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THE TREATMENT OF DIGITAL COPYRIGHT WORKS, WITH SPECIFIC REFENCE TO THE ROLE OF COLLECTING SOCIETIES AND THE ONLINE LICENSING OF MULTIMEDIA PRODUCTS

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Abstract

Digital technology facilitates the conversion of protected works into a single data format making the different categories of work virtually indistinguishable. This homogeneity of data also permits the display of different kinds of works on the same platform, a phenomenon widely known and incorrectly described as "multimedia". Until recently multimedia works were manufactured almost entirely in CD-ROM or floppy disc format, however, an increasing number of multimedia works are being produced as Internet software. This changes the technical as well as the legal nature of software products bringing them closer to the true meaning of "multimedia", which will become clearer later on. The technical convergence that made digitisation possible also created the Internet infrastructure, which would permit the instantaneous delivery of multimedia products. Unfortunately, the convergence of legal rules required for the effective administration of copyright is lagging behind technological convergence, and thereby impeding the development of the Information Society. For many years the development of multimedia products was held up by a 'marketing bottleneck', which increased the length of the product development life cycle. However, with the emergence of Internet technologies, especially the World Wide Web, this bottleneck has almost disappeared. The licensing of multimedia products has always been complex due to the different rules governing copyright in particular media and the large number of rights involved in multimedia compilations. These rights are currently administered by a bureaucratic system, run mostly by national collecting societies and publishing companies. One of the main consequences of this is that authorisation must be sought in respect of each copyright work used in a multimedia product, a process which is so complex and financially risky as to prevent the production of many multimedia products. Copying technologies that make reproduction of copyright works almost effortless, along with network technologies, which give almost instantaneous access to digitised copyright works, aggravate this situation.

While collecting societies may regard the system of exclusive rights which prevails in Europe as a great achievement. Those in the emergent multimedia industry regard this as an obstacle, and are therefore calling for the introduction of compulsory licensing. Currently the

Commission does not demand that the collective administration of rights become the rule, but is keen to centralise the administration of individual rights. Collective administration of rights may offer a more streamline approach to rights management, but may also restrict access to information, reinforce dominant positions, and erode the position of copyright law. The scope of implied licenses to copy digital works is at present uncertain, and the situation is not likely to improve with the introduction of collective licensing. Furthermore, the use of technical solutions in rights management tends to overly favour the owner at the expense of the user. This is because such systems enable owners to claim more rights than they are entitled to under copyright law. Collecting societies are not generally keen to make the works they administer available in digital form, and even when they do, digital rights are treated as a separate class of rights for which remuneration is payable. In these ways collective administration of works can both erode copyright law and deform it. If the collective administration of works for use in multimedia is to work, there needs to be a pragmatic treatment of digital data based upon a sound knowledge technical factors and a clearly structured licensing/pricing regime. Technical solutions will only work if a broad notion of fair use is applied, since the Internet could not be used legally even if effective management/payment systems were in place. Enforcement and jurisdiction on the Internet can only be effectively realised at an international level. It is therefore vital to reinforce pertinent Articles of the Berne Convention without also unduly favouring authors and publishers.

The main aims of this thesis will be to identify the factors, which inhibit the effective administration of copyright in a digitised networked environment; to assess the role of collecting societies and publishing companies in the administration of copyright in the European Union; and to identify the avenues for convergence of copyright laws regarding different forms of digitised media. In order to achieve these aims there will be a review of copyright law applicable to digitised multimedia products distributed via the Internet, the ways in which infringement of digitised copyright works occur in a networked environment will be identified, and there will be an assessment of Community legislation applicable to multimedia products. Further, the interrelation between Community level legislation and national licensing laws must be identified, the effectiveness of existing institutions that administrate the licensing of multimedia products will be evaluated, and the collective solutions to the problems associated with the licensing of digitised multimedia products distributed in a networked environment will be identified.

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CHAPTER 1

Introduction

1.0 General Introductory Comments

Since the enactment of the Statute of Anne in 1711 new technologies have created challenges to the copyright system, yet somehow the copyright system has survived the social upheavals created by new technologies. However, some commentators think that digital technologies are different and that these technologies combined with the high-speed copying and data transfer facilitated by the Internet hale the end of copyright, as we know it. In this environment a new body of so-called "cyberlaw" has evolved to combat piracy. These new laws are created mostly at the behest of a content industry that wants to protect its intellectual property, and consequently these new laws tend to be more draconian than those that went before them. While the copyright system has always had problems the introduction of new laws is not the way forward. Firstly, they do not preserve the copyright balance. Secondly, the pace of technological change is such that new laws become out of date very quickly. Thirdly, these laws tend to be very complex, so complex that their drafters or even experienced attorneys cannot predict the outcomes produced. The consequence of this unpredictability is that the courts are left to pick up the pieces, leaving uncertainty pending judicial decision. Another significant trend is the use of technical protection on the Internet. While this can benefit some companies, consumers in general do not welcome technical protection systems because they can help to increase the cost of information goods and the hassle involved in obtaining and paying for them. However, it is also evident that technical protection measures will not stop the most determined pirates and they will never be really secure on open networks like the Internet. The use of technical protection systems is therefore likely to be followed by the creation of a secure network in place of the Internet. Unfortunately this has serious implications in terms of access, data protection and unfair competition.

The third trend, which forms the subject matter of this thesis, concerns the creation of "multimedia" works and the collective licensing systems that supposedly facilitate multimedia production. The problem here is that while it may be extremely difficult to license 100 different works from ten different collecting societies, it is not necessarily going to be any easier to license those works from one giant collecting society. A possible solution is the use of rights clearing houses, but the main problem is still the system of voluntary licensing that has grown up in Europe and the U.S.A. Where digital rights are to be treated as some sort of currency then it is not really possible to have the full panoply of moral rights and economic rights. The focus must be on economic rights and these must be limited mainly to a right to equitable remuneration. Much as the content industry may find it unpalatable the kind of licensing needed to facilitate multimedia production must ultimately be compulsory in nature. The reasons for this are twofold, firstly it is far easier to license works on a compulsory licence. Secondly, collective licensing creates a serious risk of market distortion and abuse of dominant position; compulsory licences subject to review by a regulatory body such as the Copyright Tribunal would mostly avoid this risk.

The main aims of this thesis will be to identify the factors, which inhibit the effective administration of copyright in a digitised networked environment; to evaluate the technical and legal protection under civil law available for multimedia products and assess the role of collecting societies in the administration of copyright in the European Union, and identify avenues for the convergence of copyright laws regarding different forms of digitised media. In order to achieve these aims there will be a review of copyright law applicable to digitised multimedia products distributed via the Internet. The ways in which infringement of digitised copyright media may occur in a networked environment will be identified, and there will be an assessment of Community legislation applicable to multimedia products. Further, the interrelation between Community level legislation and national licensing laws must be identified. The effectiveness of existing institutions that administrate licensing of multimedia products will be evaluated, and the collective solutions to the problems associated

with the licensing of digitised multimedia products distributed in a networked environment will be identified.

1.1 Narrative and Structure

The thesis begins by defining the term 'multimedia' and outlines some of the basic ideas that underpin digital technology (i.e. e-commerce, the Internet, technical protection etc.). Chapter 2 of the thesis introduces copyright law, its fundamental precepts, and its historical evolution from its origins to present day and describes the impact of digital technology. Chapter 3 explores the nature of multimedia and the distribution of multimedia works over the Internet. The chapter grapples with the problems involved in defining multimedia works and explores the impact of the Internet on the development of multimedia and the role of copyright. The chapter ends by outlining some recent case law in this area and effect of changes in Internet technology. Chapter 4 looks at the various types of technology available in an Internet context and examines their effectiveness in relation to the protection and management of multimedia works. Chapter 5 looks at the problem of licensing software giving particular emphasis to the problem of licensing multimedia software on the Internet. While conventional licensing is found to be lacking in this regard it is seen that alternative models also have problems. Chapter 6 examines the legal environment and the general level of protection currently afforded to multimedia works and their protection systems. Chapter 7 defines the nature of collecting societies, collective administration and the way in which collecting societies deal with the management of multimedia works, especially those distributed over the Internet. The chapter ends with a brief examination of recent developments in the collective licensing of multimedia works on the Internet. The final chapter examines alternatives to copyright and proposes a solution to the problem set out in this thesis. Thereafter the conclusions reached in this thesis are reiterated and summarised.

1.2 The Problem

The problem posed by this thesis is essentially one of compromise i.e. how should society balance the interests of consumers, authors, copyright owners, and publishers in the digital networked environment. The intermediaries in this relationship are the collecting societies and sometimes the publishers. However, digitisation and network technologies have caused the traditional relationship between author, publisher, and consumer to break down. As a result collecting societies have sought to mediate between these parties in the interests of their members. The language of the law is still designed for the protection of analogue works[1], and the regime of exclusive rights forged for the protection of analogue works has become unmanageable in the digital context, since this was never intended to manage different media supported on a single platform. Film could also be said to have these properties, but film in the conventional form is not interactive, does not require complex software for the production of a moving image and is not stored in digital format. However, it is important to note that multimedia products often seek to emulate film and vice versa, so these distinctions can become rather blurred at the margins. While the problems involved are not new the anomalies that existed in the past have become lacunae because of the improvements in reproductive technology facilitated by digitisation and improvements in communications technology. The questions this raises are firstly, whether copyright provides adequate protection in the digital networked environment. Secondly, this raises the question of whether the problems created by these technologies justify changing the existing balance of rights in favour of one party or the other[2].

Currently copyright centres around the notion of a 'copy', unfortunately this is fairly meaningless on the Internet since the Internet makes many transitory and permanent

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[1] Thomas Dreier, "Adjustment of Copyright Law to the Requirements of the Information Society", IIC, 29(6), 1998, p636.
[2] ibid., p629.

copies of the documents it transmits[3]. Furthermore, in digital parlance there is no such thing as an 'original', once a work is converted into digital format then we deal only in copies. Thus the problem becomes one of access and not copying, hence the importance of technical devices that control access to works. Although this may be very effective it is also indiscriminate since both lawful and unlawful uses of the work are controlled. It is in this context that governments and regulators seek collective solutions in order to ameliorate the problems associated with digitisation and the technical control thereof by improving legal access to works. If and when this happens the problem becomes a contractual rather than a copyright problem, however, this may become a way of eliminating the law of copyright altogether by allowing contractual rights to pre-empt rights under copyright. One solution to this may be to have a wide-ranging system of compulsory licences, or some form of blanket licensing[4]. In any event copyright in its conventional sense does not exist on the Internet. Copyright is only enforceable at a national level yet the Internet is effectively international, consequently copyright on the internet becomes a problem of tracking usage, billing usage, and enforcement of rights. All three of which require extensive user education if they are to be effective[5]. Significantly, collecting societies see these areas as among their primary roles.

1.3 Complexity and the Dematerialization of Content

Our legal understanding of digital content is confused by the ever-increasing complexity of software, the operations of which are effectively invisible to us, and the data so abstract that only the designers of the software understand the way it works[6]. In the past users could take mechanical devices apart or observe the way in which they worked, though even mechanical devices have become so complex that only experts can understand the way they function[7]. However, digitisation has introduced the problem of "dematerialization", which refers to the reduction of many kinds of

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[3] ibid., p631.
[4] ibid., p638.
[5] John Gibeaut, "Zapping Cyber Piracy", ABA Journal, February 1997, p63.
[6] Donald A. Norman, *The Invisible Computer*, MIT Press 1998, p172.
[7] ibid., p173.

content, i.e. text, sound, pictures, video etc. into digital format[8] i.e. a sequence of 1's and 0's. Furthermore, digital coding can be transmitted as electrons or minute voltage differences. Thus programs and digital data can replace the paper and mechanical devices that preceded the digital revolution[9]. When digital content is transmitted over networks such as the Internet then the nature of "multimedia" is changed since multimedia content stored on CD-ROM, or DVD discs simply becomes digital data transmitted as a series of electronic impulses. This is significant in terms of copyright protection because as Antonio Mille[10] has already noted there is no specific legal protection for digital files. Thus it is only when digital files are expressed in a form that is protected by copyright that these files may obtain legal protection.

1.4 The Multimedia Concept

'Multimedia' is a much disabused term, one of those descriptors about which everyone has an opinion, but which has no single accepted definition even amongst the experts. Put simply 'multimedia' is the convergence of video, audio and telephony technologies[11]. Here 'convergence' implies the use of digital media since this is the enabling technology of convergence. This conception of "multimedia" is affirmed by the Encyclopaedia of Microcomputers that defines "multimedia information systems" (MMIS) as: "those application systems that use two or more data types from among audio, video, graphics, image and alphanumeric data". While there is no universally accepted definition for the term "multimedia" there are three distinct trends observable in the development of communications products. The first is the delivery of different types of content over a single medium; the second is the de-specialisation of transmission technologies; and the third is the integration of media and telecommunications services offered by a single vendor. What is also clear is that there is no single market player with the ability to offer the wide array of products and services that might be classified as "multimedia"[12]. The key difference between MMIS

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[8] Antonio Mille, "Copyright in the Cyberspace Era", E.I.P.R. 1997, 19(10), p570.
[9] Donald A. Norman, *The Invisible Computer*, MIT Press 1998, p172.
[10] See note 8 above, p575.
[11] Jonathan Cameron, "Approaches to the Problems of Multimedia", E.I.P.R. 1996, no.3, p115.
[12] Steven S. Wildman, "Media and multimedia", Info.Econ.Pol., 10(1), March 1998, p3.

and technologies such as video or cinematography is the direct control of the application by users[13]. Currently the most well-known multimedia format is the CD-ROM, although this format has enormous storage capacity in terms of both sound and images, this only gives us a glimpse of the full capabilities of multimedia technologies. However, CD-ROM technology is not 'multimedia' if one believes that 'interactivity' is an essential element of such technology. Interactivity may be taken to mean two-way communication in which the user has a large element of control over the data being transmitted as well as the data being received by him, this however, is bound to increase systems complexity, reduce access times and create serious security risks.

1.5 A Definition of Multimedia

The first point to make here is that the term "multimedia" changes according to context, and even in the context of products delivered over the Internet, it will never be possible to produce an entirely satisfactory definition. What can be done is to produce a coherent definition that encompasses the main features of multimedia. This might not tell us exactly what multimedia is, but it will tell us what multimedia isn't.

According to Mark Lemley multimedia products are "often (but not always) "interactive"". This he interprets as meaning that there is a functional connection between digital media files and the images appearing on the users computer screen. He is clearly of the view that there is no emphatic difference between multimedia products and other audio-visual works, multimedia is copyright only there is more of it[14]. This alludes to the fact that the main problem with multimedia is the practical difficulty of obtaining all the necessary permission to use the many works incorporated in a multimedia product[15]. In her recent book Irini Stamatoudi defines multimedia as "*a product or service which combines and integrates in a single medium, in a digitised form, at least two of the following elements: text, audio, still or moving images, computer programs and other data. It requires a software tool*

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[13] Desai Nara Simhalu, "Multimedia Information Systems", Encyclopedia of Microcomputers, 1993, vol. 11, p313.
[14] Mark A. Lemley et al., *Software and Internet Law*, Aspen Law & Business, 2000, 199.
[15] ibid., p200.

that allows for a substantial degree of interactivity and which allows for the retrieval and presentation of the above information."[16] This definition provides good starting point for defining multimedia. Interestingly Stamatoudi's definition brings out the point that the program and the data no longer need to be separate since object oriented languages mix together program code and data. The second useful point is that multimedia can be a product or a service because communication techniques such as streaming allow content to be transmitted and received in a continuous stream of data. This can be held in the buffer memory of a computer and continuously modified using controls like those of a video recorder. While the point regarding the use of software to manipulate multimedia applications interactively is perfectly valid and frequently is the case, this is not yet an essential.

The word multimedia is composed of a prefix and a root; the prefix multi is derived from the Latin word multus meaning "many"[17]. The root media meaning "centres" is more complex and like many generic terms varies according to the context in which it is used. For present purposes the definition used by Steinmetz and Nohrstedt[18] is adopted, this is the "*distribution and representation of information*", which can for example include text, graphics, pictures, voice sound, and pictures. The complexity of the term media does not stop here since media can be static or dynamic. Static media have no time dimension, thus their meanings do not change according to the time when they are presented. Static media include photographs, graphics, and text. Dynamic media do have a time dimension and their meaning and correctness change according to the time when they are presented. Dynamic media include animation, audio, and video[19]. In view of these fundamental types of media the definition of "multimedia" for the purposes of this thesis is "*a presentation of a product or service delivered via the Internet capable of handling at least one type of continuous media in digital form as well as static media on a computer or dumb terminal.*" As already

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[16] Irini Stamatoudi, *Copyright and Multimedia Products: A Comparative Analysis*, Cambridge University Press 2002, p20.
[17] Guojun Lu, *Communications and Computing for Distributed Multimedia Systems*, Artch House 1996, p1.
[18] Ralf Steinmetz and Klara Nohrstedt, *Multimedia Fundamentals: Media Coding and Content Processing*, Prentice Hall 2002, p2.

mentioned it is worth noting that in recent year's multimedia products and services have been subsumed by digital media, which when used in conjunction with the Internet make no distinction between multimedia files or any other type of digital file. So in essence this definition tells us we are dealing with digital products and services delivered over the Internet and viewed on a computer or dumb terminal (i.e. a WAP phone). Additionally, we are dealing with at least one continuous media plus static media, and that product or service might or might not have interactive capabilities.

1.6 The Internet

The term "Internet" has three different meanings, namely; (1) the collection of certified standards, (2) the physical network itself, and (3) the organisational bureaucracy that generates, revises and annuls Internet standards[20]. It is best to begin by defining the origins of the Internets physical infrastructure since this is the most tangible element of the Internet. At the beginning of the Cold War the U.S. Department of Defence became increasingly paranoid as to the security of its communications infrastructure in the event of a nuclear attack. More precisely the DoD was concerned to preserve the integrity of its communications infrastructure if a significant part of that infrastructure were wiped out by a nuclear strike. This problem was passed on to the Advanced Research Projects Agency (ARPA). Studies were commissioned in 1962 and the RAND Corporation subsequently published 11 reports, which together outlined the network concept of Distributed Adaptive Message Block Switching, or "packet switching". Packet switching involves dividing a message into segments, which are each given their own unique address, the network is then configured so as to ensure the routes for these packets. Rather than have each packet follow the same route it is now possible to configure the network so that each packet follows a separate route. In this way it is possible to ensure that a packet reaches its destination even where one of the communication lines is cut[21].

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[19] ibid.
[20] Eric Monteiro, "Scaling Information Infrastructure: The Case of Next Generation IP in the Internet", The Information Society, vol.14, p232.
[21] Peter H. Salus, "The Net: A Brief History of Origins", Jurimetrics, 1998, vol. 38, 672.

At the same time as packet switching was being developed, ARPA had been funding the acquisition of large computers at a number of key universities. In 1967 ARPA began the work of producing a protocol for a network involving different machines connected together using a common interface, the Interface Message Processor (IMP). The IMPs were Honeywell computers connected to a dedicated telephone line and thence to the various host computers, they were in effect the first routers. On the 30th of August 1969 four computers based at UCLA, the Stanford Research Institute, UC Santa Barbara, and the University of Utah were successfully connected, and by October 1969 these computers were exchanging packets of data over 500 miles of telephone line. By June 1970 there were nine sites, and by April 1973 there were 35 sites including the first satellite connection to the University of Hawaii. Unfortunately the original specification only allowed for five bit addressing, this would permit a network of 31 nodes, however, this specification was subsequently upgraded to allow for 32 bit addressing. This has led to the creation of network with many thousands of nodes and an almost inestimable number of users[22].

1.7 Why is the Internet Important?

In the last few years we have seen unprecedented growth in the demand for Internet access both in the residential and business sectors. In the United States alone it is estimated that over 35 million people spend 5-9 hours each week using popular Internet applications[23]. Before a fully networked information infrastructure can become a reality, however, a number of key technical, economic, logistical, and regulatory issues must be resolved[24]. Unless successful action is taken with regard to these issues it will be impossible to achieve the network transparency needed to enable interactive, multi-modal transactions between users[25]. The Internet is an ideal medium for the distribution of multimedia products. In comparison with computing

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[22] ibid., p675.
[23] Vijay Bhagavath, "Open Technical Issues in Provisioning High-Speed Interactive Data Services Over Residential Access Networks", IEEE Networks January/February 1997 p10.
[24] ibid., p11.
[25] ibid., p12.

products multimedia products enhance user experience by improving user friendliness, and adding interest. However, multimedia products usually require huge quantities of storage and bandwidth[26]. Among these products are electronic publishing programs, digital images, and a huge array of software products. Two key factors which will facilitate this electronic revolution will be a 30 fold increase in the availability of Internet storage capacity over the next three years, the wide availability of digital imaging technology, and the introduction of improved open standards for program interfaces[27].

Both the U.K. government and the Commission perceive new information and communication technologies as an opportunity to improve our quality of life and economic wellbeing[28]. The government sees the Internet as playing a vital role in maintaining the U.K.'s competitiveness in a global economy[29]. According to the Culture, Media and Sport Select Committee Report, "The Multimedia Revolution", a laissez faire approach to the regulation of the Internet is to be preferred. In their report the Committee states: "We recommend that the Government pursues a strategy for the Internet on the basic principles of: (i) active and accelerated promotion of the Internet as a vital engine of social and economic development; (ii) promotion of self-regulation within a framework of existing general legal provisions; (iii) absence of licensing or restrictions on freedom of individual access as producer or consumer; (iv) support for an agreed global framework for the Internet."[30]

1.8 The Development of the Internet and Multimedia

Integrated multimedia communication has a serious impact on the underlying network architecture. It was once thought that these networks would have to be able to support transmission at 140 Mbps, however, using today's compression technology networks with a much lower capacity can be used to transmit compressed multimedia

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[26] John Taylor, "Engineering the Information Age", IEE Review, November 1998, p250.
[27] ibid., p252.
[28] COI, "Our Information Age: the Governments vision", HMSO 1998, p3.
[29] ibid., p18.
[30] Dept. for Culture, Media and Sport, "The Multimedia Revolution", HMSO 1998, p5.

data[31]. Under the ITU H.261 standard 1.2 to 40 Mbps bandwidth is required for MPEG and MPEG-2, and 1.2 to 1.8 Mbps bandwidth is required for DVI. In practice present multimedia applications demand 0.4 to 1.4 Mbps bandwidth. More significantly multimedia, especially interactive applications place severe restrictions on networks in terms of transmission delay. This is because mediums such as video are made up of time sensitive data, the transmission of which would be disrupted by anything more than a short transmission delay. For most multimedia transmissions an end-to-end delay lower than 0.3 second is needed, also where data is transmitted in packets the delay must be constant, this is called isochronous communication[32].

1.9 Electronic Commerce

The success or failure of multimedia products is inextricably tied to the development of electronic commerce. In its broadest sense electronic commerce may be defined as "any business activity utilising electronic communications for data transfer". However, a more precise definition might define electronic commerce as "the process of electronically conducting business over the Internet, or networks using Internet protocols with particular reference to innovative marketing, order and payment systems, and administrative integration"[133]. The best way to conceptualise electronic commerce is to think of it as two cyclical processes that are integrated with each other using Internet protocols. The first cycle is the purchasing cycle, and the second cycle is the payment cycle. First, the vendor uses the Internet in order to sell a product to the consumer, who agrees to pay for it. Secondly, the Internet is used to establish who the consumer is, and then to set up a payment mechanism involving retailers, financial institutions and/or third parties. It is this second cycle, which causes most of the problems because it requires a level of security, which the Internet was not designed to support. Standards can be modified to facilitate security, but even where this

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[31] Heinrich J. Stuttgen, "Network Evolution and Multimedia Communication", IEEE Multimedia, Fall 1995, p42.
[32] ibid.
[33] Imagic Communications, "The E-Commerce FAQ", 13/05/99, p1. Available from: http://www.imagic.com.au/ecommerce.htm.

modification is achieved some form of physical security measure needs to be implemented.

1.10 Trusted Systems

A trusted system is simply a system which can be relied upon to follow a set of predefined rules, in the context of copyright management on the Internet these rules will concern the terms, conditions and fees for using digital works[34]. Almost all trusted systems will rely upon a trusted third party at some point in a commercial transaction. The trusted third party provides authentication for a number of clients and servers. The trusted third party stores user passwords on its server and uses them to check the identity of users before transactions take place[35]. Digital rights fall into a number of categories, which a trusted system must be aware of. These rights may be formally expressed in a digital rights language, a formal computer language, which can be interpreted by a trusted system. As well as improving the efficiency of trusted systems such languages can be used to ensure the interoperability of trusted systems. A number of companies including IBM, Netrights, and Xerox are involved in the development of digital rights languages[36].

1.11 Electronic Payment Systems

There are many ways of making payments over the Internet. The two main systems currently in operation are credit cards, and digital cash. Currently the most common method of payment online is by credit card. This operates through the input of relevant information, such as card number, cardholder name, and expiry date into a secure area in a website. Here the information can be checked and validated by special purpose software. A payment request is then made by the merchant's bank to the purchaser's bank, which then pays the merchant. The use of encryption to protect

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[34] Mark Stefik, "Shifting the Possible: How Trusted Systems and Digital Property Challenge us to Rethink Digital Publishing", B.T. L.J., 12(1), 1997, p139.
[35] V. Ahuja, *Secure Commerce on the Internet*, AP Professional 1997, p38.
[36] See note 34 above, p140.

credit card details sent to the merchant is a slight variation on this scheme. Credit card payment is fine for more expensive items; however, micro-payment systems are being developed to deal with low value transactions. Digital currencies involve the use of high-speed communications networks to store, transmit and receive representations of value. The security for such transactions is usually provided by encryption. In most digital cash systems the purchaser exchanges regular cash for digital tokens deposited in a payment account. The purchaser can then make payments from this account to the merchant's bank. In the BarclayCoin system this procedure is subject to verification, but in the Mondex system building security into the electronic token eliminates system verification.

1.12 Technical Solutions

Many copyright owners are not satisfied with the current state of copyright law in relation to the protection of digitised copyright works, particularly those distributed via the Internet. Technical solutions offer an attractive alternative to litigation but are by no means a panacea. Electronic Copyright Management Systems (ECMS) are being developed by a number of large corporations in order to control access to the material they contain, meter usage of this material and obtain payment in respect thereof. Similarly encryption technology may be used to control access to copyright works, and payment can be made in exchange for the encryption key. Commentators such as Lawrence Lessig perceive such systems as effecting a privatisation of copyright law since they eliminate the possibility of copying as well as the possibility of exercising user rights[37]. This situation would be worsened by laws prohibiting the circumvention of such access control technologies, extending the term of copyright indefinitely and reducing copyright law to the level of a general-purpose misappropriation statute.

[37] ibid., p2.

1.13 Legal Solutions

The problems which digitisation creates for copyright owners may be addressed by recourse to the courts. However, case law evolves slowly, especially in smaller jurisdictions where the volume of case law is less. In common law jurisdictions a whole raft of different precedents may be applied to copyright infringement cases, however, this kind of regulation may be ineffective because the common law was never crafted with new technologies in mind, one may simply end up applying nineteenth century values to twenty-first century problems. Code based or statutory solutions have the advantage of being more tailor-made for particular problems, however, such solutions are more rigid than the common law even where statutes are widely drafted. Catch all provisions may also have many unforeseen and undesirable effects. Because of the world-wide nature of copyright public international law has always performed a key role in copyright protection[38]. However, the main international instrument is still the Berne Convention of 1886. Some comfort is offered by the TRIPS Agreement, however, many of its provisions are considered to be highly unpalatable in the poorer countries where most of the infringement takes place.

1.14 Approach to Foreign Cases and Statutes

In IBCOS Computers Ltd v. Barclays Mercantile Finance Jacobs J. warns us about the dangers of using American case law to assist in the interpretation of U.K. copyright law. He states: "The fact is that United States copyright law is not the same as ours, particularly in the area of copyright works concerned with functionality and of compilations. The Americans (many would say sensibly) never developed copyright so that functional things like exhaust pipes could not be copied. This is partly due to

their statute, which is different from our Act. The United States Copyright Code itself sets the law against protecting function."[39] However, he also tells us that this does not mean that American case law will never be of assistance. This thesis is not a comparative law thesis, however, cases and laws from different jurisdictions are analysed because they are factually similar or because they deal with the same legal issues, this is necessitated by the global nature of intellectual property law, and I.T. law. While it is possible to observe general legal trends and practical effects in this way, this thesis does not attempt any direct analogy between non-European law and U.K./E.U. law. The law considered comes mainly from common law jurisdictions, namely the U.K., the U.S., Canada and Australia. Cases and legislation from the E.U. are also important; however, materials from individual E.U. countries feature less prominently because they are less accessible due to problems associated with language and legal system. This reflects a division in intellectual property law generally in relation to common law and civil law jurisdictions. This conflict is more likely to be won by common law jurisdictions because the personal nature of rights in civil law systems (i.e. moral rights) is less compatible with modern business practices. Clearly most of the law discussed will be legislation because the amount of case law concerning intellectual property and the Internet is small. This stems from the expense of litigation and quasi legal methods used to resolve problems in this area i.e. cease and desist letters.

While there are international laws created by organisations like WIPO these are not binding on the parties in the same way as legislation, much being dependent on the degree to which the parties agree to be bound. However, international laws are important as models for domestic legislation. Indeed there is a lot of borrowing of legislative text going on in relation to Internet law, especially between the U.S. and the E.U. While very few cases or even pieces of legislation can be treated as conclusive in relation to particular legal issues they can be used to show a general

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[38] D. P. Van der Merwe, "Copyright and Computers, with Special Reference to the Internet", South African L.R., 1998,115(1), p198.

[39] IBCOS Computers Ltd v. Barclays Mercantile Highland Finance Ltd [1994] F.S.R. 275, 292.

trend in legal decision-making. To this extent academic papers and governmental reports will also be used. The thesis is focused on European law, although a lot of U.S. cases and statutes are brought into the analysis. This is simply inevitable because the Internet originated in the U.S. and most Internet law cases and statutes emanate from there. Furthermore, the Internet is a global infrastructure, thus acts committed in one jurisdiction can have physical and legal effects in another. More significantly foreign cases can have powerful persuasive force where there is a dispute in an area of law where there are few precedents.

1.15 Conclusion

While digital technology creates issues that need to be addressed by the law it does not justify the creation of a new field of law "cyberlaw". The creation of such a specialised field of law is in fact damaging. Firstly, because the new laws created under this head do not preserve the existing balance of copyright. Secondly, such laws are often overly broad and too ambitious, tending to favour the content industry over consumers. Thirdly, these new laws are frequently very complex, too rigid to keep up with changes in technology and can become out of date even before they are implemented. Multimedia products and services do not present fundamentally different problems to single media, however, digital technology makes the lacunae in the law that have always existed more obvious. It has become almost trite to say that traditional notions of copyright like many other regulatory structures are unable to deal with digital technology because they were designed to regulate single media hosted on separate platforms, and that multimedia communications do not fit the bill. It is equally bland to suggest that the Internet is a wild uncontrollable beast, which will consume all in its path. What has changed since these kinds of arguments were in vogue is the introduction of the powerful forces of commercial gain. So has the irresistible force finally met the immovable object? What is clear is that the balance of power in the information markets is changing fast, and that whoever wins the battle to control the emerging digital markets will be very difficult to dislodge. Some authors argue that digital is fundamentally different to what has gone before, however, this

thesis contends that although the technology has changed the issues at stake are the same. What has changed is not so much the technology but the way in which it is used. Networks change the ways in which computers are connected together, and the ways in which people communicate. The Internet is therefore more of a social than a technological phenomena. The kind of battles now being waged over who controls the new media are not unlike those fought at the turn of the eighteenth century over rights to printed works. New technologies make the defects of copyright law plain for all to see, but neither do they offer a complete solution. The main problem with multimedia is simply that there are more rights involved. Technical protection offers solutions for some companies, however, technical protection costs money and can make it harder for consumers to obtain and pay for information goods and services. There is no centralised system of rights clearance on the Internet, and collective solutions offered by collecting societies are not automatically more efficient than the system separate clearance of individual rights that exists at present. What is clear is that it will not be possible to have the full panoply of exclusive rights that now exists if a centralised and streamlined system of rights clearance is to be implemented. The best way to implement such a system would be through centralised clearing houses. However, this would require greater convergence of copyright and licensing law as well as greater use of compulsory licensing. Electronic commerce is dependent upon consumer confidence, and the kind of rigid enforcement of rights offered by Copyright Management Systems (CMS) will drive the development of circumvention technologies unless the law imposes some kind of equity upon them. Equally, rampant profit taking by publishers and collecting societies facilitated by over-strengthened copyright regimes will only worsen the current levels of copyright violation. CMS are being developed with global markets in mind, it is therefore vital that fair use provisions be incorporated into international copyright law if it is to retain the kind of balancing function which it has performed in the past.

The term "multimedia" has no single accepted definition, but essentially concerns the storage of different media on a single platform, de-specialisation of transmission and the integration of media and telecommunications services. Another feature of

multimedia products, although not a fundamental one, is interactivity. However, it is important to note that in the last few years the difference between multimedia products and digital products has narrowed. In effect advances in telecommunications technology, digital compression etc. have made all file formats available in digital form, and capable of distribution via the Internet. The Internet is the result of a U.S. defence project undertaken in the late 1960's and subsequently taken over by the academic community that now has an almost inestimable number of users. To begin with the growth of the Internet was inhibited by a shortage of bandwidth, and transmission delays. Subsequently development of the Internet's infrastructure and compression technology reduced the bandwidth problem making electronic commerce more possible. Nonetheless, many technical, economic and regulatory challenges remain. E-commerce involves two main cycles, a purchasing cycle and a payment cycle. Clearly the payment cycle is the most problematic and has given rise to the development of trusted third parties, and the use of encryption technology to provide added security. A further development came with the introduction of ECMS designed to control access, manage rights and facilitate payment. While ECMS are a useful development they also cause problems of access to copyright works and distort the balance of copyright. What is needed is a flexible approach that balances the interests of the parties without being too technology specific. This approach requires consistent and transparent regulation, the need to expand society's knowledge base, the maintenance of access to information services, and technical integration on both an internal and an international level. Standardisation must inevitably play a vital role in this process in making information products/services easy to use and interoperable; however, these advantages come with the risk of anti-competitive behaviour. Chapter 2 charts the evolution of copyright from its first origins through to modern statutes dealing with digital works and analyses this development in relation to the treatment of multimedia works.

CHAPTER 2

Introduction to the Law of Copyright

2.0 What is Copyright?

In Anglo-American systems copyright is first and foremost a property right. It is an incentive to create granted for limited times to authors and inventors (normally natural persons) in order that the public may benefit from and have access to the writings and discoveries so produced. Under s.1(1) of the Copyright, Designs and Patents Act 1988 (CDPA) the right is granted only in respect of certain predefined classes of work i.e. "literary works", "musical works" and "films". The right subsists in original works fixed in a material form, and consists of among other things the exclusive right to copy, distribute and create, derivative works from copyright materials. The right does not subsist in relation to public domain works or unregulated uses, and may be subject to such exceptions i.e. "fair dealing" as may be imposed by statute or common law. Furthermore, in droit d'auteur systems copyright may be subject to moral rights, these are described in more detail below.

2.1 Historical Background

Both before and after the invention of the printing press wealthy patrons supported artists and writers, in ancient Rome artists who had no independent means sought the protection of wealthy citizens, and would receive financial support, and in return were expected to dedicate their work to their patrons. A similar practice developed in England where the landed gentry patronised the arts well into the eighteenth century,

artists and writers being rewarded with pensions, and appointments[1]. However, this system of indenture also meant that artists were subject to the whims of the ruling elite who had effective control of popular culture. Indeed on the eve of the publication of his dictionary and following much protestation by his patron with regard to the dedication of the work Samuel Johnson wrote to the Earl of Chesterfield in a letter of 1755 stating: "Is not a Patron, my Lord, one who looks with unconcern on a man struggling for life in the water, and, when he has reached the ground, encumbers him with help?"[2].

Prior to the invention of moveable type printing by Gutenberg in 1450 there was little need for copyright law because the shear effort involved in making copies of manuscripts made the process too slow and expensive to have commercial potential. Such copies were regarded as mere chattels in which there were no separate rights belonging to the creator of the original work. Intellectual property law in the Western world finds its first legislative expression in the Monopolies Act of 1624, an Act that concerned the allocation of monopolies and licences by the Crown. Even at this early date monopolies were regarded by the common law as vehicles of extortion, the Act itself being an invasion of royal prerogative[3]. Indeed the Book of Bounty in which these monopolies were recorded stated that monopolies as such were illegal but then went on to state exceptions to the general rule and it was abuse of such monopolies by James I that led to the enactment of the Statute of Anne[4]. The Act is based upon the Book of Bounty and began as a Bill specifically prohibiting monopolies; however, it also included certain exemptions such as that for 'new inventions'[5]. The stated aim of the Act was to prevent the abuse of licences and letters patent that were to profit the kings subjects whilst tending towards the common good. At this time no distinction between copyright and patent law existed since these had not yet developed as separate legal systems. Prior to 1695 the publication of books was the

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[1] Harvard Law Review Association, "Exploitative Publishers, Untrustworthy Systems, And The Dream Of A Digital Revolution For Artists", [2000] Harv. L.R. 2440.
[2] ibid., p2441.
[3] Chris R. Kyle, "'But a New Button to an Old Coat': The Enactment of the Statute of Monopolies, 21 James I cap.3",Legal History, Vol.19, No.3 (December 1998), 204
[4] ibid., p206.

preserve of printers authorised by the Crown, these printers formed the Stationers' Company. The Licensing Act of 1662[6] established a register of licensed books and required the deposit of the book to be licensed with the Stationers' Company. Without its monopoly the Stationers' Company became vulnerable to large-scale piracy of their works and the constant petitioning for statutory protection before Parliament by the Stationers Company played a significant role in the enactment of the Statute of Anne in 1709[7].

Copyright is a right attaching to legal persons or their heirs or assignees, it concerns original works and is granted for a limited time only. As the name suggests the rights which copyright protects are those of copying and the sale of copies. Originally copyright was restricted to works of literature, but through a combination of a process of inference and commercial necessity has been expanded to include maps, designs, paintings and sculptures. Subsequently the class of copyrightable works was further expanded to include photographs, works of cinematography, musical and dramatic works, broadcasts, or cable programmes, typographical arrangements of published editions, and audio-visual works. From this sequence it can be seen that copyright law is technologically driven both in terms of recording technologies and the subsequent professionalization of the processes involved. While the original framers of the first copyright laws did not have many of these technologies in their contemplation, even if they had they probably would not have regarded the processes involved in the early stages of such technology as involving sufficient originality to be copyrightable.

The Statute of Anne was the first statutory scheme of copyright protection and gave copyright owners the exclusive right to make copies of original work. In general this protection was to last for 21 years, but could last 28 years in the case of new books, subject to registration of copyright with the Stationers' Company. The validity of the Statute of Anne was tested several times in the latter half of the 18th century. In Millar

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[5] ibid., p208.
[6] ibid., p217.
[7] Ian J. Lloyd, *Information Technology Law*, Third. Ed., Butterworths 2000, p376.

v. Taylor[8] the London booksellers secured a 3:1 vote in the Court of Kings Bench affirming a perpetual common law right in literary property. In that case Lord Mansfield stated: "It is just that an author should reap the pecuniary profits of his own ingenuity and labour. It is just, that another should not use his name, without his consent. It is fit that he should judge when to publish, or whether he will publish. It is fit he should choose not only the time, but the manner of publication; how many; what volume; what print. It is fit he should choose to whose care he will trust the accuracy and corrections of the impression; in whose honesty he will confide, not to foist additions with other reasoning's of the same effect"[9]. This decision led to the appeal before the House of Lords in 1774 in the case of Donaldson v. Becket[10]. Significantly this was prior to the enactment of the Appellate Jurisdiction Act in 1876 that introduced the House of Lords as a separate appellate body. The main question before the House was whether an author had the sole right of publishing in perpetuity, or merely a statutory right created by the Act of 1710. Further, the House was to consider whether the Statute of Anne merely supplemented the common law right or determined it in its entirety, thereby placing a strict limit on the term of copyright?[11] The case arose from a dispute between a London bookseller and an Edinburgh printer concerning the reprinting of a book entitled "The New History of the Holy Bible" by Thomas Stackhouse, first published in 1767. By votes of 7: 4 in favour of an authors perpetual and exclusive common law right to publish and 6: 5 in favour of a right that was restricted by statute to a term of years. The House of Lords affirmed the decision of the court below and refused the appeal[12]. Despite holding that the right to publish was a perpetual common law right the decision of the House of Lords was almost entirely based upon economic arguments[13], a confusion between the metaphysical and the material which still exists today. Common law notions of copyright were abolished once and for all by the Copyright Act 1911, this also abolished the requirement that

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[8] 98 Eng. Rep. 233 (K.B. 1769).
[9] See Id. p252.
[10] 98 Eng. Rep. 257.
[11] Mark Rose, "The Author as Proprietor: Donaldson v. Becket and the Genealogy of Modern Authorship" in Brad Sherman and Alain Strowell ed., Of Authors And Origins: Essays on Copyright Law, Clarendon Press 1994, p23.
[12] Richard S. Thompson, "Scottish Judges and the Birth of British Copyright", Jur. Rev., 1992, 1, 32.
[13] ibid., p33.

copyright be registered with Stationers Hall. This Act asserts copyright as an entirely statutory concept thereby derogating any notion of common law copyright.

Following the statutory recognition of copyright much of the power formally held by patrons was transferred to institutional publishers, which had the financial muscle to enforce copyright and to determine which works were commercially viable[14]. In 1811 Arthur Murphy described this exploitative relationship thus: "The Bookseller...talks with much phlegm to the poor author: 'the high price of paper, journeymen's wages, the dearness of leather, the risk....' In short, he will consider of it ...till the Author's patience is quite worn out: eager to enjoy his fame, and to taste the fruits of his genius, he grows impatient of delay...and in this state of mind he sells his works for a trifle, and the perpetual property is settled on the bookseller's wife, who, upon the strength of it, has her country-house and her rout...."[15].

2.2 The Nature of Modern Copyright

In more recent times the CDPA has come to form the primary basis of U.K. copyright law. Under this Act protection of original literary, dramatic, musical and artistic works including their typographical arrangement, sound recordings, films, broadcasts, and cable programmes are protected from the moment of their creation. Section 3(1) of the Act defines a literary work as a work, apart from a dramatic or musical work, which is written, spoken or sung, although s.3(2) limits protection to works that are recorded in writing or some other permanent form. In order for text to attract copyright protection it must be at least a few words in length. In the U.K. case of Exxon Corporation v. Exxon Insurance Consultants International Ltd[16] it was held that an entirely invented word 'Exxon' was not subject to copyright. Where works are musical or audio-visual works case law in both the U.K. and the U.S.A suggest that even very small fragments of a work may attract copyright. The Ninth Circuit Court of Appeals made much play on the economic analysis in this case, and was mostly

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[14] See note 1, p2442.
[15] ibid., p2444.
[16] [1982] Ch. 119.

concerned with whether the respondent derived profits from the use of the copyright phrases they had misappropriated. In terms of the level of originality required they cite the Supreme Court decision of Feist Publications, Inc. v. Rural Telephone Service Co., Inc[17] in its assertion that the requisite level of creativity needed to establish originality for the purposes of U.S. copyright law was extremely low. In Feist the respondent was a certified public utility providing telephone services and was under a statutory obligation to provide telephone listings free of charge to members of the public. The directory produced by the respondents included yellow pages that were business listings and white pages that listed domestic users. The appellants produced wide-area listings covering 11 different telephone service areas. These listings were compiled through licensing arrangements with the various local companies. The respondents refused to license their directory to the appellant who copied the listings they needed without the permission of the respondents. The U.S. Supreme Court held that the respondent's white page telephone listings were not subject to copyright since only effort, rather than skill or judgement, was required for their compilation. While it was established that there was originality in the selection and arrangement of the respondent's yellow pages, this was not the case with their white pages. While the standard of originality was very low a work would have to posses some originality before it would be subject to copyright. This is consistent with along line of cases holding that mere facts were not the subject of copyright. In it's ruling the court explicitly rejects the sweat of the brow approach putting in jeopardy the copyright in database systems regardless of the cost of producing them. Given the increasing importance of intellectual property rights in the European Community the Commission responded to this with the introduction of Directive 96/9 on the legal protection of databases emphasising the vulnerability of databases to market-destructive appropriations[18].

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[17] 111 S. Ct. 1282 (1991).

[18] Mark A. Lemley et al., *Software and Internet Law*, Aspen Law & Business, 2000, p395.

2.3 Copying

The law of copyright as first enacted in the Statute of Anne was entirely based upon the exclusive right to issue copies of literary works to the public. While copyright has expanded to include many other original works since 1711 and includes other rights such as the right of distribution and the right to create derivative works, the exclusive right to make copies of original works remains at the heart of copyright. Furthermore, copies need not be complete and can include paraphrases, or copies made from verbal descriptions, and can be based upon media such as paintings and photographs. For literary dramatic, musical or artistic works, s.17(1) of the CDPA defines copying as the reproduction of the work in any material form including the storing of the work in any electronic medium. The wide interpretation of the term 'electronic' set out in s.178 of the Act brings direct copying of software onto a magnetic disk within its scope. Where copying is indirect such activity is is prohibited by s.16(3) of the Act as indirect infringement[19]. In addition s.17(6) of the Act tells us, in relation to any category of work, that copying includes the making of transient or incidental copies of a work. Similarly s.101 of the Copyright Act 1976 (U.S.A) requires the existence of a 'fixed' copy in order to establish infringement.

2.4 What Constitutes a Substantial Portion?

In MAI Systems Corp. v. Peak Computer, Inc[20] the Ninth Circuit Court of Appeals found that fixation in RAM was sufficient to allow a user to view a system error log and diagnose an error with the computer. In a later case Advanced Systems of Michigan, Inc. v. MAI Systems Corp[21] the district court found that storage in RAM could last for months and such periods could not be regarded as ephemeral or transient[22]. In order to establish a prima facie case of copyright infringement, the

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[19] David Bainbridge, *Software Copyright Law*, 3rd ed., Butterworths 1997, p55.
[20] 991 F. 2.d. 518 (9th Cir. 1993).
[21] 845 F. Supp. 356 (E.D. Va. 1994).
[22] J. Ebersole , "A Sampler of Issues in the Digital Age: Intellectual Property Contracts, Litigation and the Internet", Computer Telecommunications Section of the D.C. Bar Winter Convention Feb 26, 1997. Available from:

plaintiff must prove "ownership" of the work in question and "copying" of a substantial part of the work by the defendant. The work itself and especially the copied portions of the work must be amenable to copyright and should therefore possess some degree of originality. Many of the web pages available on the Internet can be classified as a computer program, or at least contain computer programs. The underlying code of these pages is written in HTML or a related computer language, they also often contain java applets and various other forms of program, which are classified as a literary works by Anglo-American copyright law. The leading U.K. case regarding what constitutes a substantial portion of a copyright work is Ladbroke (Football) Ltd. v. William Hill (Football) Ltd[23] where it was held that the substantiality of the portion of the work taken should be determined by reference to the whole rather than focusing on individual portions of the work[24]. However, the applicability of that case to software copying may be doubted since the original parts of a computer program may be located in just a few modules rather than being distributed throughout the code. This is analogous to the scenario put before the English High court in Cantor Fitzgerald International v. Tradition (U.K.) Ltd[25]. Here it was held that the substantiality of the portion of the work copied should be determined by analysing that part (or module) in isolation from the rest of the system[26]. In the recent case of Designers Guild Ltd. v. Russell Williams (Textiles Ltd. (t/a Washington D.C.)[27] the House of Lords set out some fundamental principles for determining the substantiality of the part taken. First, the court must consider that part of the work that has been copied. Secondly, only the copying of the expression of the idea rather than the idea is relevant. Thirdly, the test is a qualitative one. Fourthly, if the part taken is not substantial then it is by definition "insignificant". Fifthly, in considering the part taken, only the original elements of the design were to be considered. Sixthly, it was emphasised that the object of copyright law was not to

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http://www.ctls.org/Ebersole.htm.
[23] [1964] 1 All E.R. 465.
[24] See Id. p277.
[25] (2000) R.P.C. 95.
[26] See Id. p135.
[27] [2000] 1 W.L.R. 2416.

create a monopoly, but to protect the skill and effort of the maker in the idea expressed.

2.5 Fair Use

Another key problem is that digitisation fundamentally shifts the balance of rights in relation to fair use. The Copyright, Designs and Patents Act 1988 (the 'CDPA') does not incorporate fair use as such, but includes exceptions relating to research and private study as well as various forms of review and news reporting which is a far narrower conception of fair use than that in the U.S.. Under U.K. law infringement occurs where a substantial amount of an original document is taken. In relation to the exceptions to copyright these limit users to copying a "reasonable portion" of certain types of work. Under s.21 of the CDPA, adapting a copyright work will usually constitute infringement, where HTML code is converted into a different form that would infringe the copyright, as would the adaptation of any copy of the code. The way in which exceptions to copyright are treated depends very much upon the jurisprudence of copyright law. Apart from the differences between common law and civil law jurisdictions two distinct approaches to copyright can be identified in Anglo-European case-law. Copyright as it was first expounded was a means of encouraging creativity in certain limited areas, however, the scope of copyright has expanded enormously since its inception, and more recently copyright has been regarded more and more as a means of ensuring maximum economic return for right holders. While the public interest can be an ethereal concept, its most fundamental purpose in terms of copyright is to ensure the free flow of information[28]. Indeed the very basis of copyright as it exists in European law is Article 36 of the Treaty of Rome[29]. Article 13 of the TRIPS Agreement deals specifically with the exceptions to copyright, while these are limited to special cases, they also must not conflict with the normal

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[28] Fiona MacMillan, "Striking the copyright balance in the digital environment", I.C.C.L.R. 1999, 10(12), p351.
[29] Estelle Derclaye, "Software Copyright Protection: Can Europe Learn from American case law? Part I", E.I.P.R. 2000, 22(1), p8.

exploitation of works, they also must not unreasonably prejudice the interests of rightholders[30].

2.6 Copyright in Digital Works

Digital works are works translated into a digital form i.e. files composed of strings of 1's and 0's. Here the 1 represents the on state of a digital switch and the 0 represents the off state. Digitally recorded data differs from analogue data in that digital data has only two states, analogue data has values that lie in between the on and off states. As a consequence digital data does not readily degrade when copied, are easily manipulated, and transferred over networks at low cost[31]. However, in a world of high-speed global networks such as the Internet the ability of the authors to control their works after publication virtually disappears. Since moral rights have always had a greater problem of enforcement than economic rights enforcing moral rights when a work is converted into a digital format becomes almost impossible. The right of communication to the public assumes the possibility of such control, however, in a networked environment this sort of control is currently only possible in communication where distribution takes place from a central point i.e. video-on-demand[32]. Article 3 of the Information Society Directive gives copyright owners the exclusive right to make their works available to the public in such a way that those members of the public may access them from a place and time individually chosen by them. Such access will also implicate rights of public performance and display. In the U.S. case of On Command Video Corp. v Columbia Pictures Industries[33] a federal district court held that a hotel video system which allowed guests to receive pre-recorded videocassette recordings was 'publicly performed' even though the transmissions were serial rather than simultaneous[34].

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[30] See note 28 above, p353.
[31] Paul Mallam, "Copyright and the Information Superhighway, some future challenges", Ent.L.R. 1995, 6(6), p235.
[32] ibid., p236.
[33] 777 F. Supp. 787 (N.D. Cal. 1991).

2.7 Computer Programs

Digital copyright is synonymous with computer programs since digital code almost invariably comes in this form. In both Europe and the United States computer programs are regarded as literary works and in both systems the standard of originality required is very low[35]. However, works that are more factual in nature have always been afforded weaker protection than those works that are seen to be highly original. Thus the courts conception of what constitutes a substantial part of a work is strongly influenced by the level of originality which the work possesses. This in turn will depend upon the creative medium i.e. photographs, music, text, etc. (i.e. in terms of a qualitative measure of originality). Where works are digitised a quantitative measure of a "reasonable portion" of a work for fair use purposes will become difficult to assess, even where this is taken on aggregate[36]. This and the other factors mentioned above have lead to arguments that fair use should not be applied to digital works. However, while the problems of protecting content in the digital environment are great, technical measures also help right owners detect and prevent piracy[37]. While copyright protects the expression of an idea rather than the idea itself, assessing the non-literal elements of computer programs that are protected involves descending into systems architecture. This is hugely complex and has lead to a plethora of litigation in the United States. The European courts have on the whole steered clear of this type of litigation and are therefore badly equipped to deal with this kind of dispute, which is only likely to increase in future.

2.8 The Information Society Directive

Copyright should encourage the creation of new works; however, it is also about enabling access to new works. In the new digital environment there is a tendency to

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[34] Jane C. Ginsburg, "Putting the Cars on the Information Superhighway: Authors, Exploiters, and Copyright in Cyberspace", Columbia Law Review, 1995, 95(2), p1480.
[35] Estelle Derclaye, "Software Copyright Protection: Can Europe Learn from American case law? Part I", E.I.P.R. 2000, 22(1), p9.
[36] See note 28 above, p353.
[37] See note 28 above., p357.

emphasise the former over the latter leaving little or no room for reasonable non-commercial use. This is largely the result of fear amongst the commercial sector created by new technologies such as DVD, which can make almost perfect copies of copyright material at great speed, and has ten times the capacity of a conventional CD[38]. In an attempt to harmonise copyright laws throughout the European Union the Council of ministers reached political agreement on the Information Society Directive on the 25th of September 2000[39]. The main objectives of the Directive are to bring the state of European copyright law in line with the WIPO Copyright Treaties and to harmonise substantive aspects of copyright law across the board[40]. Article 5 of the Directive attempts to harmonise the exceptions to copyright protection, but even if this were a good idea it singularly fails to achieve the objective by making the allowable exemptions optional rather than mandatory[41]. This and the extremely vague language used in the Directive mean that major policy issues will be left to the courts.

Directive 2001/29 on the "harmonisation of certain aspects of copyright and related rights in the information society" was adopted on 22 May 2001 and is to be implemented by Member States on 22 December 2002. The Directive is amongst other things the E.U. response to the 1996 WIPO Treaties. It seeks to balance user rights against anti-circumvention measures intended to protect the technical protection systems deployed by content providers in order to secure copyrighted content. According to Recitals 5 and 6 the main objective of the Directive is to harmonize Member States responses with regard to the legal safeguards for technological protection measures used by copyright owners as a means of safeguarding their rights in the context of the internal market. Whether the Directive achieves this balance is, however, doubtful. Article 3 of the Directive provides for an exclusive right of copyright owners to make available to the public their works in such a way that members of the public may access them from a place and a time

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[38] Michael Doherty and Ivor Griffiths, "The Harmonisation of European Copyright law for the Digital Age", E.I.P.R. 2000, 22(1), p17.
[39] Bernt Hugenholtz, "Why the Copyright Directive is Unimportant, and Possibly Invalid", E.I.P.R. 2000, p500.
[40] ibid., p499.
[41] ibid., p501.

individually chosen by them. The wording of this provision is very vague, and little guidance is gained from Recital 53, which simply states that its purpose is to handle "the provision of interactive on-demand services" that allow the public to "access works other subject-matter from a place and time individual chosen by them."[42] As Groves points out the CDPA makes no distinction between author's rights and related rights. These are reflected in the structure of the Directive, however, they do not form a substantive part of U.K. copyright law[43]. Directive 2001/29 does not discuss jurisdiction for intellectual property on the Internet, an issue not conclusively dealt with by U.K. case law[44] or the Brussels I Regulation[45].

While creating broad and harmonised rights of communication and reproduction under Articles 2, 3 and 4[46], it also creates an exhaustive list of exceptions. This goes further than the WIPO Treaty by defining specific exceptions to the exclusive rights rather than merely permitting them, they are all subject to interpretation and must inevitably lead to uncertainty[47]. Critically, there is no definition of private copying, that takes due account of the digital environment[48]. Indeed the Directive makes no provision for the phasing out of levies, which are an imperfect solution at best and could become a form of double taxation in a system where payment is extracted using technological measures[49]. The Directive also does not deal with issues of rights administration (i.e. the exclusivity of rights) and does not deal with moral rights[50], by providing excessively broad protection for technological measures in Article 6 the Directive threatens to replace copyright with technological monopolies and electronic

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[42] Michael Hart, "The Copyright in the Information Society Directive: An Overview", E.I.P.R. 2002, 24(2), p63.
[43] Peter Groves, "Copyright Law Enters the 21st Century", Bus. L.R. 2001, 22(10), p225.
[44] Giles Fernando, "Protecting Copyright on the Internet", N.L.J. 2001, 151(2000), p1367.
[45] See Alex Morrison and Lorna E. Gillies, "Protecting Webcast Content, Copyright on the Internet and Problems of Jurisdiction in the European Union", 16th BILETA Annual Conference April 9 - 10, 2001, University of Edinburgh, Scotland, available at http://www.bileta.ac.uk/01/papers/morrison.html.
[46] Thomas C. Vinje, "Should We Begin Digging Copyright's Grave?", E.I,P.R. 2000, p551.
[47] Gary Lea, "Issues of access and content regulation arising from the EU draft Directives on copyright in the Information Society and e-commerce", Comms. L. 1999, no.4, p209.
[48] See note 42 above, p62.
[49] Michael Hart, "The Proposed Directive for Copyright in the Information Society", E.I.P.R. 1998, 20(5), p171.
[50] See note 39 above, p50.

contracts[51]. In particular Article 6.2 of the Directive could out-law devices that are capable of legitimate use, and circumventing technological measures[52]. This may include general-purpose computers that were never designed for that purpose. This could eventually lead to market distortions and may undermine consumer confidence thereby increasing demand for pirated works and encouraging hackers to crack technological protection systems. Technical protection measures allow right owners to control the time and place of release, and pricing, the DVD market in Europe for example is one of six global regions. Technical measures enforce regional differences imposed by right owners using regional codes. While the Commission sees that there is the potential for monopolistic practices in the DVD market it has not yet found any infringement of Articles 85 and 86 of the EC Treaty[53]. Article 5(1) of the Directive excludes temporary acts of reproduction, but does so in a very limited way. Internet routing splits copyright materials into packets of data, which are temporarily stored by intermediate hosts. However, more sophisticated forms of caching, and Internet traffic management may fall outside the scope of sub-paragraphs (a) and (b) of this Article since they only apply to acts of temporary reproduction[54]. The Directive does not tackle other functions, even more critical to the operation of the Internet, such as linking and framing.

The U.K. was required to implement the Information Society Directive by 22 December, 2002, and the Directive was finally implemented on 31 October, 2003 after much consultation. The Copyright and Related Rights Regulations 2003[55] make many adjustments to the CDPA, along with other changes forced by European Directives and International Treaties, this leaves little of the Act as originally enacted. In accordance with Article 3 of the Directive the Regulations extend s.20 of the CDPA to cover "communications to the public", and in tandem with this the definition of broadcasting in s.6 has become technologically neutral bringing to an end the

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[51] See note 46 above, p555.
[52] Michael Hart, "The Copyright in the Information Society Directive: An Overview", E.I.P.R. 2002, 24(2), p62.
[53] Joint answer to Written Questions E-509/00 and E-1510/00 given by Mr Monti on behalf of the Commission, [2001] O.J., C53E/158.
[54] Giles Fernando, "Protecting Copyright on the Internet", N.L.J. 2001, 151(2000), p1367.

notion of a "cable programme service", most notably applied in cases such as Shetland Times v. Wills. The only mandatory exemption introduced by the Regulations concerns temporary acts of reproduction as set out in Art.5.1 of the Directive, which is intended to protect ISPs and other intermediaries from copyright liability in respect of those technical operations that are essential for the effective functioning of the Internet. Under s.28A of the CDPA a temporary act of reproduction is exempt where it forms an "integral and essential" part of a technological process, the sole purpose of which is to enable the transmission of the work in a network between third parties by an intermediary or where lawful use will be made of it. Furthermore, the use made of the work must have no independent economic significance.

The most important change the Regulations make to non-compulsory exceptions in the CDPA is that it applies only to non-commercial purposes. This has the most obvious impact on the research and private study exemption in s.29, but also affects other exemptions. This includes private study that is directly or indirectly commercial, thus it will be very hard for any commercial enterprise to rely on the exemption. This is highly significant since it almost closes the door to the introduction of any notion of fair use similar to that deployed in the U.S.A. and Canada. As a consequence of the narrowing of the research and private study exemption a specific exemption relating to the observing, studying and testing of computer programs has been introduced as s.50BA of the CDPA. The exemption in s.30 of the CDPA regarding fair dealing for the purposes of criticism, review and news reporting has also been narrowed so that it now only applies to works lawfully made available to the public. This is a problem when the owner or publisher will not allow the release the work into the public domain and is an incursion on the freedom of the press. Further, the exception in s.70 of the CDPA relating to recording for the purposes of time shifting have been changed so that only recordings made in domestic premises are covered. Hence recordings made on commercial premises such as Internet cafes are no longer protected.

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[55] (S.I. 2003/2498).

The final group of changes made by the Regulations relate to the protection of technological measures and rights management information as set out in Articles 6, 7 and 8 of the Directive. Section 296 of the CDPA as amended only applies to those who traffic in devices and provide services designed to circumvent technological measures where this is done in the course of business, or where they do this otherwise than in the course of a business to an extent that is prejudicial to the interests of the copyright owner. Similarly s.296G(8) of the CDPA protects rights management information (RMI) by granting an exclusive licence to the copyright owner or the person issuing copies to the public or communicating the work to the public. These parties then have remedies against those who knowingly remove or alter RMI without authority; however, this does not include criminal sanctions. The new s.296(G) of the CDPA defines RMI broadly as: "any information provided by the copyright owner or holder of any right under copyright which identifies the work, the copyright owner or the holder of any intellectual property rights, or information about the terms and conditions of use of the work, and any numbers and codes that represent such information."

2.9 Copyright in Compilations

Under s.3 of the CDPA as amended by Regulation 5 of the Copyright and Rights in Databases Regulations 1997 (S.I. 1997 No. 3032) compilations other than databases are 'literary works', literary works are works other than dramatic or musical works that are written spoken or sung. According to Article 1 of the Database Directive (96/9) databases are "independent works, data or other materials arranged in a systematic or methodical way and capable of being accessed by electronic or other means". Copyright in compilations is thin because copyright works require a modicum of originality, and since compilations are frequently not very original that protection is weak. The problem with this conception is that it fails to protect resource intensive works such as databases which are expensive to create, but not necessarily very original. Alternatively the so-called "sweat of the brow" model protects works on the basis of how much they cost to put together thereby affording protection to

information already in the public domain. However, it is well established in Anglo-American case law that this kind of information should not be protected by copyright unless that information is of a time-sensitive nature. The "sweat of the brow" approach is now defunct in the United States after a Supreme Court decision which in Europe gave rise to Directive 96/9 on the legal protection of databases, which appears to adopt the sweat of the brow approach rejected by the U.S. Supreme Court. This is a clear recognition of the importance of intellectual property[56].

2.10 Originality

In general copyright works must attain a certain level of originality before they are subject to copyright. Given that the content of compilations is often factual i.e. not subject to copyright the requirement of originality is even more important than for other copyright works. In Feist Publications Inc v Rural Telephone Service Co[57] the respondent was a certified public utility providing telephone services and was obliged by statute to provide telephone listings which it provided free of charge to members of the public. These listings were produced as part of a directory that also included yellow pages for business listings as well as other text providing guidance to users. The petitioners specialised in the production of wide-area listings covering 11 different telephone service areas. These listings were compiled through licensing arrangements with the various local companies. The respondents refused to license their directory to the petitioner who subsequently copied the listings they required without authorisation. The U.S. Supreme Court held that the respondent's white page telephone listings were not subject to copyright since only effort, rather than skill or judgement, was required for their compilation. To establish infringement, it would have been necessary to establish that a copyright existed, and that they were original elements of the work (it was emphasised that while there must be originality in the work, the standard was low).

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[56] David Bainbridge, *Software Copyright Law*, Third ed., Butterworths 1997, p171.
[57] 499 U.S. 340 (1991).

In Matthew Bender & Co., Inc. v. West Publishing Co[58] the plaintiffs who manufacture and market judicial opinions stored on CD-ROM discs made a complaint to the district court that the defendants parallel citations (star pagination) violated copyright in their compilations. The court while recognising that considerable skill and effort went into the preparation of the plaintiff's compilations held that they did not warrant copyright protection. Furthermore, the court stated that while the head notes were derivative works star pagination was a basically mechanical operation that did not attract copyright protection. In a second case in the same court with the same parties, heard on the same day[59], the plaintiffs sought a declaration. This asserted that the copying of individual case reports after removal of the syllabi, head notes and key numbers would not infringe the defendants copyright because the remaining enhancements were not subject to copyright. The court held that all of the information in question was factual in nature and did not possess even the minimal creativity required by Fiest.

On appeal to the Second Circuit Court of Appeals the defendants sought a judgment declaring that the insertion of citations within their version of judicial opinions was a basically mechanical operation. An operation used in order to assist the location of particular pieces of text in the plaintiff's hard-copy version of the opinions that did not infringe the defendant's copyright in their compilation of judicial opinions. These citations show page locations in the West printed version of the opinions and are parallel with them. The plaintiffs claimed that the defendant's product allowed users to view judicial opinions in the same order as they appear in a west volume by repetition on of the following steps: (i) a jump feature in the program allows users to go to the first page in a West case reporter volume; (ii) the user pages to the end of a case; (iii) finds a star pagination reference; and (iv) activates the jump cite feature which retrieves the case with the same or the next page number.

On appeal to the Second Circuit Court of Appeals the plaintiff's arguments were rejected on two grounds, even assuming that a CD-ROM disc equipped with star

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[58] No.97-7430 (2d Cir. 3 November, 1998).

pagination amounted to an unlawful copy. First, the plaintiffs conceded that parallel citation could constitute fair use under the Copyright Act 1976. Parallel citation allows users to make copies of the plaintiff's work, which would by implication be fair use. Secondly, one of the benefits of parallel citation is that it allows users to perceive page breaks in each opinion and these breaks are not protected by copyright. It therefore follows that star pagination does not create a copy of any protected elements of the plaintiff's copyright. Significantly the court rejected the plaintiff's contention that similarities between intermediate copies and the allegedly infringed work was sufficient to prove 'substantial similarity' between the plaintiff's and the defendant's products. In relation to allegations of contributory infringement the defendants had failed to identify a primary infringer. Also the plaintiff's products had substantial non-infringing uses. Furthermore, the court went on to assert that the copying of individual case reports, once copyrightable elements such as syllabi and head notes were removed was not infringement. Other factual enhancements were not sufficiently original to be copyrightable.

To complete this picture recent cases have further rejected any rigid conception of the idea/expression dichotomy. These cases centre around the prohibition on copyright in facts contained in s.102(b) of the Copyright Act 1976 (U.S.A). In CDN v. Kapes[60] the U.S. Court of Appeals for the Ninth Circuit had to determine whether a compilation of coin prices made available on the Internet infringed copyright in the appellant's price lists. Affirming the decision of the court below the appeal court examined the originality of the facts themselves rather than whether the selection and arrangement of facts was original, the obviousness of arrangement and coin industry standards were therefore irrelevant to the discussion. In a similar case Warren Publishing, Inc. v. Microdos Corp[61] the U.S. Court of Appeals for the Eleventh Circuit had to to decide whether a software package consisting of three databases infringed copyright in a directory information on cable systems. While the appeal court was not concerned with the way in which the appellant gathered information, it was concerned with

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[59] No.97-7430 (2d Cir. 3 November, 1998).
[60] 53 U.S.P.Q.2d (BNA) 1032 (9th Cir. 1999 (U.S.)).
[61] 115 F.3d 1509 (11th Cir. 1997 (U.S.)).

whether the end result is a fact, or an original work of authorship. The court considered the work as a whole, but found that the court below had erred in determining that the plaintiff's community "system" was sufficiently creative and original to attract copyright protection. While the plaintiffs had developed an efficient method for information gathering, this was not sufficient in itself to establish originality and under the terms of s.102(b) of the Copyright Act 1976 (U.S.A.), this kind of procedure or process is specifically excluded from copyright protection.

The decision in Feist was the low watermark for cases concerning originality, however, since the introduction of the database right in Europe and various attempts at introducing a similar right in the U.S.A. this position has been altered. In a recent Australian case Telstra Corp. Ltd. v. Desktop Marketing Systems Pty Ltd[62] the plaintiff was an Australian corporation providing telephone services under a statutory licence that also obliged it to annually publish white page directories by geographic area. The plaintiff alleged that the defendant copied listings and headings from some of their directories in order to produce three commercial CD-ROM products that contained information substantially similar to that contained in the white page directories. Furthermore, the plaintiffs contended that these directories were original literary works within the meaning of s.32(2) of the Copyright Act 1968 (Australia) and that under s.32(1) of the Act copyright subsisted in them. Accordingly the defendants had infringed copyright in their directories contrary to s.14 of the Act. On appeal before the Federal Court of Australia Finkelstein J. held that the appellant's white page listings were original literary works that were subject to copyright and that the respondent had infringed that copyright. In reaching its decision that the white page directories were original literary works, the court followed the important House of Lords decision in Walter v. Lane[63] holding that intellectual effort was not a requirement of copyright. In determining whether a substantial part of the directories had been taken the court followed the dicta of Mason C.J. in Autodesk Inc. v. Dyason (No.2)[64] where he states that "in determining whether the quality of what is taken

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[62] [2001] F.C.A. 612 (Fed Ct. (Aus)).
[63] [1900] A.C. 539.
[64] (1993) 176 C.L.R. 300 at p305.

makes it a 'substantial part' of the copyright work, it is important to inquire into the importance which the taken portion bears in relation to the work as a whole: is it an 'essential' or 'material' part of the work?"

On appeal to a full sitting of the Federal Court of Australia[65] the appellant contended that the judge had erred in upholding the proposition that copyright subsists in a compilation of facts where the author has produced enough work or incurred sufficient expense in compiling the facts. They contended that in English and Australian law copyright couldn't exist in a compilation of facts unless a significant degree of skill or intellectual effort has been used. This skill and effort could be in the selection and arrangement of the database contents or used in the organisation of the database in the form that it takes. Secondly, the appellants contended that in Australian law the exercise of skill in works of selection must be present before copyright can subsist in them. Thirdly, it was argued, that even if copyright did subsist in the respondent's directories the appellant had not copied them, or at least a substantial part of them. The appellant's fourth and final argument was that it would be against public policy to prevent other service providers from re-utilising the respondent's information given that the respondents hold a monopoly over the data they collect.

In considering the historical development of U.K. copyright law the court established that there could be no copyright in a fact unless there is some degree of creativity on the part of the author with regard to the selection and arrangement of those facts. Furthermore, on the authority of British Horseracing Board Ltd. v. William Hill Organisation Ltd[66] the court concluded that investment of time and money by the author in gathering facts could be enough to establish the subsistence of copyright in a compilation. However, while assessment of time and money spent could include costs associated with information collection, total costs must exceed a minimum threshold. This was also an established principle in Australian law. Regarding North American authorities the court held that it was not possible to replace the established English

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[65] [2002] FCAFC 112 (15 May 2002).

and Australian authorities with the principles set out in Feist. This could to a substantial extent be explained by the constitutional footing of copyright in the United States and the positive emphasis of the copyright clause that something useful is created. The Australian authorities established the existence of copyright in compilations based on intellectual effort used in the creation of a work. However, Data Access Corporation v Powerflex Services Pty Ltd[67] established that the question of whether a work was infringed would depend upon the quality and substantiality of the portion of the work taken.

In relation to the respondent's directories and heading books the question of whether the directory portion of the directories and the headings themselves were original compilations must be determined by examining the work as a whole. This issue was litigated in in Lamb v. Evans[68] where the Court of Appeal held that copyright subsisted in the headings used in a trade directory. With regard to the question of whether a substantial part of the respondent's works had been taken the court took the view that the appellants had taken a substantial part of the respondent's work. This could be inferred once it was accepted that "industrious collection" is sufficient to establish the subsistence of copyright. Finally, with regard to the question of whether the appellant had reproduced the respondent's directory this had two main elements. Firstly, the copyright owners work must have been copied, and secondly there must be "sufficient similarity" between the copyright work and the work produced by the alleged infringer.

2.11 Publishers Rights

In order to carry on their business publishers are allowed certain rights under copyright law. These rights can extend beyond the scope of existing licences; however, publishers still need the full assignment of rights to them if they are to guarantee the full range of rights needed to exploit works in the digital environment. The first point to be made in relation to assignment is that even exclusive licences do

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[66] (2001) 51 I.P.R. 488.
[67] (1999) 202 C.L.R.1.

not have the same effect as an assignment. In the English case of Heap v. Hartley[69] the Court of Appeal held that a patent licence granted to the licensee did not allow him sue in his own name without first joining the patentee as a co-defendant. The licence simply gave the licensee authority to do lawfully that, which would otherwise be unlawful. In the subsequent case of London Printing and Publishing Alliance Ltd v. Cox[70] the English Court of Appeal considered a case in which the plaintiff alleged infringement of a painting by it's publication in a newspaper called "The Queen". Prior to this letter the parties entered into an agreement by a letter of 19th April 1890 setting out the nature and price of copies of the painting and the timing of publication. The plaintiff printing company then registered themselves as owners of the painting and commenced their action for infringement. The High Court held that the plaintiffs were not entitled to sue since they did not own copyright in the painting at the time of registration. On appeal to the Court of Appeals the court, dismissing the appeal, held that while the letter of 19th April 1890 was an agreement to sell copyright in the painting, it did not constitute an assignment. Furthermore, the plaintiffs as owners of the copyright could sue as trustees for the company.

Even supposing publishing companies can persuade authors to sign buy-out contracts; this leaves the problem of dealing with existing contracts and licence agreements. In terms of the digital exploitation of analogue works this causes problems since digital modes of exploitation were not foreseeable at the time of formation. Publishers may attempt to bridge this gap using their privileges. An early European case concerning this problem as applied to the Internet was decided in the Amsterdam district court in December 1999. In Heg v. De Volkskrant B.V.[71], three journalists who worked frequently for the defendant newspaper signed a licensing agreement whereby they authorised publication, but retained their copyrights separately. The defendants also produce and market CD-ROM databases and these articles were included in those databases without the author's consent. Consequently they brought an action claiming

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[68] [1892] 3 Ch. 462.
[69] (1889) 42 Ch.D. 461 (CA).
[70] [1891] 3 Ch. 291.
[71] Case No.H4168 (Amsterdam District Court, 22 December 1999).

damages for copyright infringement. It was the defendant's contention that exploitation of electronic media was still at an experimental stage, and that they would not pay the journalists equitable remuneration for use of their works for three years, after which they would be surer of the market for their digital products. They also stated that once their revenue streams became more certain they would negotiate agreements regarding this remuneration. They also argued that the CD-ROM completely replaced the newspaper's means of archival documentation. Both arguments were rejected by the court, which held that the utilisation of the plaintiff's work constituted a form of independent exploitation. Further, placing previously published articles on the Internet could not be considered to be a single storage and was independent exploitation in a medium other than the newspaper. The court also rejected the argument that the plaintiffs had tacitly submitted to electronic uses of their works by submitting them to the newspaper, since these uses were not foreseeable at the time of submission.

Article 10 bis (1) of the Berne Convention provides the reproduction of various topical articles by the press is permissible, unless that right is expressly reserved, however, this right is to be interpreted narrowly. In the Belgian case of Association Generales des Journalistes Professionèls de Belgique v. SCRL Central Station[72] the Brussels Tribunal de Premiere Instance decided a copyright infringement case involving a company that managed a selective database of newspaper articles appearing in the national press. These articles were copied onto a central server, accessible to the public via the Internet, without taking account of the copyright of the journalists whose work it published. Section 3 of the Copyright Act 1994 (Belgium) provides that the transfer of economic rights against the author must be in writing and that any contract made in this regard shall be interpreted strictly against the publisher. The defendants argued that the plaintiff's work was kept in digital format from the outset and submitted by the authors themselves; this being so there could be no copying, and if there was copying or distribution of the works the authors had consented to this. Further, what they did was an act of distribution and not

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[72] [1998] E.C.C. 40.

"communication to the public". However, the court held that the plaintiff's silence in relation to electronic uses could not be construed as consent. Electronic media could not have been in the contemplation of the parties at the time when the articles were submitted and was therefore an unauthorised reproduction under s.1 of the Copyright Act 1994 (Belgium). Since the public had access to the Internet provided they had the basic hardware, software and telephone connections, this constituted "communication to the public", and as the creation of a central server was not vital to the defendants business the assignment of this right could not be implied.

The problem of "new uses" is not a new one, however, much still depends upon how broadly the assignment contract was drafted, and how narrowly the courts interpret contractual clauses where these are either vague or absent. An important U.S. decision concerning a new use of an existing work is Boosey & Hawkes Music Publishers Ltd v. Walt Disney Corporation[73]. This was a case in which the Second Circuit Court of Appeals had to decide whether a licence permitting the use of a musical work used in the sound track of *Fantasia* permitted a video release of *Fantasia.* The licence granted the defendant "the nonexclusive, irrevocable right, licence, privilege and authority to record in any manner, medium or form, and to license the performance of, the musical composition "*The Rite of Spring*". There was also a condition that performances should be in theatres with valid licences from ASCAP. The key questions to be answered in this case were firstly, whether the 1939 assignment permitted distribution of *Fantasia* as a video recording, and secondly, whether distribution of such a video in the United States was prevented by the ASCAP condition. The courts analysis followed Cohen v. Paramount Pictures Corp[74] in its neutral approach to contractual interpretation. Thus the court held in the appellants favour, that any limitation the wording of the original agreement had to be justified by the party seeking to deviate from the terms of the agreement, which was most reasonably read as including rather than excluding film distribution. While the ASCAP condition was binding on the appellant, it was too ambiguous to limit the appellants licence to theatre performances only.

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[73] 145 F.3d 481 (2d Cir.1998).

In a much more recent case Random House, Inc. v. Rosetta Books LLC[75], the U.S. District court had to decide whether assignments limited to the distribution of hard copy books would permit distribution of eight works as electronic books, specifically the assignment allowed the defendant to "print, publish and sell the work[s] in book form." Subsequently a complaint was issued accusing the defendants of copyright infringement, tortious interference with contract, and seeking a preliminary injunction preventing sale and distribution of the e-books. E-books come in two basic formats, those that can be held using a hand held reader device, and those that are available via the World Wide Web and can be read online[76]. Forecasts predict that the market will accept e-book technology in two to five years[77]. The e-books published by the plaintiff can only be read if they are downloaded on to a computer and read on the VDU screen using reader software. The case centred on an agreement between the plaintiffs and William Styron made in 1961 to publish "The Confessions of Nat Turner". The exclusive licence gave the plaintiffs the right to "print, publish and sell the work in book form". The case involved seven other agreements; however, these agreements all contained the words "print, publish and sell the work in book form". The court followed the Boosey & Hawkes case in interpreting the language of the contracts so as to give effect to the intention of the parties. In interpreting the words "print, publish and sell the work in book form" the court applied the definition used in Webster's Unabridged Dictionary, which defines a "book" as "a written or printed work of fiction or non-fiction, usually on sheets of paper fastened together with covers". Hence an e-book was not a book for the purposes of the assignment contracts. The court distinguished between analogue and digital formats, which require the application of a computer program for works to be viewed[78]. Further, the court distinguished earlier cases involving motion pictures since they all involved the creation of a new work. Consequently the plaintiffs did not succeed on the merits and were not the beneficial owner of the right to publish the eight works as e-books. Evan

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[74] 845 F.2d 851, 854 (9th Cir. 1988).
[75] 150 F.Supp. 2d 613 (S.D.N.Y. 2001).
[76] Sue Huntley, "e-books in Public Libraries-Experiences from Oz", Multimedia & I.T., 28(1), February 2002, p23.
[77] ibid., p24.

Fogelman criticises the decision in this case as being fundamentally low-tech since it is based on an old-fashioned conception of what a book is, a conception that could easily change in the near future[79].

On appeal before the Second Circuit Court of Appeals[80] the plaintiffs argued that the court had adopted an excessively restricted view of the kinds of "new uses" to which an exclusive licence can be applied in situations where the contracts do not expressly cover future forms of work. Thus an e-book is just a "form" of a book that falls within the coverage of the appellant's licences. The court, in affirming the decision of the district court, held that the determination of whether the licences extended to e-books was a mixed question of fact and law dependent on fact finding regarding the "evolving" technical processes and uses of an e-book and the reasonable expectations of the contracting parties. Customs and practices were to be "cognisant of the customs, practices, usages and terminology as generally understood in the ... trade or business at the time of contracting". The case is significant because multimedia works often reuse materials licensed or assigned by contracts that do not consider new uses. Thus our cultural heritage may be denied reuse by arcane contracts and tied up in practices that have no relevance to the present day. Even custom and practice is frozen at the particular time when the contract was formed.

While the economic rights of copyright holders are increasingly the subjects of legislation the economic bargaining power of big business can easily frustrate the objectives of such legislation, however, a number of recent U.S. court cases have favoured the rights of authors. In Ryan v Carl Corp[81] the district court for the Northern District of California considered a motion for summary judgment. Four authors of individual articles published in collective works claimed copyright infringement where their publishers supplied copies of their articles to an Internet document retrieval service without paying them remuneration. The defendants

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[78] See Greenberg v. National Geographic Soc'y, 244 F.3d 1267, 1273 n.12 (11th Cir. 2001).
[79] Evan Fogelman, "Throw The Book, But Not Your Palm V At E'm", Texas Bar Journal, January 2002, p51.
[80] Random House, Inc. v. Rosetta Books LLC, No.01-7912 (2d Cir. March 8, 2002).
[81] 23 F.Supp.2d 1146 (N.D.Cal., 1998).

claimed this was within their right of revision under s.201(c) of the Copyright Act 1976 (U.S.A.), which provides that "[i]n the absence of an express transfer of the copyright [in a contribution to a collective work] or of any rights under it, the owner of copyright in the collective work is presumed to have acquired only the privilege of reproducing and distributing the contribution as part of that particular collective work, any revision of that collective work, and any later collective work in the same series.". In coming to a decision the court affirmed the Eighth Circuit decision in Olan Mills v. Linn Photo Co[82] in relation to the argument that the plaintiffs authorised the copying of their articles. On the courts interpretation the licence granted to the publishers in that case did not authorise the unlawful copying of photographs by a private investigator. In relation to the interpretation of the phrase "as part" used in s.201(c) the court opined that the section was to be interpreted narrowly and in favour of the interests of the authors. The phrase "as part" applied to each of the three clauses of s.201 rather than to one specific phrase. While it would be economically more efficient to assign the right to make copies to publishers the court was obliged to follow the intent of Congress.

In the earlier case of Tasini v. New York Times[83] the district court had to decide whether a publisher could place the articles from their periodicals onto electronic databases and CD-ROMs without the consent of the freelance authors who had written them. The plaintiffs claimed that the defendants had infringed their rights under s.201 of the Copyright Act 1976 (U.S.A.) in a total of 21 articles, and that the sale of these articles to Nexis, a legal news database, constituted exploitation of their work. The publishers claimed that they were merely exercising their right under the Act to produce revised versions of their publications. The case revolved around the interpretation of s.201(c), s.201(d)(1) and s.201(d)(2) of the Copyright Act 1976 (U.S.A.). The first subsection concerns author's 'privileges', the second subsection deals with the subdivision of author's rights, and the third subsection affects transfer of those rights. The court dismissed the action, holding that the careful placing of the articles on a commercial database had not infringed the author's copyright, but was in

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[82] 23 F.3d 1345 (8th Cir. 1994).

fact a valid exercise of the publisher's right of revision. By construing the three subsections in tandem with each other, the court left the defendant with full authority over the 'subdivision' of the rights it acquired. The aim of section 201(c) was to avoid the unfairness of indivisibility, which would not be achieved by equating 'privileges' with nonexclusive licences. Furthermore, the court held that the plaintiffs had only limited rights in the individual contributions making up their collective works.

The publishers in this case had carefully tagged the articles and kept the original selection of articles so that the collection retained a 'substantial similarity' with the original collection, even though far more than a 'certain percentage' of the articles were copied. The case does not set a precedent as such but does serve to illustrate a disturbing trend in the U.S. courts towards the disregard of authors' moral rights and a tendency to allow technology to frustrate their economic rights. This kind of disregard for the economic rights of copyright holders is affirmed in the Supreme Court in the case of Quality King Distributors, Inc. v. Lanza Research International, Inc[84]. There it was held that the plaintiff, shampoo manufacturer, which sold its copyrighted products overseas, could not prevent the defendants from reselling the goods onto the U.S. market since the economic arguments cited were not relevant to the court's duty to interpret the U.S. Copyright Act.

On appeal to the Second Circuit Court of Appeals the decision of the lower court was reversed in a ruling stating that authors who own copyright in individual articles in previously published works must give consent before their work could be republished in an electronic database. Although the publishers argued that s.201(c) of the Copyright Act 1976 allowed them to use individually copyrighted contributions in the subsequent revision of a collective work. The court held that on the most natural construction of s.201(c) this right of revision only applied to later editions of a particular periodical issue. Where there was a redistribution or re-publication of an individually copyrighted article this only fell within the exception if it was part of the same series. A further aspect of the case concerned an agreement between Time and

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[83] 23 F.3d 1345 (8th Cir. 1994).

one of the authors. This agreement granted Time the right of first publication in their magazine and the right to license republication of the article subject to the payment of royalties. In reaction to Whitford's infringement claim Time contended that the agreement permitted them to license the article to Mead. However, the court was of the opinion that the agreement did not limit Times rights under the s.201(c) which acted as a presumed baseline i.e. it set a minimum standard but did not regulate agreements that went beyond that standard.

Eventually the case reached the Supreme Court where much of the focus centred on an old debate over the transfer of print based material to microfilm which is permissible without first obtaining the author's permission. However, the court distinguished this on the grounds that articles on microfilm are not disconnected from their original context. Databases offer users intact articles, although it might be possible to assemble a collective work from a database the key question was "whether the database itself perceptibly presents the author's contribution as part of the revision of the collective work". Because databases offer users copies of articles "standing alone and not in context" the s.201(c) exception was not available to the publishers. The court therefore concluded that by reproducing and distributing the authors work in a manner not authorised by them the publishers infringed their copyrights. In a dissenting judgment Stevens J. took the view that a databases separate presentation of articles was merely a method of navigation and manipulation. That there was (legally speaking) no difference between revisions stored on a floppy disk as compared to revisions stored on the hard disk of a computer. However, this is perhaps missing the point since what the authors were complaining about was not so much the medium of storage as the manner of presentation, which will clearly be affected by the technical operations that can be performed upon them.

An interesting parallel may be drawn between the Supreme Courts decision in the Tasini case and the Eleventh Circuit Court of Appeals decision in Greenberg v.

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[84] (Case No. 96-1470, heard on 9 March, 1998).

National Geographic Society et al[85]. This was a case in which a photographer sued the defendants over their use of one of his photographs in the form of an animation with music and sound effects on a CD-ROM database containing similarly adapted photographs. The plaintiff claimed that the defendants had infringed his right to make derivative works under s.106(2) of the Copyright Act 1976 (U.S.A.). As with the Tasini case the defendants claimed that the work they had created was a revision of a collective work under s.201(c) of the Act. However, the court was unable to stretch the phrase "that particular collective work" employed in s.201(c) of the Act to include sequence and program elements also. The use of the work was transformative and therefore fell outwith the ambit of the sub-section. They also held the use to be so radical that it could not be fair use, since the defendants were a for-profit corporation, and furthermore, the use was not de minimis. Ultimately the Supreme Court denied the defendant certiorari in its appeal after the courts decision in the Tasini case. While it might be argued that the above cases are merely concerned with issues of old contracts and have no relevance to electronic works for the future, it is also arguable that these cases concern a more general licensing debate about the scope of consent. Here a balance needs to be struck in favour of the author. The alternative is to allow a liberal interpretation of contracts in favour of the licensee. Although this would help the rights clearance process it would not promote a fair distribution of the proceeds of exploitation. However, in this regard it is important to note that this right should be of a purely economic nature if an efficient system of rights clearance for multimedia works is to be possible.

2.12 The Database Right

The main problem with the Feist decision is that copyright in compilations is based almost entirely on the arrangement of information, something that is very easy to do using digital technologies. Further, this problem is exacerbated by American case law, which treats facts as outside the scope of copyright. For example in Baker v. Selden[86] the Supreme court refused to recognise the subsistence of copyright in forms

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[85] Case no. 00-1050-CC (11th Cir. (U.S.)).

described by a book setting out a system of double-entry bookkeeping. The main reason for this is that facts are regarded as discoveries and are therefore not original in a copyright sense. Under U.K. law skill and labour alone is sufficient to establish the subsistence of copyright, in Elanco Products v. Mandops (Agrochemical Specialists) Ltd[87] the Court of Appeal held that the copying of facts from a historical work amounted to infringement. In the Graves'[88] case the Court of Appeal found that a photograph of an existing picture was 'original' within the meaning of s.1 of the Fine Arts Copyright Act 1862[89]. In Europe the aftermath of Feist is Directive 96/9 on the legal protection of databases, which adopts the sweat of the brow approach rejected by the U.S. Supreme Court. The Directive is intended to harmonise copyright laws of EEA states in relation to the treatment of databases, and creates a sui generis right restricting extraction and/or re-utilisation of a substantial part of database contents. This is to be contrasted with the Database Regulations 1997, which potentially erode copyright protection of databases[90]. Thus the Database Directive evades the requirement of originality through the creation of a sui generis right.

The Directive defines the term "database" broadly. Article 1 of the Directive defines this as "A collection of independent works, data or other materials which are arranged in a systematic or methodical way and are individually accessible by electronic or other means." Significantly Article 3(2) of the Directive makes it clear that it has no effect upon copyright law relating to the content of databases. The sui generis database right is tenable for 15 years as opposed to the 70-year limit available for most copyright works. This applies only where there is significant financial expenditure by at least one maker who is a national of an EEA state or is normally resident in an EEA state. Article 5 of the Directive provides database owners with a number of exclusive rights, namely: (a) temporary reproduction in whole or in part, by any means and in any form; (b) translation, adaptation, arrangement or any other alteration; (c) any form of distribution to the public of the database, and copies

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[86] 101 U.S. 99 (1879).
[87] [1979] F.S.R. 46.
[88] (1869) L.R. 4.
[89] See Hugh Laddie et al., *The Modern Law of Copyright*, London, Butterworths, 1980.
[90] Ian J. Lloyd, *Information Technology Law*, Third. Ed., Butterworths 2000, p443.

thereof (subject to exhaustion); and (d) the right of public performance, and communication to the public. Under article 10 of the Directive the sui generis right runs from the moment of its completion and expires 15 years from January 1 of the date following completion. However, if the database is made available to the public before expiry of the 15-year term a new period of 15 years begins from January 1 following the first publication of the database within the previous fifteen-year period. This will occur each time the contents of the database are "substantially changed". Where a database is dynamically updated this effectively creates a perpetual copyright, which is contrary to basic intellectual property theory, and gives rise to serious concerns in relation to anti-competitive activity. As previously mentioned the rights created by the Directive are just two, firstly, the right of extraction i.e. the removal and transfer of data to another medium, and re-utilisation i.e. making the contents of a database available to the public. In the U.K. the Copyright and Rights in Databases Regulations 1997, which came into force on January 1, 1998, implement the Directive. Under s.3(a)(2) of the Regulations a database will qualify for protection where it is its author's "own intellectual creation" by virtue of the selection or arrangement of its contents. Further, the Directive includes limited exceptions regarding research and private study, and does not apply to licensees.

In British Horseracing Board Ltd. v. William Hill Organisation Ltd[91] over a number of years the plaintiff expended considerable resources in setting up a computerised database of horse racing information, which it made available to subscribers over the Internet. The defendants operated a business providing betting services over the Internet. The plaintiff alleged that the defendants had abstracted or re-utilised substantial parts of their database contrary to Article 7(1) of the Database Directive by taking substantial parts of the database on a regular basis. Further, they alleged that even if the amount of the database taken on each individual occasion was not substantial, the totality of the data taken was. Laddy J. sitting in the Chancery Division held that the database right was entirely independent of copyright and that the relevant text for the purposes of the proceedings was the Directive itself, and

[91] [2001] 2 C.M.L.R. 215.

admissible preparatory texts. The meaning of a 'substantial part' in Article 7(1) of the Directive was to be evaluated qualitatively and quantitatively[91]. What constitutes a substantial part was to be assessed against the database as a whole[92]. Since Article 7(5) of the Directive prohibits systematic extraction and/or re-utilisation of insubstantial parts of database contents the defendant's activities constituted infringement of the database right[93]. Furthermore, the plaintiff's database was a single database in a constant state of refinement rather than a series of databases with separate rights attaching to them[94]. This meant that the defendants could not escape liability under Article 7(3) of the Directive which in theory could negate the terms of Article 7(5) of the Directive by making repeated abstractions and/or re-utilisations into individual events. Furthermore, Laddie J. confirmed that the duration of database protection is renewed by substantial changes[95]. The defendants have in the meanwhile appealed to the Office of Fair Trading, and an appeal has also been lodged with the European Court of Justice. The appeal to the ECJ is likely to take between nine months and two-years[96]. The reference was in fact made by the Court of Appeal[97] and four opinions were issued by the Advocate General on 8 June 2004.[98]

In the related Dutch case of N.V. Holdingmaatschapij de Telegraaf v. Nederlandse Omroep Stichting[99] the Court of Appeal of the Hague had to rule on a case in which injunctive relief, sought against five broadcasting corporations. The relief sought was in respect of the republication and sale of television schedules produced weekly by the plaintiffs following the rejection of the case against the defendants by the court below.

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[91] See Id. p233.
[92] See Id. p235.
[93] See Id. p239.
[94] See Id. p242.
[95] See Id. p228.
[96] Lucy Hickman, "Leading the Field", L.S.G. 2001, 98(17), p22.
[97] U.K. Patent Office, "British Horseracing Board Limited, The Jockey Club and Weatherbys Group Limited v. William Hill Organisation Limited". Available from: http://www.patent.gov.uk/about/ippd/ecj/2002 (Accessed 15 December 2003).
[98] See opinions C-44/02, C-46/02, C-203/02 and C-338/02. Available from: http://shorl.com/fukumimegigra http://shorl.com/dafipybrifruva http://shorl.com/hopygomypajo http://shorl.com/gysograjomiby (Accessed 13 September 2004).

The plaintiffs had refused to license these schedules to the defendants who reproduced them without permission. This it was claimed was contrary to s.59 of the Mediawet (Copyright Act). The main question the court had to decide was whether the chronological T.V. Listings published by the plaintiffs were sufficiently original to be protected by the Databankenwet (Database Act). The court held that the listings were purely factual and that there was insufficient creativity involved in their selection and arrangement to bear the personal stamp of their creator. There was no substantial investment because no evidence was submitted to that effect and the plaintiffs had to compile broadcasting schedules as part of their normal operation. This investment must also be aimed at "securing the procurement, control and presentation of the contents of the database". Furthermore, an injunction would be denied because the plaintiff holds a position of economic power and is prevented from precluding competition in relevant markets by s.58 of the Mededingwet (Competition Act).

In the related Swedish case of Fixtures Marketing Ltd. v. AB Svenska Spel[100] the Gotland City Court decided a case in which the plaintiffs alleged that the defendants infringed their catalogue right under s.49 of the Copyright Act. The case involved the repeated and systematic copying of insubstantial parts of the plaintiff's football fixtures over a period of about a year. So far as the substantiality of the investment was concerned the court was of the view that this need not be judged solely on economic criteria, but was also dependent on the investment behind the acquisition, examination and presentation of data. However, in finding for the defendant the court also stated that the Copyright Act did not protect the copying of the information itself. Rather protection was directed against the unauthorised reproduction of large coherent amounts of catalogue information. Further, the court recommended that the case be referred to the ECJ. The referral was received by the registry of the ECJ on 24 May 2002, it makes particular reference to Article 7 and Article 10 of the Directive seeking specific guidance as to what constitutes a substantial part of a database, how this is to be determined, and how much a database must change before the database can be considered to be "new" under Article 10(3), and for the purposes of Article 7(5).

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[99] (Available from: http://www.ivir.nl. Accessed 15 December 2003).

Another key ruling regarding the database right is the decision of the German Federal Supreme court in the Tele-Info-CD case[101], a case with facts similar to those of the Feist case. The second Plaintiff in that case was Deutsche Telecom AG a telephone company, and the second plaintiff was a company engaged in the production of telephone directories and other lists. These were produced in hard copy and electronic format and made freely available to customers. The first and second defendants are companies engaged in the supply of telephone subscriber lists on CD-ROM. All the CD-ROM lists produced by the defendants are based on the information contained in the first plaintiff's directories. Among the CD's produced by the defendants was a product known as "Tele-Info-CD" that contained names, addresses, postal codes, telephone numbers, plus other data relating to the subscribers title, and trade or profession for over 30 million subscribers. This further permitted reverse searching, and searches based on various parameters. Despite the fact that the defendant's products were only partially similar to the defendant's directories the plaintiffs sought an injunction against the defendants based on infringement of their copyright and neighbouring rights under the German Copyright Act. The district court rejected their petitions on the ground that no copyright or neighbouring rights subsisted in the directories[102].

Subsequently the Federal Court of Appeals affirmed ruling, and the Federal Supreme Court granted the plaintiff's petition. The court held that while the plaintiffs appeal on the law essentially justified, the Court of Appeals was right to reject the petition based on copyright law. Although the plaintiff's directories were literary works within the meaning of s.2(1)(1) of the German Copyright Act, they were not personal intellectual creations within s.2(2) of the Act, and lacked the creativity to be considered collections under s.4 of the old version of the Copyright Act. However, since the time when the action commenced Directive 96/9 had come into force in German law and as

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[100] (Available from: http://www.ivir.nl. Accessed 15 December 2003).
[101] (May 6, 1999 – Case No. IZR 199/96).
[102] Matthias Leistner, "The legal protection of telephone directories relating to the new database makers's right", IIC 2000, 31(7/8), 950-967.

the case was to be judged on the law as it then stood the Directive had to be considered. While the underlying structures and ideas involved in the compilation of the work were not subject to copyright protection, the classification, selection and arrangement of facts could be protected, even where these facts were already in the public domain. Even so the compliance with a system of rules would not automatically render those parts of the works copied by the defendants' individual intellectual creations with the necessary level of creativity. Under Directive 96/9 the plaintiff was entitled to neighbouring rights as a producer of a database, and since s.7b(1) of the Copyright Act has retrospective effect these rights covered reproduction and distribution of a significant part of the database. Furthermore, the first plaintiffs directories are databases within the meaning of s.87(a)(1) of the Copyright Act and complete copying of a database producers subscriber data constituted infringement of their exclusive right of reproduction under s.87(b)(1) of the Act. While the plaintiffs directories were official works within the meaning of s.5(2) of the Copyright Act the plaintiff's were not to be denied an injunction because of this[103].

An interesting case concerning the database right on the Internet was brought in the French courts in 2000. In Sa Prline v. Sarl News[104] both parties were involved in the transmission of financial news over the Internet. The plaintiff seeking, damages and interim relief claimed that the defendant had copied a number of press releases from their website thereby infringing their database right and committing acts of unfair competition. The Tribunal de Commerce de Nantere held that the selection and arrangement of the plaintiff's press releases entitled them to the protection of the sui generis database right. The defendant's extractions from the plaintiff's database, despite being insubstantial in relation to the plaintiff's publications as a whole were qualitatively substantial since they allowed them to expand database in such a way as to give the impression that it had a more substantial character than it actually had. This further constituted an abuse of competition law. The plaintiffs were not entitled to an injunction preventing the dissemination of information about listed companies since this would be an abuse of the principles of fair trade. Further, the evidence

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[103] IIC 2000, 31(7/8), 1055-1063.

relating to the losses suffered by the plaintiff were inconclusive and accordingly an expert would be appointed by the court to assess quantum.

In a recent Finnish case the district court of Vantaa gave a preliminary ruling holding the plaintiff liable for violating s.49(1) of the Copyright Act (Finland) for taking data from a football fixture list, in order to further their betting activities[105]. This Act had recently been amended in order to implement the provisions of the Database Directive. The court held that the fixture list was a database within the meaning of the Directive and that the plaintiffs made a 'substantial investment' in that database. The use of the defendant's database for just one-week would constitute a substantial part. This was so even though the information had been collected from a number of publicly available sources. A referral to the ECJ was made on three questions: (1) Which expenses can be considered as part of the investment in a database; (2) Does the Directive protect individual data drawn from a database and used to compile individual sporting fixture lists; (3) Given that the defendant only uses one weeks worth of data from the plaintiff's database at any one time throughout the season and independently verified data, can that be utilisation of a (qualitatively or quantitatively) substantial part of the defendant's database?

The Database Directive does not provide sui generis protection for database makers who reside outside of the E.U. According to Article 11 of the Directive such persons are not protected unless the jurisdiction in which they reside provides a comparable level of protection to E.U. databases. In order to avoid the uneven playing field that this could create in the global database market the U.S. has made several unsuccessful attempts to introduce database legislation similar to the Directive. The first such attempt was the Database Investment and Intellectual Property Anti-piracy Act, 1996 (U.S.A.)[106]. This was based on the law of unfair competition, but imposed a minimum term of protection of 25 years, which could be extended each time a change of "commercial significance" was made. There were originally database provisions

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[104] [2002] E.C.D.R. 2.
[105] Fixtures Marketing Ltd. v. Oy Veikkaus Ab (Case 99/4899) (1 February, 2002).
[106] H.R. 3531.

incorporated in the Digital Millennium Copyright Act 1998 (DMCA), however, these were removed in October 1998. The database provisions of the DMCA were similar to those of the Database Directive, but were strongly opposed by libraries, universities, and scientists. On January 21, 2004 the U.S. House Judiciary Committee passed the "Database and Collections of Information Misappropriations Act (H.R. 3261). The Act prohibits the misappropriation or theft of information from a database maintained by another when that information is then made available to the public without their consent. However, the Act asserts that the information that forms the database must be gathered independently and is subject to fair use exceptions. Further, the creation of a link from one site to another will not constitute misappropriation of database content for the purposes of the Act[107]. This targeted approach is a far cry from the grant of a sui generis right, but prevents the outright monopolistic control of information. At an international level the Proposed WIPO Treaty on Database Extraction Rights was tabled before the WIPO Diplomatic Conference in December 1996. This proposed a right lasting 25 years and purports to prohibit even the independent collection of facts; however, it has been fiercely contested by the United States, and has not made much progress to date[108].

[107] L. Richard Fischer and Ivan J. Flores, "Congressional Focus", 2004, 4(6) Privacy & Info.L. Rep.
[108] See Catherine Colston, "Sui Generis Database Right Ripe for Review", J.I.L.T., 2001, No.3, para 5.4.

2.13 Multimedia products as databases

In Shetland Times v. Wills[109] Lord Hamilton suggested in obiter that a website could be classified as a 'cable programme service', thereby creating the possibility that a link to a website could constitute infringement of a cable programme service under s.7 of the CDPA. However, websites are more often than not multimedia works and like databases they are collective works, available in digital format, which derive value from their selection and arrangement,. Indeed s.6 of the Copyright and Rights in Databases Regulations 1997 define a database as "a collection of independent works, data or other materials arranged in a systematic or methodical way and accessible by electronic or other means". In this context Irini Stamatoudi[110] defines multimedia works as "works which combine on a single medium more than one different kind of expressions in an integrated digital format, and which allow their users, with the aid of a software tool, to manipulate the contents of the work with a substantial degree of interactivity." Recital 22 of Directive 96/9 suggests an implicit inclusion of multimedia works as databases since it expressly includes databases held in CD-ROM or CD-I format. If this view were accepted by the courts a multimedia product available via the Internet would be infringed where a third party without the consent of the owner extracts or re-utilises all or a substantial part of the contents of a database.

However, before this could happen certain preconditions imposed by the Database Directive would have to be satisfied. Firstly, the contents of a database must be independent, second they must be individually accessible, and thirdly they must be arranged in a systematic or methodical way. Further, to satisfy the Directives originality requirements (where copyright is claimed) a database must constitute the authors own intellectual creation. It is also worth noting that the Directive protects content not software, but it does allow separate protection for these other elements of a database. Independence means that individual elements of the database must be

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[109] [1997] F.S.R. 604.

[110] Irini A. Stamatoudi, "To What Extent Are Multimedia Products Databases?" in Irini A. Stamatoudi and Paul L.C. Torremans ed., vol.8, *Perspectives on Intellectual Property: Copyright in the New Digital Environment,* Sweet & Maxwell 2000, p21.

capable of standing on their own. The individual accessibility requirement means that individual database elements must make independent sense[111]. The third requirement would appear to be satisfied by almost all databases, which are compiled in systematic way. A problem does though arise in the case of interactive applications depending upon whether the presence of this condition is judged before or after the database is loaded onto a computers memory[112]. These conditions have many problems for the more sophisticated databases using object oriented programming techniques and similarly preclude the classification of more sophisticated multimedia products as databases. The object oriented programming used in some databases and interactive multimedia products does not treat data and program code separately, but combines them in a so-called 'object'. This kind of programming is designed to model data rather than processes. In practical terms this means that the content being modelled is not independent or individually accessible.

The German decision of wwww.roche.lexicon.de v. www.medzin-forum.de[113] suggests that a link to a website can constitute infringement of the database right, in that case the plaintiff distributed medical information via its website, an online database requiring substantial investment. The defendant markets medical online products, and included a frame link to the plaintiff's website. This allows users to access the plaintiff's website from the defendant's website within the configuration of that site. This gave users the impression that the plaintiff's website was part of the defendant's website, and any bookmarks made by users would be to the defendant's site. The plaintiffs brought proceedings for database infringement under s.890 of the German Civil Procedure (Zivilprozessordnung, "ZPO"), that prohibited the disputed link. On appeal the court held that under s.4(2) of the German Copyright Act (Urhebergesetz, "UrhG") the website was protected both as a collected edition and as a database. Linking to the defendant's site without his permission therefore constituted infringement of his exclusive right to make copies (under s.15(1) and s.16 of the UrhG). Further, the link was prohibited since it could create confusion as to

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[111] ibid., p24.
[112] ibid., p27.
[113] (Local Court of Hamburg 12.July, .2000).

authorship of the two websites. In terms of satisfying the requirement of the "personal intellectual creation of the database work", the court was of the view that this lay in the structure of the website itself[114].

However, the legal status of a straightforward link to a website is less clear. In the recent German case of Handelsblatt v Paperboy[115] the plaintiff complained that the defendant used deep links to access articles on their website thereby bypassing advertising on their home page. This they claimed was copyright infringement and a violation of fair trading laws. After the German Federal Superior court found that the use of deep links was compatible with German law the Supreme Court affirmed their decision. In so doing they held that the defendant's systematic and repeated searches on the plaintiff's websites constituted a form of fair use since the hyperlinks were not a form of reproduction or use of a protected work. The recent introduction of the Database Directive into German law did not affect the outcome of the case. Further, the plaintiff's interest in directing individuals to advertisements on their home page was not sufficient to practically forbid the use of hyperlink technology.

Under the decision in the British Horseracing Board case above the frequent and systematic removal of even insubstantial parts of a database would constitute infringement. Furthermore, since the Database Regulations define 'substantial investment' in terms of quantity and quality, or a combination of both, this will make it relatively easy for websites to qualify for protection under the database right. However, for the German Supreme Court in the Tele-Info-CD case many websites; especially the interactive websites would not have sufficiently individual accessibility to each element since these elements would be inter-linked, although works such as multimedia encyclopaedias might be an exception to this[116].

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[114] Karl H. Pilny, "Germany: Copyright – Infringement By Website Links", E.I.P.R. 2001, 23(7), N106-107.
[115] GRUR-RR 2001, 97.
[116] See note 105 above, pp956-957.

After the implementation of the Database Directive in 1998 there was a pronounced one-time growth spurt in the database production of France, Germany, and the U.K. However, according to research conducted by Stephen M. Maurer database production in these countries returned to pre-directive levels almost immediately after implementation. At least 50% of lawsuits brought under the sui generis right have been brought by only 5% of database companies. These companies create the data themselves (i.e. telephone numbers and sports listings) rather than deriving it from the real world[117]. In such a climate companies producing genuinely useful data, such as scientific data and company information, can find it difficult to obtain funding. This is because the data they produce can be obtained by independent research. Indeed some forms of competitive information such as that produced by "deep linking" is positively discouraged. The Directive's threshold requirements are not effective, firstly, the limited concept of databases as "collections of independent data ... arranged in a systematic ... and individually accessible" way. Secondly, the requirements that those database owners make a "substantial investment" in their data. According to recent court judgments almost any jumble of data can be classified as a database, and the requirement that there be a "substantial investment" has been set so low as to be relatively meaningless. Although it is unlikely that the European Commission will repeal the Directive, the courts may seek to ameliorate the effect of the Directive by allowing a broad interpretation of its exceptions[118]. Indeed the district court of The Hague recently sought to do just this.

In Vermande v. Bojkovski[119] the plaintiff produced an edited legal text of various laws. This text was produced as a CD provided with the hard-copy edition. Subsequently the defendant copied this text onto his website, later removing the editorial materials accompanying the text. The plaintiffs sued the defendant under the Dutch Copyright Act and the Database Directive seeking relief in the form of damages and an injunction preventing further publication. The defendant claimed that Article 8(1) of the Dutch Copyright Act prohibited government ownership of database rights

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[117] Stephen M. Maurer et al, "Europe's Database Experiment", Science, vol.294, October 2001, p790.
[118] ibid., p289.
[119] President District Court The Hague, 20 March, 1998).

in respect of laws, and further claimed that Recital 52 of the Directive that permits some exceptions and Article 13 of the Directive, which preserves access to public documents, covered his actions. In denying the plaintiff the relief sought the court held that it rejected the application of Article 13 of the Directive in relation to "non-original" writings. The court also did not accept that the defendant's data was a mere spin-off of its core activity, and therefore did not involve a 'substantial investment' under the rule in KPN v. Denda[120]. However, according to Article 11 of the Dutch Copyright Act the plaintiffs had no right to sue under the Database Directive since the materials involved were not of a personal character.

The Directive as originally envisaged contained compulsory licensing provisions the current version does not. Also because of the way in which the term of protection is calculated the Directive tends to over protect sole source databases[121], contrary to the spirit of Recital 47 of the Directive. This states that the protection by the sui generis right: "must not be afforded in such a way as to facilitate abuses of dominant position, in particular, as regards the creation and distribution of new products and services which have an intellectual, documentary, technical, economic or commercial added value". The effectiveness of the Directive in protecting the most valuable databases while preserving the balance between public access and rewarding the owners of unoriginal databases is questionable. However, Article 16(3) of the Directive provides for a review in 2001, unfortunately the deadlines for this have not been met.

2.14 Moral rights

While moral rights evolved during the eighteenth and nineteenth centuries as an outgrowth of the authors rights in personam in civil law jurisdictions such as France no concomitant growth was seen in common law jurisdictions during the same period. The reasons for this are to a large extent attributable to the economic thinking of the time that in common law jurisdictions saw intellectual property as a means of

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[120] (International Court of Appeal, Arnhem, 15 April 1997).
[121] Catherine Colston, "Sui Generis Database Right: Ripe for Review", J.I.L.T. 2001, issue 3, available from: http://elj.warwick.ac.uk/jilt/01-3/colston.html.

allocating wealth, notions of public well-being restricted to the public sector[122]. The main rights to which continental systems of moral rights gave rise are the right of disclosure, which concerns the author's ability to determine whether a work should be published. The right of authorship, or the right to be named as author of a work, the right to respect i.e. the right to maintain the integrity of a work, and the right of withdrawal and repentance, or the right to prevent the distribution of a work[123]. Until the Rome Act of the Berne convention which enshrined moral rights in Article 6 bis of the Convention moral rights were not an issue in common law jurisdictions, however, ever since there has been an ideological conflict between the two systems on the issue of moral rights. On the one hand common law systems require flexible rights regime in which rights exist for a limited time only and may be bought and sold freely, while civil law jurisdictions regard moral rights as perpetual and immutable. Using the latter approach many economic transactions in intellectual property such as film distribution may become slow, expensive and inconvenient, a situation exacerbated by the short shelf life of many multimedia products. Article 6 of the Berne Convention is incorporated into U.K. law as sections 77 to 89 of the CDPA. Included are the 'right of paternity', i.e. the right to be identified as the author of a work or a director of a film, and the 'right of integrity, i.e. the right not to have ones work subjected to derogatory treatment. This being defined in terms of treatment that is prejudicial to the honour or reputation of the author. Closely allied to the paternity right is the right of an author not to have work falsely attributed to them[124]. Unlike most European countries, section 7(2) of the Act allows moral rights to be waived by written instrument and the right of identification granted by s.77 of the Act only applies where it is asserted in writing. Furthermore, s.79 of the Act does not apply to computer programs, typographic designs, and computer generated works, and works created as works for hire. Similarly by virtue of s.82 of the Act the right of integrity created by s.80 does not apply in relation to works for hire.

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[122] Gary Lea, "Program Copyright & Moral Rights: A Culture Clash?", C.L.S.R. 1994, 10(6), p304.
[123] Andre Francon, "Protection of Artists' Moral Rights on the Internet" in Frederic Pollard-Dulian ed., *Perspectives on Intellectual Property: The Internet and Authors' Rights*, vol.5, Sweet &Maxwell 1999, p75.
[124] See note 56 above, p23.

2.15 Derivative works

Copyright owners have the exclusive right to create derivative or intermediate works, defined by s.101 of the Copyright Act 1976 (U.S.A.) as "a work based upon one or more pre-existing works, such as a translation, musical arrangement, dramatisation, fictionalisation, motion picture version, sound recording, art production, abridgement, condensation, or any other form in which a work may be recast, transformed, or adapted". This may be achieved either directly by a human author or indirectly using software. Derivative works are explicitly recognised under U.S. law by s.117 of the Copyright Act 1976 (U.S.A.) where the right to make limited adaptations of computer programs in conjunction with a computer was set out in the statute as a means to allow users to maintain computer software without the prior consent of the copyright owner and to set the outer limits of such adaptation, however, no such provision exists under U.K. law. In Harman Pictures, N.V. v. Osborne[125] a motion picture was made using a script based in part on a book entitled "The Reason Why" which concerned the Charge of the Light Brigade, and the story that surrounded it. Following failed negotiations over rights to the book on the subject the owner of the book applied for an interlocutory injunction to prevent the making of the film, which was alleged to infringe copyright in the book. Goff J. sitting in the Chancery Division held in favour of the plaintiffs. He found that even where the script in question was derived from other sources, in deciding whether or not to grant interlocutory relief the primary consideration was the preservation of the status quo having due regard to the balance of convenience. There was substantial similarity between the book and the film script sufficient to support a prima facie case, a case that did not have to be fully determined, this being all that was required in interlocutory proceedings. Furthermore, the defendants had failed to show they had sufficient alternative sources to rebut the prima facie evidence of similarity. While the case is not very authoritative it is significant as an early case demonstrating that copyright can transcend the media in which is expressed and that simply changing media will not negate copyright protection.

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[125] [1967] 2 All E.R. 324.

In the more recent case of Norowzian v. Arks Ltd (No.2)[126] the Court of Appeal considered a case in which the plaintiffs alleged the infringement of a dramatic work recoded in the form of a film called "Joy". The film consisted of a man doing a dance with jerky movements, these movements are impossible in real-time and were achieved using an editing technique known as "jump cutting". The first defendant was the maker of advertising films who made a film called "Anticipation" that used the same "jump cutting" technique as the plaintiff's film using a different actor and a very different setting. The film was used in an advertisement and the plaintiff sued for breach of copyright. However, the court below held that the film did not attract copyright as it was not a recording of a "dramatic work" when s.16(1)(a) and s.17(1)(a) of the CDPA were read together since the dance could not be performed live. Furthermore, the plaintiffs had not established that there had been substantial copying and any similarities in terms of style or technique did not constitute breach of copyright. On appeal it was argued that the film was itself a "dramatic work". The court held that the definition of "dramatic work" in the CDPA was broad and could encompass a film such as "Joy". However, an editing technique as such could not be the subject of copyright. While there was a striking similarity between the filming and editing styles of the films there had been no substantial copying of the plaintiff's film. Further, it was held per curiam that the interpretation of the CDPA must be consistent with Article 14 of the Berne Convention. Thus cinematographic works must be afforded protection even in cases where the natural meaning of "dramatic work" does not cover the particular film in question. The case is an instance in which the law has failed to protect a very original audio-visual work where the originality lies in the method of production rather than the expression. How much more difficult will it be for U.K. law (as it stands) to protect multimedia works, which are even more inclined to express their originality in this way? In terms of derivative works the significance of the Harman and Norowzian cases is twofold. Firstly, the system of categories used by the CDPA is too inflexible to protect multimedia works. Secondly, the absence of a specific derivative works doctrine is making it hard to protect multimedia creations

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[126] [2000] F.S.R. 363.

since there are no statutory limits and very little judicial guidance relating to how far a work has to be adapted before it becomes a new work.

Many Internet documents, especially web pages, can be described as computer software, or at least include software. These documents are written in HTML code or a related computer language. Furthermore, there is an increasing use of java applets and other types of program code in multimedia works distributed on the web. The creation of derivative works from this code may violate the rightholder's exclusive right to authorise such works. In Midway Mfg Co v Artic Int'l[127] the U.S. Court of Appeals for the Seventh Circuit held that a program that increased the speed of the plaintiff's computer games infringed their right to create derivative works by producing unauthorised adaptations of their games. However, in Lewis Galoob Toys v. Nintendo of America[128] the court held that a program designed to enhance the graphics on Nintendo video games did not create unauthorised derivative works. This was because the resulting display was produced by the interaction of the Game Genie with the Nintendo video game cartridge without making a permanent copy of the program files. More recently the U.S. Ninth Circuit Court of Appeals narrowed the scope of its ruling in the Galoob Toys case in Micro Star v. Formgen[129]. That case involved a futuristic war game called Duke Nukem 3D which has 29 levels of difficulty and allows users to create their own levels by selecting different combinations of scenery, aliens, and other challenges. The plaintiffs encouraged users to create new levels and distribute free copies of them to other users. The defendants downloaded 300 user created levels and copied them onto CD's that they then marketed for commercial gain. On appeal the defendants argued that the audio-visual displays created by their CD-ROM did not meet the requirement of s.101 of the Copyright Act 1976 (U.S.A.), that a derivative work must be stored in a "concrete or permanent form". However, the MAP files used to store the specifications for these displays were stored in a permanent form thus distinguishing Duke Nukem 3D from

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[127] 464 U.S. 823 (1983).
[128] 964 F.2d 965 (9 th Cir. 1992).
[129] 154 F.3d 1107 (9th Cir. 1998).

the Game Genie involved in the Galoob Toys case. In the earlier case the Game Genie was dumb and merely allowed users to access different parts of the program without altering it. In the present case the software infringed the original program even though the CD's did not store any aspect of the original program; the images displayed being derived from the program library[130]. Where two web pages are connected by a hyperlink the creator of that link may be liable for contributory infringement since they are inviting other Internet users to make copies of the work linked to. However, it is important to note that this may be better construed as an infringement of the copyright owner's distribution right since there is no need to retain a permanent copy of linked web pages[131]. The material is adapted as well as copied since this is implicit where frames are stored on a computer's stack memory. A further and very important consideration is the economic impact of the creation of derivative works or of conduct leading to contributory infringement: this turns on the likelihood of redistribution of the unauthorised derivative work[132].

2.16 International Copyright

The importance of the international dimension of copyright has been recognised for over a century, though there is still no such thing as an "international copyright" in the form of a right that will protect copyright material throughout the world. This is the case even where the material at issue is clearly a literary work in the narrowest sense. However, most countries provide copyright protection for foreign works provided certain conditions are satisfied. The two main international Conventions harmonising the standard of protection and the minimum requirements for copyright to subsist in a work are the Berne Union for the Protection of Literary and Artistic Property ('the Berne Convention') and the Universal Copyright Convention (UCC). While the Berne Convention sets minimum standards regarding the subject matter of copyright and the rights it protects, international copyright still consists of territorially defined national

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[130] Jane C. Ginsburg, "Putting Cars on the 'Information Superhighway: Authors, Exploiters, and Copyright in Cyberspace", Columbia Law Review, 1995, Part 2, p1484.
[131] ibid., p1486.
[132] ibid., p1487.

rights bound together by the principle of national treatment[133]. This principle ensures the integrity of national laws and the equal treatment of foreign authors in relation to local authors. The principle does not, however, ensure conformity with supranational norms in relation to the treatment of local authors[134]. This situation is further complicated by the fact that states may accept the Convention at different levels. Furthermore, states may treat the Convention as self-executing or may implement it indirectly through its legislature. Such implementation may be inconsistent with that states obligation under the Convention[135].

The Berne Convention is the oldest and the dominant Convention concerning copyright. It has been revised four times since 1886, the last revision taking place in 1971. The Convention sets minimum standards regarding duration and coverage of copyright, and recognises moral rights in Article 6 bis. However, the Berne Convention has no effective enforcement mechanism. In 1952 the UCC was created in order to effect copyright protection in countries that are not signatories of the Berne Convention. Similarly the UCC adheres to the principles of establishing minimal requirements and national treatment. Since the accession of the United States to the Berne Convention in 1989 its relative significance has diminished. In recent years supranational norms have come to play a greater role in international copyright, while the Berne minima have been maintained these norms have placed more stringent requirements as to the new substantive minima both in terms of subject matter and the rights protected. This has been achieved through multilateral agreements such as the TRIPS Accord and the 1996 WIPO Copyright Treaty (WCT) and Performances and Phonograms Treaty (WPPT) thereby extending Berne Convention minimum standards to countries which are not members of the Berne Union, but which are members of the WTO. Both WIPO Treaties came into full force on March 6, 2002 after being ratified by 30 countries. While the TRIPS Agreement does not leave the details of implementation to member states it contains detailed provisions regarding the

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[133] Jane C. Ginsburg, "International Copyright: From a "Bundle" of National Copyright Laws to a Supranational Code", 47 J.C.P.S. p267.
[134] ibid., p270.
[135] ibid., p271.

enforcement of international copyright. However, it is notable that the grievances brought by the E.U. through the TRIPS dispute resolution procedures in relation to s.110(5)(A) and s.110(5)(B) of the Fairness in Music Licensing Act 1998 have met with no response from the United States. This is despite the publication of a WTO report that found that s.110(5(B), concerning an exemption for non-dramatic musical works, failed to comply with Article 13 of TRIPS[136]. In December 2001 a settlement of 1.2 million euros per annum was reached after lengthy arbitration proceedings at the WTO[137]. However, the date for implementing the agreement has passed and negotiations continue[138]. The WCT concentrates on some of the use and distribution of copyright materials over the Internet. In particular it creates new obligations regarding the prevention of circumvention of technological protection measures, and against tampering with or removal of copyright management information.

2.17 Exhaustion of Copyright

Once rightholders sell their copyright works their exclusive right to control the uses of that work within the territory where it is released may be lost, this is known as domestic exhaustion of rights, or the doctrine of first sale in the U.S.A.. On an alternative theory the rightholders right to control his work in all jurisdictions may be lost in all territories once his work is sold in any territory; this is known as international exhaustion of rights[139]. The exhaustion of rights may not be asserted in situations where the duration of copyright has lapsed, or where the initial owner has changed[140]. Most states operate a domestic system of exhaustion, but the E.U, operates a compromise system since exhaustion occurs in all Member States simultaneously. Exhaustion of rights is important in the context of globalisation

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[136] Peter A. Jaszi, "Why U.S. Lawyers Can't Afford Not To Care about International Copyright", 671 PLI/Pat. (2001), p330.
[137] Jason R. Boyarski et al , "WTO Grants Damages To Artists On Music Licensing", JPROPR, 2002, 14, No. 1, p1.
[138] West publishing, Inc, "Settlement Between European Union and United States of WTO Fairness in Music Licensing Case Appears to have Fallen Apart", Ent.L.R., 2002, 23, No.9, p6.
[139] Alan Reganeau, "Reconciling the exhaustion of right doctrine and free trade: problem with the international approach", Comms.L. 1999, 5(4), p167.
[140] ibid., p173.

because foreign markets are more accessible and are being integrated into a single global market. Clearly the nature of exhaustion in Europe amounts to protectionism and runs contrary to any notion of international exhaustion. This stance is affirmed in the ECJ decision of Harlequin Record Shops v. Polydor Ltd[141]. Furthermore, the European approach to exhaustion of rights is expressly stated in Article 4(c) of the Software Directive, Article 9(2) of the Rental Rights Directive, and Article 5(c) of the Database Directive. The doctrine of exhaustion is used to counteract infringement actions brought by rightholders to prevent the parallel importation of goods, including intellectual property, from so-called "grey markets". This is especially significant in the film/multimedia industry, which exploits works using a series of regional distribution agreements[142]. However, the E.U. has specifically established a rental right for films and videograms, including provisions relating to exhaustion of rights. Notably the European conception of exhaustion is not really related to the concept, as it exists elsewhere. The European Court has been mostly interested in removing barriers to trade within the internal market as enunciated in Article 30 and Article 36 of the EC Treaty[143]. Under the WIPO Internet Treaties exhaustion does not apply to the distribution right, as such. However, since exhaustion does apply to the right of reproduction the distribution right is indirectly implicated since consumers will want to download and copy works distributed via the Internet.

2.18 Conclusion

Under Anglo-American law copyright is first and foremost a property right. Copyright works must be original, fixed in a permanent form and under U.K. law they are split into predefined classes. Copyright grants owners certain exclusive rights; however, copyright does not apply in relation to public domain works or unregulated uses. Furthermore, there are also exceptions to copyright permitting the use of copyright works in special circumstances. In the United States fair use is a kind of general exception that can be applied where certain relevant factors are present (or not

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[141] Case No. 270/80 of 9 February 1982.
[142] See note 139 above, p174.
[143] Frank Gotzen, "Distribution and Exhaustion in the EC", E.I.P.R. 1990, 12(8), p302.

present) i.e. non-commercial use. Commercial use is not presumptively unfair; however it can be used to prove harm to the plaintiff for the purposes of fair use analysis. In England monopolies over the written word arose following the invention of the printing press and were subject to a system of patronage until the monopoly of the Stationers Company was withdrawn in the seventeenth century. Subsequently piracy became rife and the Statute of Anne became law in 1710 following much lobbying by the Stationers Company. To begin with this right applied only to original literary works for a period of 21 years; however, the scope and duration of copyright have expanded enormously since then.

Further, the notion of the common good has been seriously eroded by the increased emphasis by the courts and the legislature on private enrichment. Copyright to begin with left most uses unregulated and most works were returned to the public domain after a fixed period. The protection of databases has brought the public domain into the private domain, moral rights are not attractive to Anglo-American copyright systems and publishers' rights are becoming ever more contractual in nature. In addition copyright was to begin with very territorial in nature, but is becoming increasingly international in scope. Digitisation of works and improved telecommunications have accelerated the pace of globalisation, and increased the control the right holders may exercise over their works putting in question the very existence of fair use. At the same time piracy has become rampant and technological protection and enforcement has improved. This has provoked a move towards legal protection of technological measures.

The originality of copyright works has always proved to be a thorny issue, especially in relation to more factual works. The Feist case in the United States held that the white page listings of telephone directory were insufficiently original to attract copyright. This was based on the assertion that the production of the listing involved only "sweat of the brow" rather than intellectual effort. Consequently, the producers of factual works became concerned about the protection of their works, the upshot of this being the introduction of the Database Directive in Europe. Where copyright

works are infringed one of the most important issues is that of whether a substantial portion of the work has been taken.

In the U.K. the test for copyright infringement is less sophisticated than that used in the U.S.A. but it is more qualitative than quantitative, the test being first and foremost a qualitative test. This looks at the work as a whole and brings the issue of the quantity taken into consideration of the part taken, relative to the size of the original work. In Ladbroke (Football) Ltd v. William Hill (Football) Ltd[144] the House of Lords found infringement had occurred in a case involving the copying of football coupons. Here Lord Pearce held that the test for infringement involved only those parts of the work that were original enough to attract copyright. The subsistence of copyright should first be established through an assessment of the work as a whole rather than its dissected parts. Secondly, the substantiality of the part reproduced could be considered on its own[145]. In the subsequent case of Warwick Film productions Ltd v. Eisinger[146] a case in which a film was held not to infringe an anonymous book. Plowman J. held[147] the question of whether the part taken is substantial must be decided by its quality rather than its quantity. He also held that substantiality is measured in relation to the part taken from a pre-existing work and not whether the part taken forms a substantial part of a new work. The third case in this trilogy is Designers Guild Ltd v. Russell Williams Textiles Ltd[148], a case in which the House of Lords found infringement of a fabric design. Here Lord Millet[149] held that the test for substantiality of taking involved making a visual comparison of the two works and identification of those parts that had allegedly been taken. Secondly, while the part taken had to be substantial it did not need to form a substantial part of the new work. Once this stage is complete it is no longer relevant to consider the ways in which the works differ[150]. Finally, Lord Foscote[151] held that in cases of altered

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[144] [1964]1 W.L.R. 273.
[145] See Id. p293.
[146] [1969]1 Ch. 508.
[147] See Id. p533.
[148] [2001] F.S.R. 11.
[149] See Id. p124.
[150] (per Lord Hofmann at p120).
[151] See Id. p133.

copying it was useful to determine whether "the infringer had incorporated a substantial part of the independent skill and labour, etc., contributed by the original author." This idea/expression dichotomy is better developed in the United States, especially in relation to computer software. In relation to non-literal copying of computer software the assessment of whether a substantial portion of a computer program is taken can be very complex, even in the United States the case law concerning this is very unsatisfactory. The authorities diverge between a very wide and a very narrow interpretation without resolution. The appellate court in Whelan v. Jaslow was too one sided in that it developed a test that favoured a finding of an expression. In Computer Associates v. Altai the court adopted a narrow and very complex test and in Apple Computer v. Microsoft corp the appeal court seems to disavow any protection of the purely functional elements of a computer program. Finally, we have the decision of the Supreme court in Lotus v. Borland an equally divided per curium decision that gives no reasoning[152].

Technical solutions are one way of avoiding copyright infringement and in both Europe and the United States legislation has been enacted in order to outlaw devices designed to circumvent technological solutions. In Europe this takes the form of the Information Society Directive, a measure designed to harmonise national laws in Member States vis a vis the treatment of digital copyright, but especially to harmonise the treatment of anti-circumvention devices; however, the Directive singularly fails to achieve this. Firstly, by granting over broad protection to technological protection measures. Secondly, the Directive fails to deal with a number of important issues including jurisdiction, moral rights, and the nature of private copying. Thirdly, the list of exceptions in the Directive is exhaustive, only some are compulsory, and they are likely to make many functions involved in the normal operation of the Internet illegal.

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[152] Kai Tumbraegel and Roux de Villiers, "Copyright Protection for the Non-literal Elements of a Computer Program", C.T.L.R. 2004, 10(2), pp34-42.

Many of the information products distributed over the Internet are compilations or databases. Compilations are classified as literary works under Anglo-American law; they have thin protection that is based on the industrious collection of facts, but must (Under U.S. law) have some originality in terms of selection and arrangement. The Feist case in the United States asserts that sweat of the brow is not sufficient to establish originality although the authority of this case is not binding on courts in the U.K. Furthermore, investment in an information product is not relevant for the purposes of copyright, and only the originality of the selection and arrangement of facts (that is where a compilation is purely factual) is to be considered in assessing originality. A significant related issue is that of publishers' rights. The only really effective way for publishers to acquire rights is full assignment, however, in some circumstances, rights may be implied i.e. the right of revision and implied licences to make alterations to works once acquired. Mostly these rights are derived from contract, however, a party's silence cannot be construed as consent and the language of the contract will be construed so as to give effect to the intent of the parties. Where a genuinely 'new' work is created the courts will interpret contracts more in favour of the producers of the new work.

As a response to the lack of protection afforded to databases, most notably in the United States, the European Commission instigated the creation of the Database Directive. This gives effect to a sui generis right lasting for 15 years that does not depend upon originality or copyright. This right prevents the extraction/re-utilisation of database contents, thus the right protects database content where a substantial part of that content is taken. Before a database provider can claim this right they have to prove that their database is their own intellectual creation (if they also claim copyright), that it involves a substantial investment, plus the independence and individual accessibility of entries. The rights created include the exclusive rights to copy, distribute, and communicate the contents of the database. The right is renewable making it a perpetual right, also some commentators believe that the Directive does not stimulate innovation, and in fact inhibits creation of the most useful databases. Many of the concepts used by the Database Directive are not adequately

defined i.e. the meaning of "substantial investment", "abstraction/reutilisation", and "substantial part". These are all the subject of references to the ECJ.

This chapter deals next with the issues of moral rights and derivative works. Moral rights include the right of disclosure, respect, authorship, integrity, and paternity. Some of these rights are included in the CDPA, but most of them are revocable by agreement. The most troublesome of these rights are the rights of integrity and disclosure, which can effectively prevent multimedia creation. In any effective system of collective licensing of copyright works these rights should not be enforced rigorously, or made subject to the provision of warranties preventing their use. The derivative works doctrine is an American conception designed explicitly to deal with computer programs and the like. As such there is no direct equivalent in U.K. law, and as a result the U.K. is ill equipped to deal with multimedia production. Furthermore, the explicit consent of the right owner is required under U.K. law, thus adding substantially to the administrative hassle of creating a multimedia work.

Finally, this chapter deals with the nature of international copyright, and exhaustion of rights. International copyright does not really exist in terms of a universal right; it exists as a bundle of rights subject to international minima that must be enforced at national level. The main instrument of international copyright is still the Berne Convention. This has many problems including inconsistent implementation, but most of all lack of enforcement powers. This lack of enforcement has to some extent been resolved by the TRIPS Agreement; however, this discriminates against poorer countries. The doctrine of exhaustion of rights concerns the termination of rights after a first sale. There are two main theories of exhaustion, one says that rights are exhausted in a state after a first sale, the other says that rights are exhausted everywhere after a first sale. However, in the digital environment exhaustion may not occur, or may only occur to a limited extent. Another problem is the system of exhaustion adopted in the European Union where a sale in one state will exhaust rights in all the other Member States. This runs entirely contrary to an international theory of exhaustion and has led to accusations of protectionism by countries outside

of the E.U. Chapter 3 next considers the nature of copyright in multimedia, especially multimedia works distributed over the internet and there future development.

CHAPTER 3

The Nature of Multimedia Works and the Impact of the Internet on Multimedia Copyrights

3.0 Introduction

Multimedia works are by their very nature diverse in terms of both form and content. However, they represent just another new technology that copyright has had to deal with. This chapter sets out to describe the main problems associated with multimedia works and the way in which courts in Europe and the United States have treated multimedia products. This chapter is concerned with the nature of multimedia products and the extent of legal protection for such products when delivered via the Internet. The chapter then goes on to analyse case law dealing with services involved in the delivery of MP3 files over the Internet. Music files are used as an example here because the delivery of music over the Internet is likely to be a precursor of more advanced services that are not yet commercially feasible. The chapter then considers the legality of using search engines since they are the principle means of information retrieval on the Internet. Finally, there is some discussion of some of the newer telecommunication technologies and the way in which their implementation is likely to affect the security of new multimedia products and services delivered over the Internet.

3.1 Legal Treatment of New Technologies

Copyright owners, or at least their short-term vested interests, are often seen to be at odds with new technology; however, the relationship is a tautological one. In the U.S. Supreme Court case of White-Smith Music Publishing Co v. Appollo Co[1] the plaintiffs contended that the defendant's pianola role was an infringing copy of their phonogram. However, the majority of the court held that the pianola role was not an infringing copy because it was not possible to perceive the musical composition directly from the holes in the role. In the much later U.S. Supreme Court case of Sony corp. v. Universal City Studios, Inc[2] the court took the view that the use of Betamax videos in order to "time shift" recordings of television programs was a "substantial non-infringing use" that fell within the scope of fair use. Notably the decision was very marginal, and a number of very recent cases involving new technology have adopted the dissenting opinion of Blackmun J. which took greater cognisance of the effect that VCR's would have on future markets, not just markets existing at the time[3]. Prior to the 1950s a golden triangle existed between authors, publishers, and consumers[4], however, as consequence of the rights demanded for authors by their collectives and the availability of new methods of copying this relationship broke down[5]. Thus from the 1970s onwards consumers and their representatives pressed for more and better rights. With this movement also came pressure from authors and publishers to improve the enforcement of rights. This combined with the expanding scope of copyright which has been evident throughout its history has led to a very evident conflict between authors and publishers on the one hand, and consumers and publishers on the other[6].

In Castle Rock Entertainment, Inc. v. Carol Publishing Group, Inc[7] the U.S. Second Circuit Court of Appeals was asked consider a case concerning the infringement of 86

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[1] 209 U.S. 1 (1908).
[2] 464 U.S. 417 (1984).
[3] See Id. 487.
[4] F. Willem Grosheide, "Copyright Law From a Users Perspective", E.I.P.R. 2001, 23(7), p321.
[5] ibid., p322.
[6] ibid., p321.

episodes of a well known television soap series "Seinfeld by a trivia quiz book entitled "The Seinfeld Aptitude Test". The case is important because it involves the infringement of a number of audiovisual works by a written work. After publication of the quiz book the defendant's alleged copyright infringement and unfair competition, ultimately the latter claim was dropped. Although the defendant claimed the use they made of the plaintiff's works was fair use the district court awarded the plaintiffs damages, enjoined the defendants from producing further copies of the book, and ordered destruction of those copies they still had under their control. Subsequently the defendants appealed, the court applied the "substantial similarity through comprehensive non-literal similarity" test developed in Twin Peaks Prods., Inc. v. Publications Int'l, Ltd[8]. The question here was not whether the original could be recreated from the infringing work, but rather whether the latter and the former were 'substantially similar'. The court was particularly impressed by the fundamental object of copyright as set out in article I, 8, cl.8 of the U.S. Constitution i.e. "[t]o promote the Progress of Science and useful Arts." This is significant because citing the copyright clause of the U.S. Constitution in this context implicitly makes remuneration of the author a secondary consideration.

In applying the four fair use factors set out in s.107 of the U.S. Copyright Act the court held that in relation to the purpose and character of use, the commercial character of the use weighed against the plaintiffs. The fact that the quiz book added little to the reader's experience of the television programme ruled out any possibility that it was 'transformative'. With regard to the nature of the copyrighted work the court took the view that the scope of fair use was narrow in relation to fictional works and must therefore favour the original copyright owner. This was also to be considered in relation to the amount and substantiality of the portion taken. Where the amount taken is substantial this must be consistent with the purpose and character of use. With regard to the effect of use on the potential market for value of the copyright work the court considered not only the actual harm caused to the market for the original, but also the adverse impact of the type of copying engaged in by the

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[7] 150 F.3d 132 (2d Cir. 1998).

defendant if it were to become widespread. On aggregate the court was of the view that allowing the defendants conduct to continue would be contrary to the objectives of the copyright clause. The decision of the court below was therefore affirmed and the appeal dismissed.

The exploitation of copyright works is seldom undertaken by the creator, who usually assigns at least some of his rights, to another party such as a collecting society or a media conglomerate. The terms of assignment are therefore very important in the creation of multimedia works since they determine what the assignee can do with those works. Many of these assignments took place before most digital media were developed consequently such media were not in the contemplation of the parties at the time the assignment was made. The problem of "new uses" is not a new one, however, much still depends upon how broadly the assignment contract was drafted, and how narrowly the courts interpret contractual clauses where these are either vague or absent at the time of assignment.

3.2 The Problem with Multimedia

While multimedia can offer users an enriched and interactive experience, in terms of product development multimedia production is problematic. These problems are, firstly, development risks and high costs. Secondly, multimedia is very dependent on the adoption of consistent communication standards. Thirdly, with multimedia it is no longer possible to distinguish between an author's work and information. Pilny suggests that in future this will lead to the sui generis protection of multimedia works. Further, this may frustrate any conception of 'fair use' since in multimedia works it is difficult to distinguish the different uses being made of a particular work, i.e. private use, commercial use, and educational use[9].

While it is trite to say that multimedia is the convergence of video audio and telephony technologies, the novel component of multimedia technologies derives from

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[8] 996 F.2d 1366, 1372-73.

the way it integrates different media. For regulators the downside of this is the way in which multimedia causes the boundaries between different media to break down[10]. The CDPA does not provide sufficient protection for multimedia works because like many similar statutes it protects the creation of copies[11]; however, distribution of multimedia works over the Internet depends more upon access to works than the creation of copies. Indeed on-line distribution is not distribution as such; it is concerned more with access to databanks that contain digital works[12]. The fact that s.17(6) of the CDPA extends copying to include 'the making of copies which are transient or incidental to some other use of the work' only exacerbates the situation since the operation of the Internet depends upon the creation of transient or incidental copies. Accessing an on-line database may also be classified as rental or public performance; however, this approach has problems[13]. The difficulty with public performance under the CDPA is that certain classes of works (i.e. artistic works) cannot be performed, whereas others (i.e. literary works) can be performed. Similarly under the CDPA certain classes of work (i.e. broadcasts and cable programmes cannot be rented. However, this is more of a problem with the CDPA than copyright law in general. In terms of Anglo-European law rental has problems in terms of works viewed in private. In the U.S.A. and some European countries it can be successfully argued in some situations (i.e. private viewing of broadcasts in hotel rooms) that works viewed in private can be classified as public performance; however, there is no consistency in the international treatment of such private performances. See by way of analogy the decision of the ECJ in Entidad de Gestion de Derechos de los Productores Audiovisuales v. Hostelaria Asturiana SA Hoasa[14], which concerns private viewing in relation to "communication to the public". Here the ultimate decision rested with the Member State.

Although the general publics understanding of 'multimedia works' is limited the use

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[9] Karl H. Pilny, "Multimedia in Germany: Potentials and Problems", Comp.T.L.R. 1995, 1(3), p91.
[10] Jonathan Cameron, "Approaches to the Problems of Multimedia", E.I.P.R. 1996, vol.18, p115.
[11] ibid., p116.
[12] ibid., p119.
[13] ibid., p116.
[14] C-293/98.

of multimedia applications is becoming widespread on the Web. Multimedia can make the users experience of using the web more engaging, especially in terms of e-business, corporate training, higher education, e-learning, and in the sports and entertainment industry. However, the use of multimedia is still limited by lack of bandwidth, and incompatible applications software used by websites. These problems are slowly being addressed, and this may ultimately necessitate the use of multimedia content on the web[15].

It is well established that the streaming of audio, video, and animation can dramatically improve the performance of web-based businesses, especially in the marketing, broadcasting, advertising, news and education industries. Both currently and in future it is projected that the Internet will support real-time applications such as video-on-demand, Internet telephony, distance education and webcasting[16]. Unfortunately this technology is limited by the large bandwidth requirements of multimedia works. The lack of this can cause video images to be relatively grainy and jittery[17]. However, the Internet infrastructure is slowly being upgraded to the point where it can handle the bandwidth requirements of multimedia. In the United States the Abilene Network, a super-fast data pipeline connecting some three-dozen research universities transmits data 45,000 times faster than the best telephone modem[18].

3.3 Legal Classification of Multimedia Products

The system of categories used by Anglo-American copyright law is ill equipped for the protection of a range of products as diverse as multimedia software. Even without the development of new media formats this system is stretched to its limits. Indeed new multimedia formats are liable to render parts of the copyright system obsolete[19]. The oldest multimedia format is the CD-ROM, which has been around for some 20

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[15] M. Anaam Hashimi, and Turgut Guvenli, "Multimedia Content on the Web: Problems and Prospects", Managerial Finance, 2001, 27(7), p40.
[16] ibid., p34.
[17] ibid., p39.
[18] ibid.

years. Multimedia products developed on this format offer a selection of copyright materials, clickable icons, and a hierarchical systems architecture, which is usually searchable using software stored on the CD. While multimedia products may be classified as databases (see Chapter 2), under the CDPA this type of work is most easily classified as a "literary work", or as a "cinematographic film". According to s.3(1) of the CDPA, a literary work is a work which is written, spoken or sung, apart from a dramatic or musical work. However, according to s.3(2) of the CDPA, copyright only subsists where the work is recorded in writing or otherwise[20]. Under s.5(1) of the CDPA a film is defined as "a recording on any medium from which a moving image may by any means be reproduced".

3.4 What is the Smallest Protectable Element of a Multimedia Work?

Digital encoding transforms a multimedia work into a long sequence of bits that can be stored on some form of computer readable media. While this makes the work easy to copy without degradation, it has the added consequence of making adaptation of the work much easier also. Thus small parts of a work can be taken and not just the whole thing. Many of the individual elements in a multimedia work possess their own copyright, this leaves open the question of how big must an individual element of a work be before it attracts copyright protection[21]. While it is often stated that individual words do not attract copyright, the situation is not so clear where the work involved is an image or a piece of music. According to Richard Hill "The essential feature that a work must have in order to be entitled to copyright protection is that it be *an original expression of an idea.*" Clearly the smaller the element of a work copied the less likely it is to have the degree of originality needed to attract copyright protection, and where the copyright protection for the work copied is thin the problem is even greater. Although digitally encoded multimedia works create some special problems the criteria for determining whether the smallest elements of such

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[19] Mark Turner, "Do the Old Legal Categories Fit the New Multimedia Products? A Multimedia CD-ROM as a Film", [1995] 3 E.I.P.R. 107.
[20] Hector MacQueen, "Copyright and the Internet" in *Copyright and the Internet*, OUP 1997, p72.
[21] Richard Hill, "What is the Smallest Copyrightable Element in a Multimedia Work?", Comp. & Law, August/September, 1995, p15.

works attract copyright are the same for conventional printed works where they are text[22].

Because multimedia works aggregate a variety of digital media in the form of a computer program the application of copyright to such works is uncertain. Furthermore, multimedia works can be distributed on any kind of digital memory, including CD-ROMs, floppy discs, and multimedia files. This situation is complicated by the fact that multimedia works can be both interactive and non-interactive[23]. One of the most significant uses of multimedia works is as a form of entertainment. The creation of a typical multimedia game might involve the design of sketches and scenes, which are then made into models of characters and sets and copied onto videotape. Complex computer programs can then be used to create a realistic on-screen depiction of the images. Finally, sound effects and dialogue can be added to the product thereby making it appear something like a cinematographic film[24].

3.5 Interactivity and Problems associated With Interactive Works

The intrinsic nature of interactivity is well summarised by Donald A. Norman who states: "Interactive written media, such as conventional letters, fax, or email, afford the recipient time to reflect on an appropriate answer. Real-time interactive media such as telephone, computer, or talking in person do not afford this reflective time between receiving an utterance and replying. The strength of real-time interactions is in their ability to afford a rich communication of emotions, affect, and intentions."[25] In terms of the copyright in multimedia products this suggests that real-time interactive communications can constitute original expression, however, they are also likely to be less original than their conventional counterparts because they are often composed quickly without much thought. Thus highly interactive products are less likely to give rise to original derivative works (i.e. works created as the result of playing a computer

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[22] ibid., p16.
[23] Anne Fitzgerald and Cristina Fuentes, "Copyright Protection for Digital Multimedia Works", Ent.L.R. 1999, no.2, p23.
[24] ibid., p25.
[25] Donald A. Norman, *The Invisible Computer*, Wellington Graphics 1998, p125.

game), but may also make the user the first person to cause the work to be "fixed". Following this line of argument rights are to be awarded to the user, since the user rather than the programmer is the instrument of "fixation"[26].

In order to classify multimedia works the crucial issue is whether the "aggregate of visual images" can be displayed as a moving picture[27]. This will depend upon whether the work can be produced as a moving picture, and whether a substantial portion of the aggregated work can be so displayed. However, there are problems with this approach where the product has interactive features. Ironically the more innovative the work is the harder it is to protect using copyright. This situation arises because interactive products are by their very nature non-sequential, thus undermining copyright over the "aggregate of visual images". This may also prevent a substantial portion of the work being displayed as a "motion picture". Hence we see that the more opportunity is given to the user to create a derivative work, the less substantive is the contribution of the producer/creator of the work[28].

According to Cameron interactive multimedia is a particular problem for the CDPA because access to and appropriation of content on a multi-point system falls outside of its definition of copying, infringement, substantiality, and broadcasting[29]. Multimedia works also create contractual problems because databases of rights implemented prior to digitisation do not consider electronic uses of the works they contain and are therefore useless for the purposes of multimedia exploitation[30]. Multimedia works are almost by definition derivative works, but under U.K. law this is more problematic because it has no substantive derivative works doctrine. For infringement to occur a substantial part of a work must be taken, however, multimedia works are made up of many component works. These may be insubstantial portions of larger works or copyright works in their own right. Infringement by taking a substantial part is a

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[26] Pamela Samuelson, "Allocating Ownership Rights in Computer-Generated Works", 47 U.PITT.L.REV. 1185, 1202 (1986).
[27] Tanya Aplin, "Not in our Galaxy: Why "Film" Won't Rescue Multimedia", [1999] 21 E.I.P.R. 636.
[28] ibid., p637.
[29] Jonathan Cameron, "Approaches to the Problems of Multimedia", [1996] 18 E.I.P.R. 117.

serious problem for certain types of multimedia work i.e. those that deploy factual compilations and those that use a lot of music and visual images. In terms of factual compilations multimedia producers are bound to run into the same kind of problems as the British Horseracing Board encountered in the recent House of Lords decision, especially in relation to the taking of a lot of insubstantial portions over time. In terms of visual images and music much will depend upon how original the work is, the type of work, whether it is copyright, and how much of it is taken. However, when all these elements are mixed together and used to create a new derivative work, the assessment of what constitutes "a substantial part" becomes very complex.

3.6 Multimedia and the Public Domain

The idea of the common ownership of property is a very old one. This first developed in relation to the ownership of land and was subsequently adopted as one of the fundamental precepts of intellectual property law[31]. As originally drawn "common ownership of property" ("the right of common") referred to the rights of individuals to utilise private land (i.e. the produce of the soil). In terms of intellectual property this evolved into the concept of "public domain", an area (i.e. works that are out of copyright) over which individuals or organisations have the right to exert authority. In both cases this right has steadily been eroded, however, this erosion has been swifter and more insidious in the case of intellectual property, since unlike land this is not protected by environmental considerations. The public domain has been privatised in the name of the author, yet those that wield such rights are usually giant corporations rather than individuals. Although the public domain has few disputants to defend it, it is nonetheless important since almost everyone relies upon public domain resources without which the creation of multimedia works would be impossible[32].

Copyright only extends to creative expression, not facts or ideas. Furthermore, protection only lasts for the life of the author plus a period of years. This period will

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[30] ibid., p116.
[31] Jeremy Philips, "The Diminishing Domain", [1996] 8 E.I.P.R. 429.
[32] ibid., p430.

vary between countries and in the United States this may depend on the renewal of registration. In the European Union the Duration Directive[33] has fixed this period at the higher term of the life of the author plus 70 years, once this period has elapsed a work will become part of the 'public domain'[34]. This term is also effective in the United States since 1996 following the introduction of the Sonny Bono Copyright Term Extension Act of 1998 (CTEA). This situation is a huge problem for multimedia creators who rely on the public domain for much of their material. Whether a work is in the public domain will depend upon whether the author is dead, and how much time has elapsed since that date. Public domain status also depends on the type of work involved and where it was originally published[35]. In the U.K. this is also affected by whether there is an identifiable author. Where an author is not identifiable s.66A of the CDPA creates an assumption that copyright has expired if it is not possible to identify the creator after reasonable inquiry[36]. In relation to sound recordings made in the United States before 1972 the situation is particularly complicated. On February 15, 1972 the Sound Recordings Act of 1971 came into effect. Prior to this date sound recordings did not enjoy the protection of federal copyright law. The effect of this is to say the least ambiguous. One way of interpreting this situation is to say that state laws are applicable prior to1972; another school of thought would treat such recordings as unpublished works. This situation is further complicated by the multiple layers of protection accorded to music; as a sound recording, as a performance, or as a score[37].

3.7 The Public Domain and Duration of Copyright

Since its inception by the Statute of Anne in 1711 copyright has been a right that subsists for a limited time only, however, as time has passed the length of this period has increased. In 1886 the Berne Convention was ratified, in Berlin in 1908 this set

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[33] Directive 93/98 harmonising the term of copyright and certain related rights.
[34] Michael Seadle, "Copyright in the networked world: sound publication", Library Hi Tech, 2001, 19(2), p189.
[35] ibid.
[36] ibid.
[37] ibid., p194.

the term of copyright at a minimum of life of the author plus fifty years, a term that was granted for the most creative works. Thus the term of copyright differs according to the type of work, computer generated works and phonograms for example being granted a lesser period of protection. Before the early 1990's the term of protection in Europe differed between countries, and to a lesser extent still does. In Germany the term of protection is life plus 70 years, in Spain the term was life plus 60 years, and in France the term was life plus 70 years for musical works. Such inconsistencies are incompatible with the internal market and the Commission spurred by the Patricia case (EMI Electorola v. Patricia im und Export[38]) set about harmonising the period of protection throughout the EC and eventually the EEA. In that case goods from Denmark, where their copyright had expired, were imported into Germany where the copyright term was longer. The ECJ held that German copyright law could be used to prevent the import of these goods thereby dividing the single market. In the Phil Collins Case[39] an illegal recording of the plaintiff's performance was made in California and marketed in Germany. The plaintiff sued in a German court, but lost as he was accorded lesser rights than a German citizen because Germany was not then a member of the Rome Convention, and because the recording was not made in Germany. There was also a parallel case involving Cliff Richards, which involved an illegal recording made in the U.K. and marketed in Germany. The plaintiffs appealed to the ECJ on the ground that they had been discriminated against by German law on the basis of their nationality. Furthermore, it was alleged that this was contrary to Article 7 of the EC Treaty, which prohibits discrimination within member states on grounds of nationality. The court held that Article 7 of the EC Treaty applied to intellectual property and that Article 7 had been contravened in both cases. This confirms the principle that the rules regarding comparison of terms i.e. that terms of protection should be granted on a reciprocal basis, cannot be used to discriminate against the nationals of other E.U. member states.

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[38] (C341/87) [1989] F.S.R. 544.

[39] Collins v. Imtrat Handellschaft Gmbh (C92/92) Times, November 19, 1993 (ECJ).

3.8 The Term Directive

The first proposal for the Duration Directive was presented by the Commission in March 1992 and was then subject to many amendments before the final version was published on 29 October 1993. The basic aim of the Directive is to harmonise the term of protection itself, the event that triggered the running of the term, and the date from which the term was to be applied throughout Europe[40]. The term of protection under the Directive was rounded upwards to life plus 70 years. The reasons given for this were first that according to Recital 5 of the Directive people live longer, and since copyright was intended to give protection for two generations life plus 50 years were no longer enough. The second reason given in Recital 9 of the Directive was that it was contrary to the principles of Community law to reduce existing levels of protection. The fact that people live longer surely extends the duration of copyright, usually for the benefit of the company to which they have been assigned and since remuneration of authors is not the primary purpose of copyright the first reason is unsound. As regards the second reason this seems to be a case of the tail wagging the dog. Simply because one state chooses to adopt a longer term does not justify the usurpation of international minima. While this creates problems it is no more problematic than increasing the term of protection. Another reason that may be given for increasing the term upwards is that the creation of some works like multimedia works requires a longer term to recoup the high level of investment involved. However, given the fact that product life cycles for new products are diminishing rather than lengthening the argument seems a rather shallow one.

The traditional copyright category that is nearest to multimedia works is the cinematographic works category, under Article 2(1) of the Directive the author of such works is considered to be the director. The term of life plus 70 years designated for these works will start to run after the death of the last co-author, the designation of co-authors being left to member states. Multimedia works are usually works of

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[40] Alessandra Silvestro, "Towards E.C. Harmonisation of the Term of Protection of Copyright and so-called Related Rights", Ent.L.R. 1993, p73 at p77.

joint authorship, according to Article 1(1) of the Directive the term of copyright is to be calculated from the death of the last surviving author. This has the unfortunate effect of making the term very difficult to calculate. According to Article 6 of the Directive photographs are also protected for the life of the author plus seventy years, however, the photographs must be "original in the sense that they are the author's own intellectual creation", a phrase that is not defined by the Directive. In relation to collective works Article 1(5) makes the term run from the date of publication of each individual part, thus effectively creating perpetual copyright. Article 1(4) of the Directive discriminates against legal persons in relation to collective works by applying the lesser term set out in Article 1(3) i.e. seventy years after the work is made available to the public. According to Article 3 related rights are to run for 50 years after the date of performance. Also Article 8 of the Directive states that terms set out therein "are calculated from the first day of January of the year following the event that gives rise to them." Significantly Article 9 of the Directive excludes moral rights from its application. Further, the Directive has the unusual effect of reviving copyright in some states and Article 10(2) obliges states to make provisional arrangements for this eventuality.

3.9 The Copyright Term Extension Act

The situation in the United States regarding pre-existing works is not as extreme as in Europe; nonetheless the legislation bringing the term of copyright of life plus 70 years into force in the U.S. is currently under challenge in the Supreme Court. Allegedly the origins of the Sonny Bono Copyright Term Extension Act 1998 (CTEA) lie in the desire of executives of the Walt Disney Corporation to prevent expiration of their copyrights in Mickey Mouse, Pluto, Goofy and Donald Duck in 2003. The CTEA was enacted after a period of intense lobbying in Congress by the media industry. It extends the term of copyright protection in the U.S. by 20 years for works that became copyrighted after 1 January 1923. For works produced by companies after

1978 the term of protection is 95 years[41]. Unlike Directive 93/98 however, the CTEA does not take works out of the public domain, it simply extends the term of copyright of works that have not yet fallen into the public domain. In 1999 a group of individuals led by Eric Eldred, concerned about erosion of the public domain filed a suit that challenged the validity of the CTEA. They argued that Article I, 8, cl.8 of the U.S. Constitution placed a substantive limit on the power of Congress to increase the term of copyright i.e. granting rights to authors for "limited times". Secondly, they argued the Copyright clause limited the power of congress to promoting the progress of science and the useful arts. Thirdly, they argued that the CTEA fell foul of First Amendment rights concerning freedom speech, especially given the fact that it did not "promote the Progress of Science and useful Arts". After the district court rejected the action the plaintiffs appealed to the D.C. Court of Appeals. In Eldred v. Reno[42] the Court of Appeals affirmed the court below unanimously rejecting the First Amendment Claim and holding that the copyright Clause did not place a "substantive limit" on the power of Congress to extend the term of copyright. However, on 19 February 2002, the Supreme Court granted Certiorari to hear the case[43].

In the appeal case of Eldred v. Ashcroft[44] the appellant's arguments were (1) that the U.S. Congress had exceeded it's authority by extending existing copyrights; and (2) that this extension had violated the freedom of speech rights enshrined in the First Amendment. With regard to the first argument the Supreme Court held by a majority of 7: 2 that the extension of copyright in the CTEA was part of an unbroken practice of giving the authors of existing copyrights the benefit of term extensions in order that a level of parity between past and present authors was maintained. The extension was for a limited term that fell within the ambit of the constitutional grant since the term of copyright was for a limited time and therefore was not perpetual.. In relation to the second argument the court held that because expression rather than ideas were

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[41] Chris Sprigman, "The Mouse That Ate The Public Domain: Disney, The Copyright Term Extension Act, And Eldred v. Ashcroft", 5 March, 2002, p1. Available from: http://writ.news.findlaw.com/commentary/20020305_sprigman.html. on 6/4/02.
[42] 239 F.3d 372 (D.C. Cir. 2001).
[43] See Eldred v. Ashcroft
[44] (Case No. 01-618 U.S. Sup. Ct. 15, January 2003).

protected by copyright and ideas are not the exclusive property of the author the First Amendment did not apply. Furthermore, the First Amendment was not applicable since there were fair use exceptions in the CTEA during the 20 - year extension. Here the Supreme Court seems to have missed the point; copyright is first and foremost designed to promote science and the useful arts, not the interests of authors. Further, the decision is not in the long term interests of authors since it is economically unsound and will in fact promote yet more piracy. Consumers will simply not view the sale of the same old product in new wrapping as a fair deal and this is likely to make them more inclined to acquire illegal copies.

3.10 Two-dimensional Representations of Three-Dimensional Works

One of the key difficulties involved in protecting multimedia works using copyright is the fact that the classifications into which copyright works are divided do not necessarily fit multimedia works, which straddle the boundaries of these classifications. It has long been understood that copyright works may benefit from protection in more than one of these classifications. A film for example can be protected as a cinematographic work, its sound track can be protected as a musical work, and the dialogue of the film (or rather the script on which it is recorded) can be protected as a literary work[45]. However, the different copyright classifications afford different levels and kinds of protection, i.e. different terms of protection, and a different interpretation of what constitutes a 'substantial part'. Given the high-resolution 3D graphics enabled by multimedia software, it is highly desirable that both the three dimensional image and the two dimensional representation of the image, as well as the computer code underlying the image be protected. If this is not the case legal loopholes are created, which pirates will not hesitate to exploit. For example Burchett J. in Galaxy Electronics Pty Ltd. v. Sega Enterprises Ltd[46] says of the video Virtua Cop" "The programme itself was extremely sophisticated. It calculated the three-dimensional position of each part of each object and character at each stage of all movements. An example of the sophistication involved is the windscreen of a car,

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[45] Electronic Techniques (Anglia) Ltd. v. Critchley Components Ltd. [1997] F.S.R. 401, p413.

which is shown three-dimensionally, with a superimposed two dimensional image of a reflection of the sky appearing on it."

Where a three dimensional work infringes a two dimensional work much hinges on whether the two dimensional work is protected as a literary work or an artistic work. In Anacon Corporation Ltd. v. Environmental Research Technology Ltd[47] Jacob J. considered a case involving the infringement of a computer program, engineering drawings, and circuit diagrams by circuit boards incorporated in an electronic dust meter. While the court was satisfied as to the validity of the claim of copyright infringement relating to the computer program and the drawings, there remained an issue as to whether the plaintiff's copyright in the circuit diagrams was infringed; this the plaintiffs claimed was achieved by the creation of a "net list" (a list of all the components in a circuit, what each component is connected to and the way in which it is connected) and circuit boards copied from the plaintiff's circuit boards. The court held that the circuit diagrams were sufficiently original to attract copyright protection. Secondly, a net list had been made from the diagrams[48]. Thirdly, the definition of "literary work" in s.178 of the CDPA was wide enough to include a circuit diagram[49]. Fourthly, by applying the decision in Interlego AG v. Tyco Industries Ltd[50] where it was held that a substantial part of an artistic work (especially drawings) was taken only where this is "visually significant". It was possible to determine that the copying in the present case was not substantial enough to amount to infringement[51].

In the subsequent case of Aubrey Max Sandman. v. Panasonic (U.K.) Ltd[52] Pumfrey J. considered the alleged infringement of two two-dimensional circuit diagrams by circuits that were incorporated into the plaintiff's electronic audio equipment, this equipment was manufactured outside of the U.K., but specially adapted for sale in the U.K.. Subsequently there was an application by the first defendant to have the action

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[46] [1997] 403 F.C.A. (23 May 1997).
[47] [1994] F.S.R. 659.
[48] See Id. at 661.
[49] See Id. at 663.
[50] [1988] R.P.C.343.
[51] Anacon Corporation Ltd. v. Environmental Research Technology Ltd. [1994 F.S.R. 659, 662.

struck out on the ground that there was insufficient similarity between the plaintiff's diagrams and the defendant's circuits. The court held, firstly, that copyright could subsist in a circuit diagram was undoubted. Secondly, the court followed Anacon insofar as it was of the view that three-dimensional object could infringe two-dimensional objects. Secondly, a circuit diagram could be an artistic work, but protection of circuit diagrams as artistic works was restricted to cases where there was some degree of visual similarity between the two, the determination of this being a matter for the judge[53]. Thirdly, while an expert witness could use words or figures in a drawing to aid his understanding of it, it was not true that literary and artistic copyright simultaneously subsisted in the work. Fourthly, there was no visual similarity between the circuit diagram and the circuit board. However, it would not be right to strike out the plaintiff's claim since both the scope of the relevant copyrights and the standard of similarity was unclear[54].

Arguably the leading English authority concerning the infringement of a two-dimensional work by a three dimensional copy is Interlego A.G. v. Tyco Industries, Inc[55], while this is a Privy Council case originating in Hong Kong and founded on subordinate legislation it has strong persuasive authority. The case concerned drawings of toy bricks manufactured by the plaintiff. It being alleged that plaintiff infringed those drawings by openly reverse engineered the bricks in question. The plaintiff originally protected its products using patents, however, these had expired and the defendant sought to protect copyright in the revised drawings of the bricks. Consequently they were claiming that the defendant had copied copies of copies (although these had some small but significant modifications). The defendants therefore claimed that the drawings in question were not sufficiently original to attract copyright protection. The Hong Kong Court of Appeal held that copyright did not subsist in the drawings made before 1973, but that copyright did subsist in the drawings made after 1972 even though they were drawings of earlier drawings.

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[52] [1998] F.S.R.651 (Ch.D).
[53] See Id. at 655.
[54] See Id. at 661.
[55] [1989] A.C. 217.

Subsequently the plaintiffs cross-appealed to the Privy Council, which held that despite the functionality of lego bricks the drawings of the pre 1973 bricks did attract copyright. The court stated that: "The Lego brick could not have achieved the commercial success that it has if it did not look as much like an authentic building brick as is consistent with its technical function. In this sense its function is to appeal to the eye."[56] With regard to the test for originality the court said: "What is protected is the skill and labour devoted to making the 'artistic work' itself not the skill and labour devoted to developing some idea or invention communicated or depicted by the 'artistic work.'"[57]. In relation to the meaning of "original" when a work is copied the court stated that: "The word "original" means the same for literary works as it does for artistic works. What the author produces need not be new in an absolute sense. There must be original creative input by the author. If in copying something is added, it is a question of degree whether that makes it an original artistic work or not. The skill and labour in doing the copying is irrelevant. There must be sufficient new material in a derivative work to give rise to copyright."[58] Hence the post 1972 drawings were not entitled to protection as copyright works, and even if they were a substantial part of those works was not taken[59].

In Electronic Techniques (Anglia) Ltd. v. Critchley Components Ltd[60] Laddie J. considered another case involving infringements of circuit diagrams by a three dimensional object. In this case the object in issue was a tiny transformer, the circuit diagrams were taken from data sheets produced by the plaintiffs, and in which they claimed both literary and artistic copyright. Notably the copying took place over a period of years and involved the regular taking of insubstantial portions of the data sheets. Subsequently the plaintiffs sued for infringement of their copyright, infringement of their design right and passing off. This included an application for summary judgement, and an application to strike out some parts of the defendant's defence concerning the design claim. The plaintiffs sought an injunction to restrain

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[56] See Id. 246.
[57] See Id. 265.
[58] See Id. 232.
[59] See Id. 265.
[60] [1997] F.S.R.401.

infringement, delivery up of infringing documents, damages for flagrancy in accordance with s.97(2) of the CDPA, and account of profits.

The court held firstly, that the copying of insubstantial parts of the data sheets over a period of time created a possible defence of lack of substantial copying[61]. Secondly, the defence of insubstantial copying was credible at least in relation to some of the data sheets. Thirdly, the copyright category into which a work is to be placed is significant in terms of both the duration and scope of copyright[62]. Fourthly, the decision in Anacon merely confirmed that literary copyright subsisted in the "net list", this did not extend to the graphical elements connecting individual parts on the list[63]. Fifthly, summary judgement was not appropriate in the present case since the plaintiff's claim was not sufficiently strong to justify depriving the defendant of the opportunity to defend itself at the full trial[64].

3.11 Photographs

While artistic works that are 'public domain' in theory belong to the public, the reality may be very different. The public may, not photograph for example a painting belonging to an art gallery, because this is contrary to museum policy. While the museum may provide authorised photographs of the painting these will be subject to copyright restrictions. Thus members of the public are unable to obtain free access to the painting despite the fact it is in the 'public domain'[65]. This situation comes about because the courts in the U.K. and the U.S.A. allow photographs and similar reproductions to have their own copyright insofar as they are different from the original. Although the protection is thin and only protects the original elements of the reproduction, this often sufficient to allow trustee's to retain control over a public

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[61] See Id. 411.
[62] See Id. 413.
[63] See Id. 414.
[64] See Id. 415.
[65] Kathleen Connolly Butler, "Keeping the World Safe From Naked-Chicks-In-Art Refrigerator Magnets: The Plot to Control Art Images in the Public Domain Through Copyrights in Photographic and Digital Reproductions", (1998) 21 Hastings Comm. & Ent.L.J. 58.

domain work[66]. The variations in reproductions that are protected must not be mere by-products of the process that produced them, and the grant of copyright must not affect the public domain status of the work[67]. Arguably this is contrary to the spirit of copyright, which is intended to encourage new contributions to the visual arts rather than the dissemination of old ones. According to Nimmer some photographs may not merit copyright protection because of their lack of originality[68]. Any digital reproductions may devalue works of art because of their inability to copy colour, and texture properly. Further, conversion between mediums may inherently change the nature of the work in ways that owe nothing to independent, artistic effort[69]. Ultimately copyright in digitised reproductions will be hard to sustain because of the difficulty of differentiating lawful and unlawful copiers, especially given the laws reluctance to define what art is[70].

Subsequent to the Interlego case there was little authority regarding the copying of pictures until Bridgeman Art Library Ltd. v. Corel corp[71]. This case is curious in a number of respects, firstly it involved a British museum fighting an alleged infringement of a transparency of a painting from its collection in the United States, secondly, the court failed to follow the leading U.K. authority, the Graves case[72]. The case was decided under both U.K. and U.S.. law and involved exact photographic copies of public domain works of art. Thus the defendants contended that the transparencies were insufficiently original to attract copyright protection.

The court cites the U.S. case of Batlin & Son v. Snyder[73] as authority for the proposition that artistic works must be original, the test for 'originality being one of "distinguishable variation" i.e. something which goes beyond technical skill. The case itself involved a plastic reproduction of an iron Uncle Sam moneybox, however, the

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[66] ibid. p74.
[67] ibid., p111.
[68] ibid., p91.
[69] ibid., p113.
[70] ibid., p117.
[71] 36 F.Supp.2d 191 (S.D.N.Y. 1999) and 25 F. Supp. 2d 421 (S.D.N.Y.).
[72] (1869) 4 L.R.Q.B. 715.
[73] 536 F.2d 486 (2d Cir. 1976).

variations were held to be trivial. Notably this case was based on the U.S. Copyright Act 1909. In an earlier U.S. case Alva Studios v. Winniger[74] also decided under the U.S. Copyright Act 1909 it was decided that an exact reduced scale reproduction of Rodin's Hand of God was an original work because of the artistic skill and judgement exercised in its creation. This would indicate that the Batlin case is inconclusive authority. While the decision of the Supreme Court in Feist Publications, Inc v Rural Telephone Service Co[75] supports Batlin insofar as a photograph can be regarded as a literary work, however, U.K. law does not treat photographs as literary works (See Burrow-Giles Lithographic Co v. Sarony[76]).

In relation to U.K. law the court was of the view that the Graves case was irrelevant because it predated modern conceptions of originality in the law of copyright. This is at least partly supported by a statement in obiter by the Privy Council in the Interlego case[77]. Instead the court observed passages from a copyright treatise written by Hugh Laddie, thereby reaching the conclusion that the making of a photograph of a painting or drawing was analogous to making a photocopy of it. Such a copy was a slavish copy and would thus have insufficient originality to be a copyright work. This view is plainly wrong since the work of a skilled photographer is not analogous to the making of a photocopy. Interestingly though this analogy does work in relation to at least some digital copies. Indeed the English Court of Appeal in The Reject Shop plc. v. Manners[78] held that a slightly enlarged image produced on a photocopier was not an original work since there was no substantial difference between the original drawings and the image produced from them. The significance of the decision lies in the fact that it challenges the monopoly control over public domain artworks exercised by art galleries by controlling access to works and controlling their images by photographing them. This gives rise to copyright in public domain works, copyright that is effectively perpetual[79]. Furthermore, if not all photographs are original, and digitised images are

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[74] 177 F.Supp. 265 (S.D.N.Y., 1959).
[75] 499 U.S. 340 (1991).
[76] 111 U.S. 53, 4 S.Ct 279, 28 L. Ed. 349 (1884).
[77] See at p251F-G.
[78] [1995] F.S.R. 870.
[79] See note 66 above, p74.

photographs this lays open to question the subsistence of copyright in digitised images[80].

More recently the Chancery Division of the High Court rejected the persuasive authority given by the U.S. district court in the Bridgeman case in Antiquesportfolio.com Plc. v. Rodney Fitch & Co. Ltd[81]. In that case the court had to consider whether there was a repudiatory breach of contract by a company hired to develop an antiques website as a result of it having included allegedly infringing material from an encyclopaedia. In tandem with this the court was forced to consider whether certain photographs of antiques were sufficiently original to attract copyright under s.1(1)(a) of the CDPA, the incorporation of infringing material in the website being cited as a breach of contract. Justice Neuberger was of the opinion that even a photograph of a piece of pottery involved sufficient aesthetic or even commercial judgement to attract copyright[82]. At the conclusion of the case he ruled in favour of the plaintiffs since the breach was not sufficient to be a repudiation of the contract although there was some question as to the amount of any setoff. The court in this case is somewhat extreme in that it permits the most mundane of copies to be considered copyright even where any effort expended is purely technical[83]. Indeed in his article of 2001 Deazley[84] advocates the approach of the Bridgeman court citing Woodfall J. in Geographia Ltd v. G.W. Bacon & Co. Ltd and Lord Oliver in Interlego to show that the matter is still open to debate[85]. He also draws upon the traditional judicial disapproval in relation to the over-extension of copyright through the making of very small alterations to an existing work[86]. Finally Deazeley quotes Lord Oliver in Interlego where he states "skill, labour or judgement merely in the process of copying cannot confer originality"[87].

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[80] Hugh Laddie, Peter Prescot, & Mary Victoria, *The Modern Law of Copyright and Design* , Sweet & Maxwell 1995, para 3.56 at p238.
[81] [2001] F.S.R. 23.
[82] See Id. p347.
[83] See Id. 353.
[84] Ronan Deazley, "Photographing Paintings in the Public Domain: A Response to Garnett", [2001] E.I.P.R., 23(4), pp179-184.
[85] ibid., p183.
[86] ibid., p184.
[87] ibid.

Inevitably multimedia text and images must be stored as software, even where images are three-dimensional, however, this does not necessarily make those works easier to protect. In the United States s.102(b) of the Copyright Act 1976 (U.S.A.) expressly prohibits protection of ideas, it states: "In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work." However, in Computer Associates v. Altai[88] the U.S second circuit court of Appeals adopted a three-stage test for copyright infringement that could include the underlying ideas incorporated into computer program. The "abstraction" stage broke the computer program down into its constituent parts, the "filtration" stage removed the public domain elements of those parts, and the "comparison" stage compared what remained with the original program[89].

Article 1(2) of the Software Directive[90] denies protection to the ideas and principles that underlie computer programs. However, the Copyright (Computer Programs) Regulations 1992[91] do not enact this exclusion, thereby theoretically opening the door to the protection of ideas in the U.K.[92]. While Article 9(2) of TRIPS specifically prohibits the protection of ideas much still depends what we mean by ideas. According to Lord Wilberforce in L.B. (Plastics) Ltd v. Swish Products Ltd[93] there can be no copyright in a mere idea. However, Cooke J. in the New Zealand case of Frank M. Winstone (Merchants Ltd v. Plix Products Ltd[94] held that a mere verbal description was sufficient to infringe a copyright design. As abstract forms their protection is prohibited, however the position is less clear as we near the boundaries

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[88] 982 F2d 693 (1992).
[89] Peter Stone and Peter Groves, "Filtering the Functional out of Computer Programs", Bus. L.R., February 1997, p27.
[90] Directive 91/250 on the legal protection of computer programs.
[91] S.I. No. 3233 of 1992.
[92] See note 89 above, p26.
[93] [1979] R.P.C. 551, 619.
[94] [1985] NZLR 376.

of the idea/expression dichotomy. In Richardson v. Flanders[95] the court was in favour of such an approach as embodied in the abstraction/filtration comparison test used in Computer Associates. Ferris J. states: "But at the stage at which the substantiality of any copyright falls to be assessed in an English case the question which has to be answered, in relation to the originality of the plaintiff's program and the separation of the idea from its expression is essentially the same question as the United States court was addressing in *Computer Associates.* In my judgment it would be right to adopt a similar approach in England."[96]

However, Jocob J. subsequently disavowed this approach, stating: "The fact is that United States copyright law is not the same as ours, particularly in the area of copyright works concerned with functionality and of compilations. The Americans (many would say sensibly) never developed copyright so that functional things like exhaust pipes could not be copied. This is partly due to their statute, which is different from our Act. The United States Copyright Code itself sets the law against protecting function."[97] In relation to the courts position on the copying of ideas in the U.K. Jacob J. says that: "The true position is that where an "idea" is sufficiently general, then even if an original work embodies it, the mere taking of that idea will not infringe. But if the "idea" is detailed, then there may be infringement. It is a question of degree. The same applies whether the work is functional or not, and whether visual or literary. In the latter field the taking of a plot ("the idea") of a novel or play can certainly infringe if that plot is a substantial part of the copyright work."[98] The problem with this approach is that with digital works, and certain newer programming techniques such as object oriented programming the idea and the expression of the idea are merged together, and it is not necessarily possible to separate data from programming. Where the program is interactive this situation is further confused by the addition of unpredictable user input. While complex multi-stage tests will struggle with this situation, merely saying infringement is a matter of degree is even more

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[95] [1993] F.S.R. 497.
[96] See Id. 526.
[97] IBCOS Computers Ltd. v. Barclays Mercantile Highland Finance Ltd [1994] F.S.R. 275, 292.
[98] See Id. at 291.

likely to produce inconsistent results.

3.12 Video Games

In the early 1800's the English mathematician Charles Babbage wanted to develop a method of playing Tic-tac-toe and Chess on a machine in order to finance the construction of his Analytical Engine[99]. The first video games became available in the early 1970's. The first arcade video game, 'Computer Space' was marketed and produced by Nutting Associates in 1971. By 1972 Atari, a rival company set up by one of the founders of Nutting Associates produced a simulated tennis match called 'Pong', the first commercially successful video game. It was not until 1975 that a home version of 'Pong' was produced[100]. In 1977 Atari produced the 'Video Computer System', a cartridge game system[101]. The games were encoded on ROM chips, which were housed in the games cartridge. By 1985 the demand for cartridge game systems began to decline because the standard of home systems became far inferior to arcade games. However, in 1985 Nintendo introduced the Nintendo Entertainment System. This sought to emulate arcade video games, using a pad controller instead of a joystick, and producing the hardware as a loss leader in order to sell the software[102]. Every computer games system has a user control interface that allows the user to interact with the game, a CPU that provides the processing speed for interactive games, and RAM to provide the memory for the on-screen representation. Computer games must also have a software kernel that acts as the consoles operating system and provides a common interface between different pieces of hardware[103]. Finally the game system must have a power supply plus audio/video output. Furthermore, the games software must be stored on some medium of storage, the two most common storage media for video games is CD-ROM and DVD. Most consoles also have a dedicated graphics chip, which provides mapping, texturing,

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[99] Donald D. Spencer, *Game Playing With Computers*, Second Ed., Hayden Book Co, Inc. 1975, p9.
[100] Jeff Tyson, "How Video Game Systems Work: A Short History", 2002, p1. Available from: http://www.howstuffworks.com/video-game2.htm on 2/21/02.
[101] ibid., p2.
[102] ibid., p3.
[103] See note 99 above.

geometric functions, and video output. An audio chip will handle stereo output, and in some instances digital surround sound[104]. In his article on video games Jeff Tyson identifies ten main classes of video game, namely action adventures, simulations, sports, roll-playing, fighting, puzzles, shooting games, platform games (i.e. Sonic the Hedgehog), racing, and conversion games (i.e. Who Wants to Be a Millionaire)[105].

An early European case concerning the legal protection of video games is Re: Copyright Protection for Computer Games[106]. A case where the Bavarian Court of Appeal stated in relation to a criminal prosecution that the fixation and medium on which a computer game were stored were irrelevant so far as its entitlement to copyright protection was concerned. The only difference between video games and cinematographic films were in the "quality of personal intellectual creation". Thus a video game could qualify for protection as a cinematographic work so long as it created the impression of movement. The mere display of a succession of moving images would not qualify for protection. However, the possible intervention of the player in this sequence did not prevent the on-screen presentation having the character of a sequence of images because any changes so made were already pre-programmed making it impossible for the player to create a derivative work. Finally, both the cinematographic work and the underlying computer program were entitled to separate protection. Section 2 of the French Copyright Act 1957 protects copyright in all original copyright works regardless of merit. Thus video games are protected under the section unless there is some reason for regarding the work as insufficiently original to attract copyright. In the French case of Williams Electronics Inc. v. Claudie Tel[107] an imported American video game called "The Defender" was denied copyright protection for the purposes of a criminal prosecution on the grounds that the work was not very original and the user could transpose the various elements of the work. Furthermore, it had not been proven that the designer of the work intended to create an aesthetic or artistic work, thereby countering any analogy with the work of a film

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[104] See note 99 above, p2.
[105] See note 99 above.
[106] (Case 4 St RR 64/92) [1994] E.C.C. 354.
[107] [1987] E.C.C. 215.

director. Since criminal law required the work to be intangible i.e. unchanged by the user, the work was not protected for the purposes of criminal copyright law. On appeal the French Cour de Cassation held that the originality of a work could not be challenged merely because the player of the game has some control over the sequence of events. The court further found that s.2 of the Copyright Act 1957 protects video games regardless of whether the designer intends to create an aesthetic or artistic work.

In the French case of Jean-Marc Vincent v. S.A. Cuc Software International[108] the defendants produced an interactive multimedia game entitled "Urban Runner" incorporating images, sound, text, and software; the images, text, and sound were being displayed/played simultaneously. In producing this video the defendants concluded a "contract for the supply of services contributing to a collective work" with the defendant who contributed the filming and animation scenes. After learning of the defendants' intent to make changes to his work the plaintiff notified the defendants that he wished to be notified of any such changes before they were made. Following completion and delivery of his contribution the plaintiff discovered that the defendants in the process of assembling the different elements of the video had altered his work had failed to comply with the notice. Subsequently the game went on sale as a CD-ROM and the plaintiff obtained a court order for seizure for infringement. An action was then brought by the defendants in the district court, which in dismissing the action against the writ, ordering the plaintiff to pay damages found the action to be unfounded and that Urban Runner was a collective work. On appeal to the Versailles Court of Appeal the court held that the video was not an audio-visual work because there were technical obstacles to the mobility and clarity of the images and necessitating the use of an off-screen voice and texts. The result is that the audio-visual part of the work is secondary or even marginal. As a result the plaintiffs could not plead L121-5 and L121-6 of the Intellectual Property Code, which only consider audio-visual works. Further, while the work fell within the definition of "collective work" set out in L.113-2 of the code, it was also clear that there was no severable

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[108] [2001] E.C.C. 21.

right in the completed whole. Even though the making of modifications was necessary for completion of the work, the right of respect for the work prohibits alteration of the work without the author's consent, or at a minimum notifying the author of such alteration. In fact this rule was referred to in the contract between the parties.

An early U.S. case concerning the copyright in video games is Stern Electronics, Inc. v. Kaufman[109] where the defendants challenged the preliminary injunction that prevented it from distributing its "Scramble" arcade game. Previously the plaintiffs had licensed the game from a Japanese company under the name "Scramble". The game was stored mostly in a PROM as well as other parts of the device. The defendants produced a "knock off" product that reproduced the sounds and screen displays of the original product without reproducing the text of the software. The plaintiffs claimed copyright and trademark infringement and sought a preliminary injunction. This claim was upheld by the district court so the defendants appealed contending that the video game did not qualify as an audio-visual work since it was neither "fixed in any tangible medium of expression" nor original within the meaning of s.102(a) of the Copyright Act 1976 (USA). The U.S. Second Circuit Court of Appeals in affirming the decision of the court below held that the video game did fall within the definition of an audio-visual work since it satisfied that statutory requirement of a "copy" in which the work is "fixed". Section 101 of the Act defines "copies" as "material objects ... in which the work is fixed by any method known or later developed, and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device" and states that a work is "fixed" when "its embodiment in a copy ... is sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration." In this case the audiovisual work was stored in the machine's memory devices and could be viewed with the aid of a VDU. The court was also of the view that the user's participation did not withdraw the work from protection, and that the repetitive nature of many of the sequences within the game qualified it as an audio-visual work, equally this repetition satisfied the fixation

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[109] 669 F2d 852 (1982).

requirement.

In a subsequent case Midway Mfg Co v. Artic International, Inc[110] the defendant argued that circuit boards designed to speed up the operation of its video games did not infringe the plaintiff's copyright in video games that were not protected as audiovisual works under s.101 of the Copyright 1976 (U.S.A.) and therefore did not infringe the plaintiffs exclusive right to create derivative works under s.106(2) of the Act. Here the Seventh Circuit Court of Appeals analogised the playing of a video game to arranging words in a dictionary into sentences or putting the paints on a palette into a painting. Thus there were questions as to whether the game was protected as an audiovisual work and whether there was sufficient creative effort involved in the playing of the video to make the player the inventor of the game. However, the court found the playing of video games to be more analogous to changing channels on a television set, and therefore involving insufficient creative input to make the player its creator. The court found that the games were audio-visual works within the meaning of the Copyright Act 1976 (U.S.A.) and that the speeding up of the game was sufficient to create a derivative work under s.117 of the 1976 Act. The presence of a significant market for speeded up video games was of considerable importance here. However, it may be more difficult to assert the owners exclusive right to create derivative works where a video game is more complex. In a recent U.S. case Micro Star v. Formgen[111] the Ninth Circuit court of Appeals held that a company marketing new levels of a computer game created using the plaintiff's software had created infringing derivative works. This was so even given the fact that none of these new levels of game software incorporated any aspect of the game in fixed form[112]. This outcome may be owing to the emphasis of fair use on the effect upon the market for value rather than the flexibility of the U.S. Copyright Act.

A significant case concerning the application of the fair use doctrine where video

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[110] 704 F2d 1009 (1983).
[111] 154 F3d 1107 (9th Cir. 1998).
[112] Mark Lemley et al., *Software and Internet Law*, Aspen Law and Business 2000, *p211.*

games are copied is Sega Enters. Ltd v. MAPHIA[113], here the court found that use was commercial when an individual downloaded copies of video games "to avoid having to buy the video game cartridges". The case involved an Internet bulletin board that allowed users to download and upload software, including software owned by the plaintiff. The site was linked to other similar sites, the defendants sold and advertised equipment used to copy video games, and charged a fee for most of the services provided by the site. The plaintiff sought and obtained a preliminary injunction against the defendants who then challenged the injunction on the grounds that they had not profited from the programs. The court found that before the fair use exemption could be invoked "individuals should possess an authorised copy of a literary work"[114]. The purpose and character of use weighed against the defendants (See Lewis Galoob Toys, Inc. v. Nintendo of America, Inc[115]), as did nature of the programs themselves i.e. entertainment involving fiction and fantasy. Furthermore, the affect on the market for value was significant since it could be shown that if the challenged use "should become widespread, it would adversely affect the potential market for value of the copyrighted work".

The Australian case Galaxy Electronics Pty Ltd. v. Sega Enterprises Ltd[116] is very interesting with regard to multimedia works because the works involved in that case were particularly sophisticated video games. The action was brought by the plaintiffs in order to prevent the parallel importation of two video games "Virtua Cop" and "Daytona USA Twin". The defendants contested the protected status of the videos, consequently the case hinged upon whether the videos fell within the definition of a "cinematographic film" used in s.10 and s.24 of the Copyright Act 1968 (Australia). The two videos were of similar construction and presented the user with a series of images and sound similar to those produced by a conventional movie. However, these images were a two-dimensional simulation of three-dimensional objects produced by the interaction of complex software algorithms with animated images stored on an integrated circuit. The range of images produced depended on the level of aptitude of

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[113] 857 F.Supp. 679 (N.D. Cal. 1994).
[114] See Atari Games Corp. v. Nintendo of America, Inc., 975 F.2d 832, 843 (Fed Cir. 1993).
[115] 964 F.2d 965, 971 (9th Cir. 1992).

the player controlling the program within the parameters set by the programmers. Consequently the defendants argued that the images were not fixed until the user interacted with the program and that the video was not stored on computer memory as a form of 'digital movie'. For the purposes of s.10 of the Act "cinematograph film" *means the aggregate of the visual images embodied in an article or thing so as to be capable of use of that article or thing: (a) of being shown as a moving picture; or (b) of being embodied in another article or thing by the use of which it can be shown; and includes the aggregate of sounds embodied in a sound-track associated with such visual images;"* Section 24 states: *"For the purposes of this Act, sounds or visual images shall be taken to have been embodied in an article or thing if the article or thing has been so treated in relation to those sounds or visual images are capable, with or without the aid of some other device, of being reproduced from the article or thing."* At first instance the court held that the definition of "cinematographic film" was to be given a liberal construction and rejected the idea that it was necessary for the images involved to be incorporated into something analogous to a frame. Furthermore, the court found that it was the intention of Parliament to be technologically neutral and that the definition of "cinematograph film" was to be expressed in terms of result rather than the means used to generate the result.

On Appeal both defendants argued that the trial judge should have determined whether the video games could be classified as cinematograph films or computer programs. Further, if this determination were made the games would have been found to be computer programs and therefore "literary works". If this were the case s.37 and s.38 of the Act would exclude any finding of infringement. In dismissing the appeals the court considered that the video games could be protected as an integrated circuit, as a computer program or as a cinematograph film. Both the latter forms of protection could subsist separately, and the protection of the circuit only covered circuit layout, which also subsisted separately. The court held that the video games were cinematograph films and this did not detract from the protection of the games as

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[116] 1997] 403 FCA (23 May 1997).

computer programs. The court reached this conclusion on three grounds: Firstly, the use of the term "*embodied*" used in s.10(1) of the Act did not merely refer to forms of embodiment used in earlier times. Secondly, the fact that all possible visual images were embodied in the integrated circuit led to the conclusion that there was a single time of publication for all of them. Thirdly, the definition of "cinematograph film " used in s.22(4) of the Act and the special definition of "copy" used in s.10 of the Act meant that there was no uncertainty about the time of making of a cinematograph film, or the identity of the maker.

3.13 The Internet and the Copyright Treatment of MP3 File Sharing Applications

The entertainment industry has always been at odds with the computer hardware industry with regard to the legal treatment of hardware devices. The truth is probably that hardware manufacturers are among those who benefit most financially from the Internet. The next in the firing line are the ISPs, between them the ISPs and the hardware manufacturers are the only entities that really control what happens on the Internet. To the entertainment industry computers are amongst other things very effective copying machines that pose a serious threat to their markets, and the Internet connects them together. The Internet provides a distribution model that is radically different to those used by the entertainment industry, and is consequently seen by it as more of a threat than an opportunity. The development of music file sharing applications and the resulting litigation is important because it is the first time the distribution structures of the entertainment industry have been seriously threatened by those of the Internet. The outcome of this litigation is important because music licensing on the Internet is now fairly well established. Also most of the largest and most well established collecting societies are music collecting societies. The MP3 cases set out below are some of the first cases involving Internet companies that have had sufficient economic impact to give rise to significant legal disputes on the Internet. Cases involving copyright infringement of multimedia products distributed via the Internet are thus far almost non-existent, and certainly have not in general

reached the higher courts, either in the U.S. or elsewhere. I therefore must draw what conclusions I can from the most similar cases I can find i.e. the litigation concerning MP3 file sharing. In the end these cases all boil down to the extent of fair use, a concept that does not exist in Europe in the same way as in the U.S. However, this only serves to show that the role of fair use on the Internet will have to expand rather than contract if the balance of copyright is to be maintained. The alternative would be a system of contractual rights that reflect the interests of the entertainment/media industries.

The cases discussed below fall into five main classes i.e. fixation of works, challenges based on originality, classification issues, moral rights, and derivative use/fair use cases. The cases also come from different jurisdictions which effects standards of originality, underlying legislation, and different legal approaches i.e. to moral rights, fair use etc. The U.S. cases are clearly discernable in terms of the rather dated legislation being applied, but are also notable in terms of the flexible way in which the judges interpret the law. The Galaxy case is also notable in terms of the pragmatic treatment of new media. The approach here is not technology specific and focuses on the practical effect that new technology is designed to achieve and whether it is just to give it legal protection. Finally the European cases clearly demonstrate the pitfalls of a copyright system based on categories. Whether a multimedia work is a film or not is not really the point, nor is the medium of fixation. The most interesting cases are those that concern the creation of derivatives and whether this should be allowed as an exception to copyright or disallowed as an infringement of the rights of the owner. While the balance is not easy to strike, what is clear is that the more original works deserve more protection than those of limited creative value. The conclusion to be drawn from this is that there needs to be a more flexible system of exceptions to copyright to allow the creation of genuinely transformative derivatives while simultaneously protecting more original works.

3.14 What is MP3?

The MP3 standard is an open source standard i.e. a standard, which is available free and is not controlled in any way by commercial interests. It is part of a series of standards created under the auspices of the Motion Picture Experts Group (MPEG). MP3 belongs to group 1 layer 3 of the MPEG standard developed by a German engineer named Karl-Heinz Brandenberg at the Fraunhofer Institute in 1991[117]. This standard was developed because audio signals consume twice the available bandwidth on the Internet, and because of the many repeated and inaudible elements in audio signals it is possible to eliminate some of these elements in a process known as digital compression[118]. The MP3 standard allows files to be compressed to one twelfth of the size of uncompressed audio data[119] and consists of three parts. Firstly, software used to compress the data is required, secondly, the user needs software known as "a ripper" to convert digitally encoded audio files into MP3 format, and thirdly special software is needed to listen to the MP3 files. This software is widely distributed on the Internet and is used to make copies of CDs. Whether because of the non-proprietary nature of the standard or simply because it is the best currently available format, the MP3 standard has become the de facto standard for digital audio compression[120]. The Napster file-sharing program is only designed to permit the sharing of MP3 files, but other competing programs such as Aimster and Gnutella are also capable of sharing video and text files[121]. The Napster case is exemplary of a syndrome, which the owners of video content want to avoid. What they fear is that the economy of the video industry will be damaged by the release of perfect master copies of videos that will then be distributed on the Internet. In order to prevent this, the owners of video content allow only analogue outputs on hardware devices thereby

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[117] Anthony R. Berman, "You Say You want a Revolution: An Unofficial History of the Digital Music Revolution", [1999] MELON available from: http://www.degrees.com/melon/archive/mp3.html.

[118] Fraunhofer Institute, "MPEG Audio Layer-3", p1. Available from: http://www.iis.fhg.de/amm/techinf/layer3/index.html.

[119] Visible Light Mall, "Confused About MPEG?", p1. Available from: http://www.visiblelight.com/mpeg/info/confused.htm.

[120] Pete Brush, "What is MP3, anyway?", APB News, March 9, 1999, p1. Available from: http://www.apbonline.com/1999//03/12/mp30312_02.html.

[121] William Sloan Coats et al, "Streaming into the Future: Music and Video Online", PLI, November, 2001, p128.

preventing the creation of digital files[122]. Currently there is not enough bandwidth on the Internet to make video online commercially feasible[123]. Furthermore, this will require computers with a large storage capacity on their hard drives, and cable modems. This kind of hardware already exists; however, its use in Europe is not yet widespread.

Currently five big players, namely BMG Entertainment, EMI Music, Sony Music, Warner Music Group and Universal Music Group, control world-wide distribution of music. Although the distribution of music encoded in MP3 format accounts for a small slice of the total market, revenues generated by the music industry amount to some $40 billion world-wide. However, Forester Research has estimated that by 2004, 25 percent of all music sales will come from downloads, and that much of that revenue will go to independent or unknown artists[124]. Conventional record companies generate about 90 percent of their profits from conventional retail distribution of music products. Artists can expect to receive only about 10 percent of profits using this form of distribution. However, using Internet distribution with its wide market penetration and near zero marginal costs, artists can receive as much as 50 percent of profits[125]. Apart from this the distribution of music in MP3 format requires no tangible media, eliminates traditional channels of distribution and is much more convenient means of distribution. Lycos already operates a searchable database of some 500,000 indexed MP3 files and the Rio PMP300 offers consumers a portable device for playing MP3 files with a 64-megabyte memory card[126]. Consumers also have the option of playing MP3 music on their hard drives, sending MP3 files to each other as email attachments, or uploading MP3 files to the Internet so that anyone can download them, all without any degradation in sound quality[127]. As a consequence of this the music industry has perceived the free distribution of MP3 files as a threat to

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[122] SEC(2002) 197 p15.
[123] See note 121 above p122.
[124] Vanita Kohli, "Mutilating music: a critical look at the copyright and business issues in online music distribution", Ent.L.R. 2001, 12(1), p23.
[125] See note 117 above.
[126] ibid.
[127] Berkman Center for Internet & Society, "MP3", February 20, 2000, p1. Available from: http://eon.law.harvard.edu/h2o/property/MP3/main.html.

its core business. Their response has been to develop new ways of securing digitally encoded music using copyright management systems known as Electronic Music Management Systems (EMMS) and to file copyright suits against both the consumers and distributors of MP3 files.

3.15 The MP3.com case

(a) Under the Copyright Act 1976 (U.S.A.) the storage and copying of MP3 files for downloading is an explicit violation of copyright, and the notion that fair use will protect such activities is fundamentally ill founded. In UMG Recordings v. MP3.com, Inc[128] the United States district court for the Southern District of New York gave summary judgment against the defendants in respect of the service called "My.MP3.com". This service hosted the "Beam-It" software program that gave subscriber's access to the plaintiff's CDs allowing them to store, customise and listen to recordings on any Internet terminal. In the process of setting up this site the defendants purchased tens of thousands of popular CD's, the copyright of which belonged to the plaintiffs, and copied these onto their server so that their subscribers could replay them. Before subscribers could obtain access to recordings they had to prove that they already owned the CD by putting it into the CD-ROM drive on their computer so that the defendants could detect and identify it. Alternatively, subscribers could purchase an MP3 copy of the CD directly from the defendants using their "Instant Listening Service". Once either of these options was completed, the subscriber would be able to access their CD from anywhere in the world. While the defendants characterised this service as the equivalent of storing its subscribers' CDs, what they were actually doing was replaying copies of the plaintiff's CDs. The defendants claimed that their use was non-infringing use under the fair use defence set out in section 107 of the Copyright Act.

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[128] 92 F.Supp.2d 349 (2000).

In relation to the first factor the court found that, despite the fact that the defendants derived their income from advertising revenue, the My.MP3.com site was clearly commercial. As to the second factor, the court was of the opinion that "the creative recordings here being copied are close to the core of intended copyright protection", and are therefore very distant from the more factual or descriptive work deemed amenable to "fair use". With regard to the third factor-"the amount and substantiality of the portion of the copyrighted work used in relation to the copyrighted work as a whole"-it was not disputed that the whole work was copied. Finally, in respect of the fourth factor - "the effect on the potential market for or value of the copyrighted work" - the activities of the defendant clearly contravened the plaintiff's right to license their work under s.106 of the Copyright Act 1976 (U.S.A.). The defendant contended that in the market for derivative works involved here the plaintiffs failed to show that licensing was "traditional, reasonable or likely to be developed". Furthermore, they argued that their activities actually increased the level of the plaintiff's sales since subscribers could not access recordings without actually owning them. The court here was not persuaded by the former argument and held the potential positive impact of the defendant's activities on the plaintiff's sales to be irrelevant. On June 9, 2000, the plaintiffs entered into a settlement with the defendants making them party to a North American licence for the use of recordings controlled by the plaintiffs on MP3.com's "Beam-It" and "Instant-Listening" software services[129].

3.16 The Diamond Multimedia Case

Prior to the development of the MP3 standard, most audio files were too big to download via the Internet. However, with the emergence of the MP3 standard and fast cable modems it became possible to download music files holding tracks of CD length onto the hard drive of a PC. This could be achieved in only a few minutes with little or no degradation in sound quality. In order to exploit this new market Diamond Multimedia Systems Inc. developed the "Rio", a portable device

[129] MP3.com, "Press Releases: MP3.com Settles Copyright Infringement Suit with Warner Music

about the size of an audiocassette capable of storing and playing MP3 files of 60 minutes' duration. The Rio is supplied with computer software ("Rio Manager") which allows users to download MP3 files from the hard drive of their PC on to the Rio. It is impossible to download MP3 files directly onto the Rio without first loading them onto the hard drive of a computer. The RIAA represents about half-a-dozen major record companies controlling about 90 percent of the music distribution market in the United States. In 1999 the RIAA estimated the value of Internet piracy committed against its members as being in the region of US$300 million. In October 1998 the RIAA filed a complaint[130] against Diamond Multimedia Systems, Inc. alleging violations of the 1992 American Home Recording Act (AHRA) and requesting a preliminary injunction enjoining the defendants from manufacturing or distributing the Rio.

The district court refused to grant the injunction and on appeal, the Ninth Circuit Court of Appeals[131] was of the opinion that the Rio did not fall within the scope of s.1002(a)(1) and (2) of the AHRA which prohibits the import, manufacture, or distribution of of digital audio recording devices that fail to conform to the Serial Copyright Management System (SCMS) or a functionally similar system. For the purposes of this section the Rio had to be a "digital audio recording device" which is defined by s.1001(3) of the AHRA as:

"...any machine or device of a type commonly distributed to individuals for use by individuals, whether or not included with or as part of some other machine or device, the digital recording function of which is designed or marketed for the primary purpose of, and that is capable of, making a digital audio copied recording for private use."

In short, for the Rio to fall within the scope of the subsection it must be able to produce a "digital music recording" either "directly" or "from a transmission".

Group", p1. Available from: http://pr.mp3.com/pr/111.html.
[130] 49 U.S.P.Q. 2D (BNA) 1024.
[131] 180 F.3d 1072 (9th Cir. 1999).

Since the typical computer hard drive contains many kinds of information it could not be a "digital music recording device". Furthermore, since the Rio does not record "directly" from "digital music recordings" it could only be classified as a digital audio recording device if copies are made "from transmissions". Given that computers are not digital audio recording devices it therefore followed that the Rio had no need to incorporate the SCMS. Moreover s.1001(5)(B) of the AHRA specifically excludes computer programs from the definition of "digital music recording" and, since production of digital musical recordings is a necessary quality of a "digital audio recording device", it could not be such a device. In view of this the court denied the plaintiffs a preliminary injunction and affirmed the decision of the court below.

3.17 The Napster Case

One of the earliest and most infamous cases involving the unauthorised distribution of MP3 files is A. & M. Records, Inc. v. Napster, Inc[132] in the district court for the Northern District of California on June 30, 2000. This litigation is in many respects analogous with hyperlink infringement cases concluded at around about the same date. However, the case is more significant in terms of its economic impact and because it was forged under the restrictive copyright regime created by the Digital Millennium Copyright Act 1998 (DMCA). The Napster site was created by 19-year old Sean Fanning and first appeared in 1999. The site takes advantage of the peer-to-peer networking deployed by the Internet to allow users to view directories of MP3 files residing on other users' hard drives, once located these files can be downloaded onto the users hard-drive[133]. Napster is essentially an information location tool; the MP3 files it locates never pass through the Napster server. Before Napster finding MP3 files on the Internet was a very hit or miss affair, but with the arrival of Napster finding MP3 files has become easy and reliable. The Napster server allows users to search for specific files and facilitates the direct transfer of files between clients. A

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[132] 114 F.Supp.2d 896 (N.D. Cal. 2000).

[133] internet.com Corp., "Webopedia Definition and Links: Napster", 1999-2000. Available from: http://webopedia.internet.com/TERM/N/Napster.html.

program called "OpenNap" extends the capability of Napster to cover all media types, and allows it to link servers together. At the user end this process is facilitated using a special browser known as "Macster", this allows users to easily navigate the Napster system, and create library files into which MP3 files can be downloaded. Napster does not charge for its services, rather it generates money from advertising. Indeed, as part of its terms of use Napster had introduced a policy, making compliance with copyright laws a precondition of use, although in subsequent proceedings there was some dispute as to the date when this policy was instituted. On December 6, 1999, the plaintiff record companies filed a suit alleging, among other things, contributory and vicarious copyright infringement, and seeking damages of up to $US100, 000 per copyrighted song exchanged via the defendant's program[134]. In response the defendants alleged that their activities fell within the safe harbour provisions set out in s.512(a) of the DMCA, which limit the liability of service providers "transmitting, routing or providing network connections through a system or network operated by or for the service provider, or by reason of the intermediate and transient storage of that material", if five conditions are satisfied:

(a) the transmission of the material was initiated by or at the direction of a person other than the service provider;

(b) the transmission, routing, provision of connections or storage is carried out through an automatic technical process without selection of the material by the service provider;

(c) the service provider does not select the recipients of the material except as an automatic response to the request of another person;

(d) no copy of the material made by the service provider in the course of such intermediate transient storage is maintained on the system or network in a manner ordinarily accessible to anyone other than the anticipated recipients, and no such copy is maintained on the system ordinarily accessible to such anticipated recipients for a longer period than is reasonably necessary for the transmission routing, routing or provision of connections; and

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[134] Rebecca, J. Hill, 'Pirates of the 21st Century: The Threat and Promise of Digital Audio

(e) the material is transmitted through the system or network without modification of its content.

The defendants claimed to be a service provider within the meaning of s.512(a) of the DMCA since it offered "transmission, routing or providing of connections for digital online communications" via the Internet through the file sharing facility hosted by its file server from users' hard drives and the Macster browser on users' PCs. Subparagraph 512(k)(1)(A) provides: *"As used in subsection (a) the term 'service provider' means an entity offering the transmission, routing or providing of connections for digital online communications, between or among points specified by the user, of material of the users choosing, without modification to the content of the material sent or received."* Section 512(a) of the DMCA describes the term "service provider" as *"an entity offering the transmission routing, or providing connections for digital online communications, between or among points specified by a user, of material of the user's choosing, without modification of the material sent or received."* Although the court was willing to assume that the defendants were service providers it was unwilling to rule on this point. It was the defendants contention that that if they fell within the "service provider" exemption in s.512(a) of the DMCA then they only needed to satisfy the five requirements of the safe harbour to avoid liability. They argued that they were not liable since the user through an automatic technical process initiated transmission of MP3 files. They did not select recipients, did nothing to alter material and kept no copies of material following transmission. However, even where these conditions are met, under s.512(i) of the DMCA service providers are only eligible to claim the protection afforded by the section if they:

a. have adopted and reasonably implemented, and inform subscribers and account holders of the service provider's system or network of, a policy that provides for termination in appropriate circumstances of

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Technology on the Internet", (2000) 16 Santa Clara Computer & High Tech. L.J. 334.

subscribers and account holders of the service providers system or network who are repeat infringers; and

b. Accommodate and do not interfere with standard technical measures.

The court found that s.512(a) does not protect the transmission of MP3 files even though this transmission bypassed certain parts of the defendants system. Because Napster operates via the Internet, the defendants could not claim to be a mere conduit, and thereby fall within the s.512(a) exemption. Furthermore, because Napster did not transmit, route or provide connections through its system it failed to qualify for the s.512(a) safe harbour. Finally, the defendants could not show that they had reasonably implemented a policy designed to terminate access by repeat infringers and the court therefore denied the defendants motion for summary adjudication.

On appeal to the Ninth Circuit Court of Appeals[135] the defendants claimed that they were not guilty of vicarious or contributory infringement of the plaintiff's copyrights. They claimed that any use made was fair use, and that they were sheltered under the provisions of both s.512 of the DMCA and s.1008 of the AHRA. In addition the defendant alleged that the preliminary injunction entered against it was over broad. The court held that direct infringement was established since the evidence at trial showed that the majority of Napster users were engaged in the copying of copyright music. The defendants fair use argument did not save it from liability because the downloading of MP3 files was not a transformative use, and use was commercial since the plaintiffs did not have to demonstrate that the defendant derived a direct economic benefit. The nature of the use went against a finding of fair use since the works involved were creative in nature and "closer to the core of intended protection"[136]. While the taking of whole recordings did not per se preclude fair use it militated against a finding of fair use. Also the fourth factor went against the plaintiffs since it had been shown that the defendant's activities reduced album sales amongst

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[135] 239 F.3d 1004 (9th Cir. 2001).

college students and it "raises barriers to the plaintiff's entry to the market for the digital downloading of music." There was further an error in the district court's finding that sampling constituted commercial use even where users eventually purchased the music. The defendants knew of the infringement where they "know or have reason to know" of direct infringement (See Religious Tech Ctr. v. Netcom Online Communication Serv.s, Inc[137].

This was so even when they had no knowledge of "specific acts of infringement". Thus they would not escape liability merely by claiming that they could not distinguish infringing from non-infringing files. Significantly, the court distinguished Sony Corporation v. Universal City Studios[138] since the majority of VCR purchasers in Sony were not involved in the distribution of taped television broadcasts, and that in accessing recordings users made them "available to millions of other individuals". While maintaining the defendant's obligation to police the Napster system within the limits of that system, the court went on to modify the original injunction by placing the burden of providing notice of infringement of works available on the Napster system on the plaintiffs. This had to be done before the defendants had a duty to disable access to the offending content. The Ninth Circuit Court of Appeals affirmed its modified preliminary injunction on 25 March 2002[139] and licensing deals with the major record labels have thus far eluded Napster.

3.18 Post-Napster Cases

This section considers those MP3 infringement suits brought after Napster in order to evaluate the effect of the Napster decision. It first considers the immediate fallout of the decision and then the importance of linking in relation to MP3 cases. This section then considers the development of these cases in terms of ISP liability and the legal treatment of picture and audiovisual file formats. The cases are included in order to

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[136] See Campbell v. Accuff-Rose Music, Inc., 510 U.S. 569, 586 (1994).
[137] 907 F.Supp. 1361, 1373-74 (N.D. Cal. 1995).
[138] 464 U.S. 421 (1984).
[139] Case No. 01-15998 (9th Cir., 25 March 2002).

bridge the conceptual gap between the judicial approach to infringement of music files on the Internet and the infringement of audio-visual works.

Following the Napster decision an influential paper by Fred von Lohman[140] was published entitled "Peer-to-Peer File Sharing and Copyright Law after Napster". This advises the operators of how to construct their network architecture so as to minimise their exposure to claims of vicarious and contributory copyright infringement. Essentially this paper advises ISPs that they should either adjust their architecture so as to permit heavy monitoring of use, or to relinquish control over user behaviour altogether. Further, it advises ISPs to disaggregate functions, not to make money out of users infringing behaviour, use open source code, and not to participate in direct infringement of copyright works. While this paper may not have had any direct effect on the behaviour of ISPs, it is notable that subsequent to the Napster case a number of similar ventures were created. These lacked the degree of control attainable in the Napster system, and maintained the anonymity of users so that there was no possibility of tracing user transactions.

3.19 Linking and ISP Liability

The provision of links does not automatically amount to contributory or vicarious infringement, however, in certain circumstances i.e. where the linker is encouraged to commit infringement it can. In Intellectual Reserve, Inc. v. Utah Lighthouse Ministry, Inc[141], for example a critic of the Mormon Church posted the churches handbook on its website. The church claimed that this was a copyright work and that the critic's actions infringed its copyrights and sued claiming contributory and vicarious copyright infringement. When a temporary injunction was issued some of the churches other critics created mirror sites containing copies of the handbook. In response the defendant created three links to these sites, publicised the presence of the copies of the handbook, and posted emails encouraging people to log onto the infringing

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[140] Fred von Lohman, "Peer-to-Peer File Sharing and Copyright Law after Napster", 30 April, 2002. Available from: http:// www.eff.org/IP/P2P/Napster/20010309_p2p_exec_sum.html.
[141] 75 F.Supp.2d 1290 (D.Utah 1999).

websites in the hope that this would affect the outcome of the case. The district court held that there was no direct infringement by the defendants, however, because the defendants actively encouraged others to commit infringement the plaintiff had demonstrated a likelihood of success on the merits. Liability for contributory infringement was imposed when "one who, with knowledge of the infringing activity, induces, causes or materially contributes to the infringing conduct of another"[142]. The court was of the view that users of the Internet created copies of works while browsing[143], and also dismissed the defendant's free speech arguments under the First Amendment of the U.S. Constitution since this did not allow the defendants to infringe legal rights under the law of copyright[144].

3.20 The MP3Board case

One of the first post-Napster cases is MP3Board, Inc. v. Recording Industry Ass'n of Am.[145], the case involved the operator of a website that organised and indexed thousands of links to copies of sound recordings in which it did not hold copyright. The files indexed on the site included MP3 files and other formats; however, the plaintiffs did not monitor the websites they indexed or the material on them. While the plaintiffs denied knowledge of the infringing character of these files; they must have been aware that at least some of them were pirate copies. Significantly, the plaintiffs provided access to "Gnutella", an MP3 search engine that does not allow its owners to monitor users' activities. There were also links to Amazon.com allowing users to see displays of album covers, and purchase the recordings legitimately. The site actively encouraged users to download pirated sound recordings, and derived revenue from advertising according to the number of people visiting their site. The defendants requested that the plaintiff's ISPs take down the site no less than four times, as a result of this two of the sites ISP's interrupted service. The plaintiffs initiated a lawsuit against the defendants in the district court seeking a declaration regarding "its right to

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[142] See Gershwin Publish'g Corp. v. Columbia Artists Mgt., Inc., 443 F.2d 1159, 1162.
[143] See MAI Systems Corp. v. Peak Computer, Inc., 991 F.2d 511, 518 (9th Cir 1993).
[144] See Cable/Home Comm Corp. v. Network Productions, Inc. 902 F.2d 182d 829, 849(11th Cir. 1990).
[145] Case No. C-00 20606 RMW (C.A.N.D. Jun 23, 2000).

employ automated hypertext linking for the advancement and promotion of independent musicians and music distributors", and that with regard to these linking activities and automated searching of hypertext links their service providers were protected by the safe harbour provisions of s.512(a) through to (d) of the DMCA. They claimed that the defendants were engaged in anti-competitive conduct and had unlawfully interfered with the plaintiff's business contracts and prospective business advantage. Furthermore, the plaintiffs sought an injunction against the defendants preventing them from demanding that the plaintiffs cease and desist from the above-mentioned activities.

Following this action the RIAA filed a motion to dismiss MP3Board's complaint[146], demanding that the defendants remove their site and its links from the Internet, and that they cease to display album cover art. The complaint alleged contributory and vicarious infringement of sound recordings, and was based largely on the assertion that the defendants knowingly supervised, controlled, and encouraged copyright infringement on their website. More specifically the complaint alleged that the defendant's counterclaim was void for want of specificity, that federal law pre-empted the tortious interference claim and that the claim of interference with prospective economic advantage was based on hypothetical relationships[147]. However, this kind of interference was upheld in both the Napster appeal and the Kelly v. Arribasoft appeal. However, the defendants correctly asserted that they were not proper plaintiffs for the claim relating to copyright since they do not own any copyrights. The plaintiffs final claim alleges that notices issued by the defendant violate s.512(f) of the DMCA i.e. that they "knowingly materially misrepresent[ed]" that the material or activity identified is infringing, however, the actual claim alleged reckless or negligent misrepresentation. It has been argued that the RIAA will not succeed in their action against MP3Board because it is not possible for them to prove the degree of materiality required for a finding of contributory or vicarious infringement. According

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[146] Arista Records, Inc. v. P3Board, Inc. Case no. C – 00 Civ. 4660 (S.D.N.Y. Jun 23, 2000).
[147] Publications, Inc.,"MP3.com Argues For Summary Judgment In Suit With RIAA", M.L.R.I.P., 9(16), May 21 2001, p18.

to the Celotex rule[148], the defendant may be entitled to summary judgment since the mere speculation that the defendant contributed to the infringement is insufficient to establish contributory or vicarious infringement. Furthermore, it could be claimed that the defendant's website is capable of substantial non-infringing use[149]. On this argument it might be claimed that the defendants systems are generic and widely available, they benefit both the general public and independent artists. In Arista Records, Inc. v MP3Board, Inc[150], the defendants filed a motion to dismiss the plaintiffs counterclaim on the grounds (1) that the common law interference with contract claims were pre-empted by federal law; (2) that the plaintiff did not plead all of the state law elements of the tortious interference claim; (3) the claim of interference with prospective economic advantage was invalid due to the failure to plead wrongful conduct by the defendant and that the claim was based too much upon hypothetical economic benefits; and (4) that the amended counterclaim failed to allege "knowing" misrepresentation by the defendant. The court refused to dismiss claims 2, 3 and 4, and granted the motion to dismiss claim 1. Significantly, the court held that the plaintiff had made sufficient allegations to make out a prima facie case that the defendant had interfered with the plaintiffs contracts were they to be substantiated. The court also supported the proposition that recklessly made statements were enough to violate s.512(f) of the DMCA. With regard to claims 3 and 4 the court was unwilling to make any decision at that stage[151].

3.21 The Ellison case

The ultimate outcome of the MP3Board litigation is likely to be affected by the recent decision of the California district court in Ellison v. America Online, IncCase no. CV 00 04321 FMC (RCx. March 12, 2002). Case no. CV 00 04321 FMC (RCx. March 12, 2002). Case no. CV 00 04321 FMC (RCx. March 12, 2002).. In that case summary judgment was granted where an ISP was sued over a copy of a digitised

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[148] See Celotex Corporation v. Catrett (477 U.S. 317 (1986).
[149] See Sony corp., v. Universal City Studios, Inc., 464 U.S. 417 (1984).
[150] Case no. 00 Civ. 4660 (SHS) (February 1, 2001).
[151] The MP3Board litigation ended on 31 May 2000 when the District court for the Northern District of New York refused to certify the case for immediate interlocutory appeal.

book uploaded onto a USENET group hosted by them, and from whence it was copied. The plaintiffs had a policy of leaving materials on their servers for eleven days, they were allegedly informed of the presence of the infringing file by the plaintiff, although the defendant disputed this. In the ensuing action the plaintiffs alleged direct infringement, contributory infringement, vicarious infringement, unfair competition, and trademark dilution. The court found that as a passive provider of USENET access the defendants were not liable as direct infringers[152]. The defendants would only liable for contributory infringement if they encouraged or assisted in the infringement[153] and "must know or have reason to know of direct infringement"[154]. In relation to the allegation of vicarious infringement the court held that the 'right and ability to control' meant more than having the ability to erase files or block access to infringing materials after infringement has occurred[155]. In the present case this ability was far less than in the Netcom case[156]. The court also held that the defendants did not draw a direct financial benefit from the infringement. "Financial benefit exists where the availability of infringing material "acts as a "draw" for customers."[157] The limitations which s.512(i) of the DMCA imposes only require a realistic threat of termination of a customers Internet access where intellectual property rights are violated. Furthermore, s.512(a) – (d) of the DMCA were satisfied, and the test of "intermediate and transient storage" was also satisfied since the servers in the Netcom case stored data for fourteen days[158].

Subsequently the case went to appeal[159], the Ninth Circuit Court of Appeals upheld the case in part, but remanded the case to be reconsidered by the court below with regard to the contributory infringement claim. The court held that the defendant was eligible for the safe harbour limitation of liability under s.512(a) of the DMCA. However, they held that the court had erred in concluding that the defendant satisfied

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[152] See Netcom On-Line Communications Services, Inc., 907 F.Supp. 1361, 1372-73 (N.D. Cal. 1995).
[153] See A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1019 (2001).
[154] See Id. at 1020.
[155] See Hendrickson v. eBay, Inc 165 F.Supp.2d 1082 (C.D. Cal. 2001).
[156] See Netcom, 907 F.Supp. at 1365 -1366.
[157] See Napster, 239 F.3d at 1023.
[158] See Netcom, 907 F.Supp. at 1368.

the requirements of s.512(i) of the DMCA. This was based upon the fact that they had changed the email address to which notifications of copyright infringement were to be sent, and failed to provide a message forwarding facility to facilitate communication of messages sent to the old address. In short they had failed to implement their policy of terminating access to users who engaged in repeated copyright infringement.

3.22 The Kazaa case

While the Information Society Directive borrows heavily from the DMCA, the attitude of the European Commission towards ISPs is more liberal than that in the U.S., despite the fact that there is no generalised notion of fair use. For example in Church of Spiritual Technology v. XS4ALL[160] copyright works belonging to the plaintiffs were posted on a website hosted by the defendant ISP. The district court of the Hague had then to decide whether these works had been infringed, and whether the ISP was liable. The court decided that the defendant had merely facilitated the publication of the infringing works, and that where this was limited to the transfer and temporary storage of information the defendants could not be held liable. Furthermore, the court held that the activities of ISPs did not constitute copying within the meaning of the Dutch Copyright law. Here the judge referred specifically to Article 5(1) of the amended proposal for a European Parliament and Council Directive on the harmonisation of certain aspects of copyright and related rights in the information society[161]. However, the court also found that where the ISP is notified about the copyright infringements of its users it is obliged to take a reasonable degree of care in preventing further infringements. This was so even where a hyperlink to infringing material is inserted into a web page[162]. Subsequently Media Metrix estimates that in January, 2002 some 10.3 million Web surfers in Western Europe have visited the Websites of peer-to-peer companies like Kazaa MusicCity and

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[159] (D.C No. CV-00-04321-FMC, 6 March, 2003).
[160] (District Court of the Hague, 9 June,1999).
[161] [1998] O.J. C108/6.
[162] E.I.P.R. 1999, N-173.

Audiogalaxy, rising to 10.7 million by March[163]. Similar trends are manifested in the United States where Internet analysis company Webnoize estimates that downloads of MP3 files increased by 20 percent to 1.81 billion between September and October 2001[164].

In the Napster appeal the court considered the knowledge of the appellants to be the crucial issue. It relied upon the authority of case of Religious Technology Centre v. Netcom On-line Communication Services[165] as authority for the proposition that an ISP is liable for contributory infringement if it has knowledge of the infringing activity and it "induces causes or materially contributes to the infringing conduct"[166]. Directive 2000/31 on certain legal aspects of electronic commerce in the internal market[167] provides some degree of protection for ISPs against copyright infringement. In particular Article 12 of the Directive restricts liability for acts of transmission of information through a network. This includes, for example, automatic, intermediate and transient storage of content as long as that information is not stored any longer than necessary for the transmission[168]. This is subject to the proviso that the content is not selected or modified, and the ISP does not initiate the transmission. Article 13 of the Directive restricts ISPs liability for caching and is logical extension of Article 5(1) of the Information Society Directive; again the ISP may not modify or otherwise control the form that content takes[169]. Article 14 of the Directive concerns hosting and provides that ISPs will only receive the benefit of limited liability if they exercise no control over the information as such[170].

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[163] Steven Bonisteel, "'Legitimate' Music Loosing Ground Online In Europe – Report", Newsbytes, 19 April, 2002. Available from: http://www.newsbytes.com/news/02/176016.html.
[164] Gwendolyn Mariano, "Napster rivals winning popularity contest", CNET News.com, November 5, 2001. Available from: http://news.com.com/2100-1023-275417.html.
[165] 907 F.Supp. 1361 (N.D. Cal.1995).
[166] Markus Lubitz, "Liability of Internet Service Providers Regarding Copyright Infringement – Comparison of U.S. and European Law", IIC, 2002, vol.33, Issue 1, p27.
[167] [2000] O.J. L178/1.
[168] See note 166 above, p36.
[169] ibid., p37.
[170] ibid., p38.

In a more recent case between a Dutch music collecting society and a website called Kazaa[171] the decision in the above case was expanded to include even situations where the ISP is made aware of copyright infringement. Kazaa is a second-generation peer-to-peer file sharing service that allows one user to download text, image, and sound files, including MP3 files from the hard drives of other users. The desktop software provided free on the Kazaa website allows users to organise, play, and view their files using an integrated media jukebox. The service is similar to Napster, but unlike Napster once users download the software there is nothing Kazaa can do to control the use that is made of the software because the central server does not support this. Since October 2000 the parties had been involved in discussions concerning the use of music by Kazaa users, these discussions were confined to a so-called streaming licence, but even so the discussions were abandoned. Subsequently copyrighted sound recordings belonging to the plaintiffs were exchanged using the defendant's software and the plaintiffs informed the defendant of these infringements. In spite of this they failed to take action against infringers, although in their disclaimer they claimed the right to terminate the accounts of users involved in infringing activities. In December 2001 the plaintiffs served a writ on the defendants. This alleged that by providing users with the means to download their copyrighted music without a licence they had infringed the plaintiff's copyright, and that the primary function of the defendant's software was to facilitate the exchange of copyrighted music by users. On 29 November 2001 the district court of the Hague ordered the defendant to stop infringements of the plaintiff's copyright works committed using the software provided by them within 14 days subject to a fine of NLG 100,000 per day. The plaintiffs appealed to the Amsterdam Court of Appeal on the grounds that it was unable to control the actions of its users, and the plaintiffs cross-appealed on the basis of the defendant's withdrawal of its claim that negotiations be continued.

The court held that although the Kazaa application could be extended using services provided by the appellant, these services played no role in the allocation or exchange of files. Hence it was impossible for the appellant to intervene in the operation of the

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[171] Kazaa B.V. v. BUMA/STEMRA (Amsterdam Court of Appeal, 28 March, 2002).

software in locating and exchanging files. Termination of the appellant's services would not prevent the exchange of illegal files in the absence of an internationally recognised standard for the detection of files containing copyright material, and this would further make it more difficult to detect and trace files. In any event it would be relatively easy to circumvent a technological barrier to file exchange. With regard to the appellant's disclaimer, that was written in Dutch, and required the identification of offending materials, along with the complainants' name plus the IP address by which the materials could be accessed, this did not state that the appellant could meet the conditions. Neither had the appellant made any promise to this effect in emails sent in response to the complaint. In addition the court ruled that the provision of the means to publish or reproduce copyright works is not in itself an act of publication or reproduction. Furthermore, the appellants program was not used exclusively for the downloading of copyrighted works. It had been demonstrated that many of the works exchanged using Kazaa's software included works not subject to copyright, and public domain works. While these 'other' uses might be lacking in substantive meaning so far as the respondents were concerned, this did not mean that this was not the case for these 'other' users. In consequence it was considered that the appellants offering of their litigious computer program could not be regarded as unlawful. In relation to the cross-appeal, the judgment as made in the main action was to be set aside and the appellants ordered to pay the costs of the cross-appeal. This case has serious implications for the harmonised copyright protection of streamed broadcasts. Indeed Recital 23 and Article 3 of the information Society Directive[172] concerning the right of communication to the public specifically covers, "transmission of work to the public by wire or wireless means", including broadcasting.

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[172] [2001] O.J. L167/10.

3.23 The Grokster case

The weaknesses of the Napster decision have again been exposed in MGM Studios, Inc v. Grokster Ltd[173] where it was held that a decentralised peer-to-peer file sharing network was not liable for contributory infringement. The plaintiffs were film, recording and publishing companies, and the defendants were companies distributing software via peer-to-peer networks. The software they distribute enables users to exchange digital files (including sound, picture and video) and although the software is distributed free of charge the plaintiffs were able to generate revenue from advertising. The plaintiffs used different types of software for sharing files, however, what they all had in common was the fact that once the software was downloaded from their servers they relinquished control of the file sharing network enabled by it. While this software could be used for lawful purposes it was inevitably used for infringing purposes, so the plaintiffs sought injunctive relief and summary judgment for contributory and vicarious infringement.

The district court in dismissing the application found that the plaintiffs had failed to establish a prima facie case of copyright infringement. Although it was not denied that there was direct infringement, it was also established that the Morpheus program had been used to research public domain materials. However, it could not be shown that defendants knew or had reason to know of the direct infringement or that they engaged in conduct that gave encouragement or assistance to infringers. In relation to the allegation of vicarious infringement liability under U.S. law arises where the defendant has the right and ability to supervise infringing activity as well as a financial interest in such activity. While it was possible to demonstrate the plaintiff's financial interest in infringing activities the decentralised nature of their networks made it impossible to exert control over them. This case brings the American notion of contributory infringement more into line with the English concept of infringement by

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[173] (No. 01-08541 C.D. Cal. 25 April 2003).

authorization; however, the case has been appealed to the Ninth Circuit Court of Appeals.

3.24 Internet Search Engines

Information tools such as search engines are economically significant because they facilitate the pay-per-use method of charging for works as well as aggressive licensing[174]. They are essentially written works[175] protected by copyright, patent law excludes writings as such. Although it may be possible to protect software using a business method patent this may stifle the enhancement of these tools by second comers[176]. The protection of software as literary works has effectively transformed de minimis anomalies that existed in the pre-digital era into the large and economically significant anomalies of today. This situation is exacerbated by the use of artificial intelligence in information tools, this being foreshadowed by the unsuccessful application of patent law to computer programs. The desire of industry lobbies for stronger protection of information tools has hastened in the drive towards the sui generis protection of works such as databases only accorded thin protection by copyright[177].

A global electronic marketplace needs a scalable architecture that facilitates the sharing of resources. This will require asymmetrical protocols, transparency of data locations, and must also support multimedia information, integrating various hardware and software platforms. Retrieval of multimedia data on the Internet requires the use of software filters, located either remotely, or at the users' workstation. In the recent U.S. ninth Circuit Court of Appeals case Kelly v. Arriba Soft corp[178] a professional photographer claimed that the copyright in 35 of his photographs were infringed by the defendant's search engine. This search engine searches for photographic images and displays the results as small photographic images known as "thumbnails". By

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[174] Jerome H. Reichman, "Electronic Information Tools – The Outer Edge of World Intellectual Property Law", IIC, 1993, vol.24, issue 4, p464.
[175] ibid., p447.
[176] ibid., p459.
[177] ibid., p471.

clicking on the thumbnail it was further possible to view an enlarged and framed version of the image imported directly from the original website. This was done using inline linking, a technique that does not directly copy the image. The defendant subsequently removed the offending images; unfortunately these images had in the interim been copied to third-party websites. The district court found that there was a prima facie case of infringement against the defendants; however, the use made was fair use under s.107 of the U.S. Copyright Act. This lists four factors to be considered by the court in finding whether or not fair use applies: (1) the purpose and character of use, non profit or educational uses being weighed in favour on the alleged infringer; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion copied in relation to the work as a whole; and (4) the effect of the market for value the copyrighted work.

On appeal the court held that in relation to the purpose and character of use the commercial use of the copied works did not end consideration of this factor[179]. This factor was primarily dependent upon whether the work was transformative or merely superseded the work copied. Further, the court held that the defendant's search engine was transformative. In doing so the court applied Sony Entertainment America, Inc v. Bleem[180] a case in which the use of "screen shots" from a computer game was held to be a transformative use since "comparative advertising redounds greatly to the purchasing public's benefit with very little loss of integrity of Sony's copyrighted material." In relation to the nature of use the court followed its own decision in A&M Records v Napster[181] where it held that creative works are closer to the core of intended copyright protection than more fact based works. The court found photographs to be of a generally creative nature. With regard to the amount and substantiality of the portion used, the court found that the copying of whole works "militated against a finding of fair use", however, in this case the copying of whole works was reasonable given the intended purpose of use[182]. In relation to the

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[178] Case No. CV-99-00560-GLT (9th Cir. 2002).
[179] See Dr. Seuss Enters., L.P. v. Penguin Books USA, Inc., 109 F.3d 1394, 1399 (9th Cir. 1997).
[180] 214 F.3d 1022 (9th Cir. 2000).
[181] 239 F.3d at1016. (9th Cir. 2001).
[182] See Id. p1967.

fourth factor, the effect of the use on the potential market for or value of the copyright work, the court considered both the harm caused by the defendant's actions and possible future harm. This could be caused by widespread actions of the sort engaged in by the defendant and the adverse impact this would have on the potential market for the original[183].

Finally, the court considered the infringement of the linked and framed images of the plaintiff's photographs. Despite the fact that there was no direct copying of these images the court considered that this was an infringement of the plaintiff's exclusive right under s.106(5) of the U.S. Copyright Act to "display the copyrighted work publicly." Section 101 of the U.S. Copyright Act defines a copy as "the material object in which the work is first fixed". However, he court took the view that "'display' would include projection on a screen or other surface by any method, the transmission of an image by electronic or other means, and the showing of an image on a cathode ray tube, or similar apparatus connected with any sort of information retrieval system" This was so whether the display was received at the same time and place or at different times in different places. As authority for this the court cited Playboy Enterprises, Inc. v. Webworld, Inc[184]. In that case the defendants downloaded images from newsgroups and made them available to subscribers. This use of the plaintiff's images was found to be an infringement of their exclusive right of display.

The cases outlined above show that copyright has little problem in dealing with direct copying on the Internet, however, the law is often unclear in cases where indirect copying is involved. The current emphasis in the U.S. cases is placed upon the possibility of control and knowledge of the infringing act. Both these factors are hard to ascertain and easy to avoid. The economic basis of the U.S. cases is slender and based upon a questionable interpretation of the Sony case. The European cases are reliant on legal constructs that are narrower than the American notion of contributory infringement. However, linking still presents a problem for copyright regimes in most

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[183] See Id. p1968.

countries. Where there is knowing encouragement to infringe then this is likely to constitute contributory copyright infringement under U.S. law, however, a range of factors have to be considered before this can be determined. Where framing rather than linking is involved this is likely to give rise to infringement of the right of public display, which is particularly relevant when considering the use of search engines.

In the U.K. it seems that direct infringement by search engines will not be permissible, however, where copying is indirect much will depend upon the degree of incitement to infringe on the part of the plaintiff. In Antiquesportfolio.com Plc v. Rodney Fitch & Co. Ltd[185] the court was asked to give summary judgment where there was an alleged repudiatory breach of a web design agreement. The plaintiffs are a website involved in the advertising and selling of antiques over the Internet and defendants were hired to supply them with a website design, logos, watermarks, brochures, business cards and advertising material. However, some of the material supplied was the copyright of an antiques encyclopaedia. This content formed photographic thumbnail icons on the website and outlines of antiques were used on business cards. A more detailed drawing of a bureau was used on the front of the company brochure. The court had to determine whether the supply of this material was a repudiatory breach of contract, whether the photographs and other images were copyright, and whether any copyrights had been infringed? There were also questions relating to the cost of the work done and monies claimed in respect of the repair the website. The court held that the defendant's conduct was not sufficient to amount to a repudiatory breach. In the view of the court the photographs taken were entitled to copyright protection, so long as the author could demonstrate that he expended some small degree of time, skill and labour in producing the photograph, it would hold copyright regardless of its subject matter. Where the whole photograph is taken, even where the photographs used are very small, this will amount to infringement. The outline images used by the defendant did not infringe because the work of origination was not copied and there was no attempt to recreate the feeling and artistic character of the work.

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[184] 991 F. Supp. 543 (N..D. Texas 1997).

In the more recent U.S. case of Nautical Marketing, Inc v. Boats.com[186] the Florida district court was asked to decide a case in which the plaintiff alleged that copyright in its website had been infringed by a search engine. The plaintiff's website advertised yachts and included pictures and text, the defendant's website was similar and the plaintiff alleged that the defendant's spider had infringed their website by copying pictures and text. In addition the plaintiff alleged that the defendant's "vallet service" infringed their copyrights. This service moves, modifies and deletes broker's listings with their consent. The plaintiff's claimed that these operations are fair use and sought a declaration that they had not infringed the plaintiff's copyrights. The court held that momentary copying of the plaintiff's web pages by the defendant's search engine constituted fair use as defined in s.107 of the Copyright Act 1976 (U.S.A) and therefore did not infringe their copyrights. With regard to the defendant's valet service the use of this did not cause infringement since only pictures and listings were copied from the plaintiff's website and the plaintiff did not own copyright in these elements of the website.

Since this case was decided an action has been brought against a U.S. service provider in respect of infringement by one of its users, thus bringing into play the safe harbour exemptions of the DMCA. In Costar Group, Inc v. Loopnet[187], a copyright infringement suit was brought against a web host where infringing photographs were posted on its website. The defendants merely managed the network used by those who were violating the plaintiff's copyright. The defendants briefly reviewed photographs before allowing them to be posted on their website in order to make sure the pictures depicted commercial real estate and to make sure they were not the copyright of another. The district court decided that the defendants might have infringed the plaintiffs copyright and that they were not entitled to the "safe harbour" immunity provided by s.512 of the DMCA. On appeal before the Fourth Circuit Court of Appeals the respondents argued that: (1) the Netcom decision was a pragmatic and temporary limitation on traditional copyright liability that would have otherwise held

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[185] [2001] F.S.R. 23.
[186] Case No. 802-CV-760-23TGW (Florida Middle District, 2004).
[187] (CA-99-2983-DKC 6 May 2004)

ISPs strictly liable and given the enactment of the DMCA this was no longer necessary; (2) since Congress had considered the Netcom decision in enacting the DMCA it was no longer necessary to consider it; and (3) that given the appellants were strictly liable under s.106 and s.501 of the Copyright Act 1976 (U.S.A.) and cannot satisfy the conditions of the DMCA they remained strictly liable.

In allowing the appeal the court held that it made no sense to make third party ISPs liable for infringement where there was an infringing subscriber who was clearly liable for the same act. Even where a service provider failed to meet the "safe harbour" conditions set out in s.512(c) of the DMCA, the ISP is still entitled to all other arguments under the law, either by way of defence or by arguing that its conduct does not establish a prima facie case under the Copyright Act. The DMCA defines a minimum level of protection rather than a maximum level of protection. Further, the conduct of the appellant is not truly "copying" as understood by s.106 of the Act. In performing its gate keeping function the appellants were merely preventing duplication of certain photographs and did not search out or select certain photographs or engage in copyright infringement. The case is significant insofar as it asserts that the provisions of the DMCA do not exclude common law defences. Also a degree of supervision by ISPs does seem to be allowed where screening is so cursory as to be insignificant.

3.25 Multimedia and the Future of Networks

Mobile telephony was already well established in the U.K. by the mid 1990's and has now reached the point of market saturation. If we call voice telephony the first generation of telecommunications then mobile telephony is the second generation of telecommunications technology. The third generation of telecommunications technology is the Universal Mobile Telecommunications Service (UMTS), unlike earlier generations this technology can cater for high resolution multimedia applications bringing the capabilities of mobile networks closer to those of fixed

networks[188]. UMTS services will depend on a three level hierarchy made up of service providers, network operators and content providers. These services are likely to be sold as an integrated package involving both fixed and mobile elements tailored to the individual needs of the customer[189]. UMTS is currently in service but is not expected to be in widespread use until 2005. UMTS can deliver high-speed Internet access, video telephony, audio/video on-demand, and direct instant access to home and office applications, regardless of location[190]. Further, UMTS is capable of providing at least 144 kbit/s multimedia services worldwide[191]. In the long term it is expected that UMTS and its successors will allow mobile telecommunications to fully emulate the fixed environment[192]. The most important development in this field is the Wireless Application Protocol (WAP) a standard designed to facilitate fast, secure interactive communications[193]. Unfortunately total security on open network architectures is impossible, and what security there is relies mostly on encryption, which is not full proof. When security breaks down then network operators must rely on legal mechanisms assisted by technological tracking of infringers. However, using current technology even powerful well-funded legal agencies cannot do this without the help of ISPs, which are the only entities that really know the true identities of infringers. For example in April 2000[194] the band Metallica sued Napster alleging the unauthorised swapping of copies of their songs in MP3 format. The action is significant because it is the first time that a large number of individual users have been singled out as copyright infringers. As a consequence the plaintiffs were able to personally identify 335,000 individual infringers[195]. The defendants complied with the defendant's demands and blocked the accounts of 317,377 identified users[196]. In a

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[188] DTI, "Multimedia Communications On The Move", July 1997, p3.
[189] ibid., p5.
[190] ibid., p6.
[191] ibid., p25.
[192] ibid., p32.
[193] Lara van Rooyen, "M-Commerce", I-Ways, Fourth Quarter 2001, p14.
[194] James Harding, "Rock band attacks web piracy", Financial Times, 28 April, 2000. Available from: http://www.ft.com/ft.
[195] Matt Richtel and Neil Straus, "Metallica to Try to Prevent Fans From Downloading Recordings", New York Times, May 3, 2000. Available from: http://www.nytimes.com/library/tech/00/05/biztech/articles/03music.htm.
[196] Keith Dawson, "Metallica Names Screen Names", Indus. Standard, May, 3 2000. Available from: http://thestandard.com/article/0,1902,14715,00.htm.

subsequent case SonicBlue obtained an order in respect of copyright infringement against ReplayTV from the Central district court for Los Angeles in May 2002. What is unusual about this is that it ordered the defendant to track thousands of its users anonymously and keep records of how they copy, store and view TV broadcasts[197]. The ultimate solution to these problems seems to be services that harness the economics of the Internet rather than relying on existing business models. New subscription services, for example, allow users to burn their own CDs on portable devices rather than buy pre-recorded CDs[198].

3.26 Conclusion

In relation to the distribution of works via the Internet what is clear is that ISPs and hardware manufactures are the only bodies that can really control user behaviour, however, the implementation of draconian sanctions against ISPs is not good business and ultimately will not succeed. A more sensible strategy is to promote Internet business models using simplified dispute resolution procedures including the issue of compulsory licences where this is necessary to promote competition. In terms of securing multimedia content the primary options are to turn the Internet into a closed secure network, which has considerable privacy implications, or to keep the network open and to find alternative means of making money from it i.e. advertising, sponsorship etc.

Copyright law is often seen to be in conflict with technology, yet copyright is itself a product of technological change. Before 1950 there was a golden triangle between authors, publishers, and consumers, however, with the arrival of new copying technologies, first photocopiers, then desk-top publishing, this relationship began to break down. Consumers began to demand more and better rights, and publishers in turn demanded better enforcement of the rights they controlled. Thus a dual conflict

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[197] Dawn C. Chmielewski, "SonicBlue ordered to track ReplayTV user's viewing choices", SiliconValey.com, May 2, 2002. Available from: http://www.silicinvalley.com/mld/siliconvalley/3186191.htm.

[198] Gwendolyn Mariano, "Liquid Audio to let subscribers burn music", CNET News.com, April 28 2002. Available from: http://news.com.com/2100-1023-893707.html.

arose between authors and publishers on the one hand and publishers and consumers on the other. At about this time the scope of copyright expanded considerably thereby exacerbating this conflict. A parallel conflict arose with copyright law itself, especially in the United States where copyright law is derived directly from the Constitution. Here copyright law is not designed primarily to reward authors for their labours, but to promote science and the useful arts. Multimedia works posed a particular problem because of their use of existing works for new purposes.

Traditionally copyright works have been placed in rigid classifications i.e. "literary works, musical works etc., however, multimedia works do not fit neatly in any one of these categories. Usually multimedia works are classified as "literary works" or "cinematographic works", and sometimes "collective works". The problem with this is that each category has a different strength of protection, and sometimes a multimedia product may fall outside of these categories altogether. The result is a culture of under-protection for multimedia works. The same problem has created a movement towards sui generis protection, but this has problems of its own. Another difficulty with multimedia works is that each component element of a multimedia work may possess its own copyright. A question then arises, as to how small is the smallest protected element. Obviously before an element of a work is protected it must be original, and the smaller it is the less likely it is to be original. Under English law for an element of a work to be original, it must "be an original expression of an idea". The difficulty of identifying an individual element of a multimedia work is complicated by the fact that such works may be stored on any form of digital memory and can be interactive or non-interactive.

In terms of disadvantages multimedia products can have high development costs and distribution of such products over the Internet is to a large extent dependent on the adoption of consistent communication standards. It is also difficult to distinguish between authors work and information, and it can be hard to differentiate between different uses of a work. This makes licensing difficult and can frustrate the application of fair use. Equally, in multimedia works the boundaries between different

media break down thus stretching conventional notions of copyright to breaking point.

In the U.K. copyright law is codified mostly by the CDPA, this protects the creation of copies, and therefore tends to overprotect some elements of multimedia works (i.e. static elements) while under protecting others (i.e. moving images and interactive elements). The provision of multimedia works on the Internet is dependent primarily on access to copies rather than the creation of copies. This access will often involve databanks of original works. Further, the CDPA prevents infringement of transient and incidental copies, unfortunately the Internet cannot operate without creating such copies. Accessing a database would be better classified as rental or public performance. To complicate matters further several databases may be accessed simultaneously. The development of multimedia technology is also being slowed by technical factors such as lack of bandwidth on the Internet and the incompatibility of applications software; however, these problems are steadily being resolved.

Advanced multimedia products are interactive, while this brings a rich communication of the emotions it leaves little time to reflect. One result of this is that works created interactively tend to be less original than those created by conventional means; another is that the user of software rather than the programmer can be the first person to cause a digital work to be "fixed". Since cinematographic works involve an aggregate of visual images being displayed as a moving picture, it may be difficult to establish that a substantial part of an interactive multimedia product is so produced, thus bringing it outside of the category. Ironically the more innovative a multimedia work is the harder it is to protect using copyright. A similar problem with interactive works is that they are often non-sequential in structure so that they do not form an aggregate that can be displayed as a motion picture. Thus the more opportunity is given to the user to create a derivative work; the less substantive is the contribution of the producer/creator of the work. A specific problem relating to the application of the CDPA to interactive multimedia is that appropriation of multimedia content on a multi-point system falls outside its definition of copying, substantiality, and

broadcasting. Multimedia works use a lot of pre-existing copyright material often held in databases. These databases were created using contracts that do not contemplate digital uses so in practical terms this material may be unusable in any digital work. Another significant problem for interactive works is that they create derivative works and U.K. law contains no substantive derivative works doctrine.

The public domain is important in terms of multimedia because multimedia creation would be impossible without it. However, the public domain is steadily being eroded by the steady expansion of copyright. It is being privatised in the name of the author, yet giant corporations rather than individuals usually own the rights involved. The public domain has few disputants unlike private companies, which can afford teams of lawyers. One very significant way in which the public domain is being eroded is through the steady lengthening of the term of copyright. This situation is worsened by the increasing life expectancy of authors. Both the Duration Directive in Europe and the CTEA in the United States significantly lengthen the term of copyright. This is not just a sudden change but is part of the steady expansion of copyright since its inception. Duration of copyright differs according to the type of work involved and even if this were not so there were significant differences in the term of copyright in Europe between one Member State and another. Consequently the Commission sought to harmonise the term of protection throughout the Member States. This included the event triggering the running of the term, and the date from which the term was to be applied. For performances the term was fifty years from the date of the performance, but for most other works the term was increased from life plus fifty years to life plus seventy years, thus going above international minima. Supposedly this was to give copyright owners more time to recoup their investment and to take into account the greater longevity of authors. For multimedia works the author became the director and producer and the term was to run from the death of the last surviving author. For collective works the term effectively became perpetual because for these works the term begins to run from the date of publication of each individual part. These increases in the term were subject to the proviso that the work is it's "author's own intellectual creation", a term not defined in the Directive. Further, the

Directive has the unusual effect of bringing some public domain works back into copyright.

Changes to the term of copyright in the United States are more recent, the CTEA creates a new term of 95 years for works created by companies after 1998, but for works created after 1 January 1923 and before the CTEA came into effect the term is life plus seventy years. The CTEA was subject to challenge in the U.S. Supreme Court on the grounds that there is a Constitutional limitation on extending the term of copyright, it does not promote science and the useful arts, and because it is contrary to freedom of speech under the First Amendment. However, the court rejected that challenge because in its view Congress had not exceeded the scope of the copyright clause of the U.S. Constitution and because the existence of 'fair use' provisions in the Act invalidated the argument that the CTEA contravened the First Amendment.

One of the main difficulties in protecting multimedia works is that they often straddle the categories used in Anglo-American copyright law. This is particularly the case where a work involves two-dimensional representations of three-dimensional objects. Where this happens it is difficult to determine the category into which a work should be placed. Furthermore, different categories offer different levels of protection and some multimedia works may be hard to fit into any category. In relation to infringement proceedings the category into which a multimedia work is placed will affect what constitutes a substantial portion and the level of originality that portion needs to attain. If a three-dimensional copy of a two-dimensional work is made or vice versa, much will depend on the visual similarity between the copy and the original. Functional objects may still attract copyright, but the skill and labour involved in the copying are irrelevant.

Photographs are often two-dimensional representations of three-dimensional objects; however, they may be just two-dimensional copies that are totally lacking in originality. Works of art, which are in the public domain, may be kept in the private domain using the thin copyright that attaches to many photographs. This thin

copyright only protects the original elements of a photograph and some photographs lacking in such original elements will not attract copyright protection. Digital copies have been analogised to photocopies and as such may not be copyrightable. Similar problems can be encountered in relation to interface software, where some elements of the software are in the public domain, and other elements constitute ideas rather than the expression of ideas. In the United States multistage tests have been developed to separate the protected an unprotected elements of computer programs and then evaluate their originality, however, in the U.K. this approach has specifically been disavowed in favour of much less sophisticated tests. While multistage tests have problems simple tests for substantive similarity are even more inadequate when evaluating the originality of multimedia products.

Video games have been available on the mass market since the early 1970's and are structurally similar, if not the same as, many multimedia products. Case law concerning video games is therefore very important when considering the legal treatment of multimedia products. From case law in the U.S. and the E.U. it is clear that for such works to be copyright what matters is "quality of the personal intellectual creation". The creation of derivative works by users depends on the sophistication of the program and the degree to which the user can manipulate it. Intent is also important in that the user must intend to create a derivative work. The originality of a game cannot be challenged just because the user has some control over it. Where the fluidity of a video game is impaired it may not be classified as an audio-visual work. Furthermore, the alteration of a video can be prohibited if the author of some of its elements chooses to assert his moral rights. The fixation of a video game is also important because a work must be fixed before copyright subsists in it. However, in a recent appeal decision in the United States, the creation of a derivative work from a video game was held not to be fair use, even though the derivative work did not incorporate any part of the work in fixed form. In recent cases in Australia the interpretation of the fixation requirement has become quite liberal so that the end result is more significant than the means used to generate it.

Where fair use is claimed in relation to the use of video games recent U.S. decisions make it clear that the courts take a dim view where use is commercial. It is also clear that the fourth factor in the test for fair use is the most important. Even when the effect on the market for value is small the courts place considerable weight on the likely effect on future markets. Since there is no way of quantifying this it seems a very dubious way of determining whether use is fair or not.

Computers are very good copying machines and when used in combination with the Internet produce an ideal environment for piracy. The exchange of music files over the Internet is perceived by the record industry as a huge threat to its revenue streams. Formerly music files were too big to transfer easily using the Internet; however, with the arrival of digital compression and the MP3 standard this became feasible. Further, the development of file sharing software allowed users to locate MP3 files easily. The debate over the legality of this technology centres on the extent of fair use on the Internet. The MP3.com case concerned the mass copying of large numbers of CD's for commercial gain and was a clear violation of the copyright owner's exclusive right to make copies and fell outside of the scope of fair use. Following the development of file sharing technology Diamond Multimedia developed a device for playing MP3 files via the hard drive of a PC. The legality of the device was challenged as a contravention of the relevant provisions of the AHRA. However, the MP3 player did not fall within the definitions set out in the Act because recordings were made indirectly via the hard drive of a computer, which had significant non-infringing uses and therefore did not need to conform to the security standard prescribed by the AHRA.

The Napster case was not so straightforward since the defendants did not copy CDs directly, but merely provided the ability to link to files on users computers without files passing through their own server. Ultimately the defendants were held liable on the basis of their ability to monitor infringement. While they attempted to shelter under the service provider exemption of the DMCA, it was held that they had made an inadequate attempt at introducing a policy prohibiting infringement, and since they

operated via the Internet they could not claim to be a mere conduit. While the appeal court amended the injunction because it was over broad they upheld the decision of the court below distinguishing the Sony case on the ground that the consumers in that case were not engaging in mass distribution of copyright works. Following the Napster case websites continued to provide file sharing facilities but maintained the anonymity of users and relinquished the ability to monitor users so that they lacked the requisite knowledge to be held liable for copyright infringement. This was also significant because these operate through linking. For contributory infringement to apply to linking there must be direct infringement which the defendant encourages users to commit. Liability only arises if the plaintiff has actual or constructive knowledge of infringement. Link liability may also arise from browsing.

The MP3Board case is significant because it involved a successful pre-emptive action against the RIAA. The case involved a website containing a database of links to MP3 files that actively encouraged users to download MP3 files. The site did not exercise control over its users. The RIAA issued four take down notices and in response two of the sites ISPs disrupted service. In reply the plaintiffs sought declaratory relief in the district court, claiming that the defendant's actions amounted to anti-competitive conduct and tortious interference with business contracts. The plaintiff's further alleged that they were protected by the safe harbour provisions of the DMCA and claimed injunctive relief preventing the issue of more take down notices. The defendants counterclaimed, however, a number of counts, particularly the tortious interference with business contracts claim were upheld. In relation to ISP liability under the DMCA significant guidance may be derived from the Ellison case brought in the California district court. Here an ISP was sued over an infringing copy of an electronic book stored on its network. The court held the "right and ability to control" referred to in s.512 means more than the ability to block and erase files after infringement has occurred. The plaintiffs here derived no financial benefit from infringement and the test of "intermediate and transient storage" was satisfied where the defendants had a policy of removing material after eleven days. However, on appeal this ruling was overturned because the defendants had failed to properly

implement their policy of terminating access to users who were engaged in repeated copyright infringement.

Probably the most significant recent case concerning file sharing is the Kazaa appeal to the Dutch Court of Appeals, which involved an action for contributory copyright infringement, brought against a website involved in the distribution of MP3 files and other file formats. Notably the site exercised no control over its users and had failed to secure a streaming licence from the plaintiff collecting society. Here the court held the appellants not liable on the grounds that the termination of their services would not prevent the exchange of files and because Kazaa's software had substantial non-infringing uses. Similarly, in the factually analogous Grokster case in the U.S.A. the plaintiffs failed to show that the defendants knew or had reason to know of the infringement.

Apart from the distribution of multimedia files on the Internet the role of search engines must not be overlooked. The retrieval of multimedia files on the Internet requires software filters, software can be protected using patents, but this type of protection can be problematic. Search engines can trawl the Internet for all kinds of information; however, graphical search engines are not good at identifying the copyright status of images. In Kelly v. Arribasoft the Ninth Circuit Court of Appeals decided a case involving the infringement of photographs by a picture search engine. The appellants claimed fair use and the court held that the display of thumbnail images did constitute fair use while the display of full size images did not. The decision was based largely on the fact that use of thumbnails was necessary for the normal functioning of the search engine while the display of full size images was not. Further, it was considered important that the display of full size images would harm future markets if the practice were allowed to continue. Clearly, however, this case does is not reflected in the attitude of the English courts, which would regard the copying of even thumbnail images as infringement. Where copied images are just outlines, that are not very detailed, it seems that this would not be infringement. However, the approach of the U.S. courts is not likely to be emulated in the U.K. In

Antiquesportfolio.com Plc. v. Rodney Fitch & Co. Ltd the court held that even the most mundane of copies could be considered copyright even where any effort expended is purely technical. The size of the image copied being irrelevant to the issue of substantiality where the whole image was copied.

Finally, this chapter considers the future development of network technology and its effect on the distribution of multimedia works. Here three key stages of network development are identified, the third generation coming into operation by about 2005. This will make those services available on fixed networks available as mobile services. The development of the WAP standard will provide fast, secure, interactive services. In relation to multimedia distribution the main problem with such services concern jurisdiction and enforcement. Thus the importance of controlling ISPs is only likely to grow since they are at the moment the only organisations that know the true identity of users. Chapter 4 goes on to consider the nature and effectiveness of technical protection devices, having regard to multimedia products and the copyright regimes that protect them.

CHAPTER 4

Technical Protection for Multimedia Products Distributed over the Internet

4.0 Introduction

In response to the cheap large-scale reproduction facilitated by the Internet, copy owners have sought protection against infringement through technical means, an approach summed by Charles Clark who states "the answer to the machine is in the machine"[1]. This rather over-confident approach is not matched by reality where technical solutions are at best partial. At worst they protect content that is not subject to copyright, frustrate user access, or just end up as a technological arms race fought against infringers and consumers. Technological solutions have five main areas of application, namely: (1) preventing access; (2) controlling access; (3) limiting reproduction, adaptation, performance or display; (4) identification and attribution of works, providing proof of ownership; and (5) management of copyright licensing[2]. To work effectively technical protection requires a harmonised legal environment. Even assuming that technical protection systems work effectively and have harmonised legal protection they may distort the balance of rights that existed in the analogue world in favour of right owners. Laddie J. advises that the widening of copyright protection requires both moral and economic justification. In an article of 1996 he states: "The whole of human development is derivative. We stand on the shoulders of the scientists, artists and craftsmen who preceded us. We borrow and develop what they have done; not necessarily as parasites, but simply as the next generation. It is at

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[1] John-Willy Rudolph, "The Role, Importance and Possibilities of Collecting Societies in a Digital Age", Kopinor 1996 p1. Available from: http://www.kopinor.no/dokumentbank/foredrag/engjwr96-1.html.

[2] Paul C. Graznak, "From Atoms to Bits and Back: DVD Technology and Copyrighted Content", Ent. L.R. 1998, 9(2), p83.

the heart of what we know as progress. When we are asked to remember the Eighth Commandment, 'thou shalt not steal', bear in mind that borrowing and developing has always been acceptable." [3]

4.1 Technical Protection Measures and their Effect on the Balance of Copyright

From the outset copyright has never simply been a means of making money for right holders and has attempted to strike a delicate balance between the interests of all the parties involved i.e. the 'public', rightholders and publishers. However, in the digital age this balance has tipped in favour of rightholders and publishers who are claiming rights in the digital environment that they never had in the analogue world. Furthermore, the public does not support this unbalanced view of copyright, yet it is enforced in the courts, through contract law and using technical protection systems that are protected using both civil and criminal sanctions. Jessica Litman suggests that the digital world is so different from its analogue equivalent that existing copyright law should be replaced with something completely different. This she claims is necessary because the underlying premises of copyright law are irrelevant in the digital world where what counts is access and usage rights rather than the right to make copies[4]. Indeed strict application of current legal standards would completely incapacitate the Internet, which makes numerous copies of digital works as part of its normal functioning. For example, linking and caching are essential features of the Internet, which would work inefficiently or become un-navigable if they were legally prohibited. Technical protection systems make nonsense of the idea/expression dichotomy because they protect both idea and expression indiscriminately. Even where exceptions allow the public to break technological protection systems, if distribution of circumvention technology is prohibited, this offers little consolation for ordinary users who don't have the time, the skill, or inclination to do so. While rightholders ought to be given sufficient rights to exploit their works the rest of the world needs sufficient access to those works to allow them to read, see, listen to, use

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[3] Hugh Laddie, "Copyright: Overstrength, Over-regulated, Over-rated?", E.I.P.R. 1996, 18(5), p259.
[4] Jessica D. Litman, "Revising Copyright Law for the Information Age", 75 Or.L.Rev., Spring 1996, p19.

and reuse, adapt, and learn from them in order to develop human knowledge. However, while Litman's ideas are attractive they are only partially right. She is right in the sense that copyright will ultimately be replaced by something else, and that the issues of access and user rights have become critical in the context of the Internet. But she is wrong if we are to interpret her in a way that involves the rapid replacement of copyright with something else. The economic structures that underpin the Internet are far from stable and before we can replace copyright we need to understand the problem we are trying to solve. In the mean time what is required is a flexible interpretation of existing law. To do otherwise is to make wrong assumptions and to predict futures that may never happen.

The issues here are confused by the use of the term 'public' which can be used to denote society as a whole and to the various interest groups from which it is composed. While some of these interest groups have money and formidable lobbying power, others do not and are therefore relatively underrepresented[5]. Furthermore, there is a fundamental conflict between underlying philosophies of the two main schools of thought in copyright law i.e. the Anglo-American and droit d'auteur systems. Whereas the former is based upon a limited monopoly designed to serve the public interest, moral rights are based upon the personality of the author[6]. The level of the authors control in droit d'auteur systems is therefore much greater than under Anglo-American systems. However, this control is justified on public policy grounds as encouraging the creation of new works for the instruction and enlightenment of the public[7]. Despite this public interest lobbies have had a much greater impact in the United States than in Europe where the exclusive rights of copyright owners have been strengthened[8]. In Europe the balancing of interests has taken place through legislative exceptions favouring particular user groups. However, the Information Society Directive has placed specific limits on such exceptions. Antitrust law may also

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[5] Thomas Dreier, "Balancing Proprietary and Public Domain Interests: Inside or Outside Proprietary Rights?" in *Rochelle Dreyfus ed., Expanding the Boundaries of Intellectual Property*, OUP 2001, p297.
[6] ibid., p298.
[7] ibid., p300.
[8] ibid., p303.

play some role in regulating what can be done with technical protection systems, however, antitrust law is a blunt instrument that will normally only be used in situations of market failure[9]. It is also worth noting that most disputes concerning technical protection systems will be regulated by contracts or licences, which like the technical protection systems themselves, can go beyond copyright law unless specifically prohibited from doing so by legislation.

4.2 Controlling New Technologies

Copyright law, as we know it is very much a creation of the nineteenth century, and as such it tends to assume that the interests of authors and publishers are the same[10]. Furthermore, the current approach to copyright law in most common law countries tends to regard technological change as an assault on the existing legal framework. With the demise of the so-called "golden" triangle" between authors, publishers, and consumers in the 1950's new user-friendly reproduction and dissemination technologies emerged, and this along with the development of digital technology allowed different media to converge preparing the way for the creation of the Information Society[11]. In this new order consumers and authors were able to take on the mantle of publisher, and as a consequence they demanded more and better rights. The reaction of the publishing industry was to demand access rights, not the right of users to access information, but the right of publishers to control information[12]. However, this technologically challenged, technology specific approach must be replaced by a more flexible approach that seeks to strike a balance between the interests of authors, publishers and the public using the exceptions and limitations that have always been part of copyright. For example, in the 1997Australian case of Sega Enterprises Ltd. v. Galaxy Electronics Pty Ltd[13] the full Federal Court of Australia held that two multimedia games could be classified as "cinematograph films" under

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[9] ibid., p314.
[10] F. Willem Grosheide, "Copyright Law from a User's Perspective: Access Rights for Users", E.I.P.R. 2000, 23(7), p321.
[11] ibid., p323.
[12] ibid., p324.
[13] (1997) 35 I.P.R. 161 (Fed Ct (Aus)).

s.10 of the Copyright Act 1968 (Australia). This was so even given that the technologies used in the games were not literally cinematograph films, but produced the same sort of effects. In another case Video Retailers Association Ltd. v. Warner Home Video Pty Ltd[14] the Federal Court of Australia held that the storage of fractions of visual images in the RAM of a DVD player did not constitute the making of a copy of a substantial part of a DVD recording.

4.3 Technical Protection in the Information Society

Despite Commissions introduction of grand schemes such as the Information Society the attitude of Europe's businesses and consumers towards electronic Commerce is ambivalent, however, revenues from electronic commerce continue to increase rapidly[15]. While these two statements seem contradictory they reflect the reluctance of businesses to take some of the legal risks associated with electronic commerce i.e. violation of foreign laws, and being bound to honour contracts with thousands of people. Equally consumers may never receive goods and may not be able to get their money back. However, for many transactions electronic commerce is convenient and offers low prices. The Information Society was established at the Corfu Summit of 24/25 June 1994, and its objectives were set out on 19 July 1994 in an Action Plan entitled "Europe's way to the Information Society". Four key policy lines can be identified in this document. Firstly, an Information Society requires an improving business environment in which regulation is consistent and transparent, and swift adoption of information technologies in all sectors of the economy. Secondly, there would need to be a considerable expansion of the knowledge base of society. Thirdly, the members of such a society would require access to wide variety of information services and content, necessarily entailing a high degree of quality assurance, and consumer protection measures. Fourthly, for this society to be relevant on an international scale these services would have to be integrated both internally and on a global level. In order to produce a harmonised legal environment in which technical

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[14] (2001) 35 I.P.R. 242 (Fed Ct (Aus)).

[15] Cecilia Kye, "E-Commerce in the E.U.: bringing business and consumers aboard", C.L.S.R. 2000, 17(1), p25.

protection systems are effective the Commission has introduced six Directives, most notably the Information Society Directive.

Copyright is of a territorial nature, consequently the applicable law is that of the country in which protection is sought. However, unless European copyright law is harmonised this will lead to forum shopping and inconsistent treatment of copyright. The Commission recognises that there is a need to properly protect intellectual property rights if the objectives of the Information Society are to be met. This policy must though be balanced against the rigours of competition law[16]. Thus far European and American proposals for reform have favoured right owners in three main ways: (1) the redefinition of access to information in an electronic medium so that this automatically entails reproduction of a work, which needs permission and potentially requires a licence; (2) redefining the electronic transmission of a work as distribution for which a licence is required; and (3) the attachment of rights management information to electronic copies of works[17].

4.4 Standardisation

Standardisation is the process whereby a specific technology is adopted for use in a particular industry for a particular purpose. This process may be fostered by a recognised organisation (e.g. the Internet Engineering Task Force, "IETF"), by government decree, or de facto i.e. when most users in a particular market voluntarily select a particular technology[18]. The standardisation of icons and commands used on user interfaces are essential elements of a user-friendly computer system[19]. Standardisation is also essential to ensure the interoperability of one technical system with another, especially where devices need to communicate with one another (e.g. HTTP). In terms of copyright law the main problem of standardisation is that the utilitarian nature of standardised products and interfaces makes them hard to protect

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[16] Tom Usher and S.J. Berwin, "Copyright in the Information Society", L.E.. 1997, Sum, p4.
[17] Gabriela Kennedy, "Copyright in the Information Society: A World of More Copies and Rights?", C.W. 1999, vol.93, p17.
[18] Mark A. Lemley et al., *Software and Internet Law*, Aspen Law Business 2000, p1098.
[19] David Bainbridge, *Software Copyright Law*, 3rd ed., Butterworths,1997, p88.

since they lack originality because they are already in the public domain. The other significant problem with standardisation and/or compatibility is that this may in certain circumstances justify reverse engineering of software. Almost all recent courts and commentators endorse this view[20].

In terms of the Internet itself the standardisation process is controlled by a small number of entities. While the Internet is decentralised, certain critical standards required for its operation are not. The Domain Name System (DNS) for example is administered by a U.S. corporation, and the Internet Corporation for Assigned Names and Numbers (ICANN) formed in 1998. ICANN requires one At Large Director from each of the ICANN regions, namely, Europe, Asia/Australia/Pacific, Latin America/Caribbean, Africa (which is not represented), and North America. However, OECD statistics show that 90% of Internet hosts are located in the world's 29 richest countries, and that by 2003 80% of these hosts will be outside of the United States[21]. With regard to multimedia products, or any products for that matter, the standardisation process has serious antitrust implications. The five most significant of these are (1) over-inclusive standard setting organisations; (2) market leveraging; (3) abuse of market power; and (4) belated disclosure of intellectual property rights; and (5) the closure of open standards[22]. Currently the treatment of standard setting in network industries is a very underdeveloped area of antitrust law[23], both in Europe and the United States, but especially in Europe. In recent years a plethora of standards have been introduced by European standards agencies in furtherance of the Information Society with little understanding of their competition law implications. Even more recently Microsoft has released its Windows XP operating system, which critics contend is "designed to increase the company's monopoly over PC operating systems to Internet commerce and other business lines"[24].

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[20] See note 18 above, p244.
[21] Gabriela Kennedy, "New codes and protocols for cyberspace: current issues in Internet governance", C.T.L.R. 2000, 6(8), p228.
[22] David A. Balto, "Standard Setting in the 21st Century Network Economy", Internet Lawyer, June 2001, p10.
[23] ibid., p17.
[24] Peter Kaplan, "Windows XP disappears from Capitol Hill debate", SiliconValley.com, 24 October, 2001, p1. Available from: http://www.siliconvalley.com/docs/news/reuters_wire/1594051.htm.

4.5 DVD Technology and the Threat it poses To Digital Copyright

The immediate predecessor of the DVD was the CD, a small polycarbonate disc that stores "digital" data, and can be reproduced in large quantities. CDs were first used to store audio recordings and were developed in the late seventies by Sony (Japan) and Philips (Netherlands)[25]. While the CD hailed a new era of high quality sound and video recordings, by the early 1990's it was becoming apparent that the CD standard had insufficient storage capacity to handle the rapidly evolving new generation of memory hungry multimedia products. Although the exact date when the development of the DVD standard began is uncertain, its development in the consumer electronics market was fully under way by mid-1995. To begin with DVD stood for "digital video disk", and subsequently "digital versatile disk", and now stands for no term at all[26]. The key feature that makes the DVD an attractive medium for consumers is its interoperability with video players, audio players and DVD-ROM drives for personal computers. Further, a DVD looks much like a CD but can hold the equivalent of seven CD-ROMs. Initially the DVD held 4.7 GB and could potentially hold four times this much data[27]. Such a standard poses a clear threat to the producers of multimedia products because producers were formerly able to control parallel importing, and thereby maintain price discrimination by having different standards in different parts of the world. However, a knock on effect of these different standards was that piracy was less easy, at least on an international level. Producers were also aided by the fact that it was difficult to download massive multimedia files[28]. With the arrival of DVD this is no longer the case, especially given the fact that the standard allows the recording of MPEG-2 files, thus markedly diminishing the number of video bits utilised. Another interesting factor is that of interactivity since technically speaking it is possible for DVD recordings to simulate interactivity i.e. to change the order of

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[25] Vittorio Testa, "DVD: Risks and Benefits for the European Audio-visual Markets", [1999] Ent.L.R., 10(3), p71.
[26] See note 1 above, p76.
[27] See note 1 above, p77.
[28] ibid.

scenes in a film or to insert new ones[29]. Thus we have a form of sampling for video with similar implications in terms of the creation of derivative works.

The software originally used to protect DVD recordings is known as CSS; however, as mentioned later in this chapter, in 1999 a Norwegian schoolboy cracked the code. This code was developed by Xing technology, unfortunately they made a critical mistake in failing to encrypt the encryption key in their DVD player, consequently hackers had easy access to the encryption code which they reverse engineered to produce DeCSS. Placing this code on the Internet meant that anyone with a DVD-ROM drive could download the DeCSS program and use it to copy DVD movies, thus causing a massive increase in film piracy[30]. Part of the problem here was the fact that until January 14, 2000 the United States government prohibited the export of encryption products with encryption keys that were more than 40 bits in length thus providing software with only weak protection against attacks[31]. In the ensuing litigation the plaintiffs sought what amounted to a perpetual extra-territorial injunction restraining the distribution of DeCSS. While the injunction was granted by the district court, the Second Circuit Court of Appeals overturned the injunction because of the courts failure to consider the defendant's First Amendment right to freedom of speech, and severely criticised the granting of a perpetual injunction[32]. Current attempts at controlling DVD piracy concentrate on the identification and tracking of copyright works using a combination of watermarking and powerful search engines. However, this methodology will not stop the unauthorised use of copyright works since it is almost impossible to stop pirated material from getting onto the Web in the first place[33]. However, in 1994 a new DVD format designed to do this was released, Divx is a DVD format that facilitates pay-per-view rental schemes. The price on such schemes is relatively low for the first 48 hours, after this time the downloadable DVD software will cease to operate without further payment. The standard combines DES

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[29] See note 25 above, p73.
[30] Anna Thomas, "DVD Encryption - DECSS", En.t.L.Rev. 2000, 11(6), p135.
[31] ibid., p137.
[32] ibid., p136.
[33] See note 1 above, p83.

encryption, and watermarking, but has aroused vociferous opposition amongst users[34].

4.6 Access control or Copy Protection

Technological protection falls into two main categories i.e. access control and copy protection. Access control is the most frequently encountered because it is easiest to implement and the most secure because if a hacker cannot gain access to content he cannot copy or manipulate it. However, this kind of protection may afford copyright owners more rights than they are given under copyright law or even contract law. Even lawful users may not be able to view the material so protected, and content that is not subject to copyright may be taken out of the public domain. Copy protection uses sophisticated programming to limit the extent to which content may be copied. Both techniques require adoption of compulsory industry standards to work effectively, access control mechanisms must be installed on hardware devices[35], and copy control techniques work through the incorporation of flags in digital signals, flags that must be recognised by the hardware installation[36]. One such standard is the Serial Copyright Management System (SCMS), which allows users to make an unlimited number of copies from the original while preventing the creation of second-generation copies. This is achieved through the hardware recognition of control flags embedded in the software. SCMS is used primarily to protect musical recordings, but can be readily circumvented[37]. The Content Scramble System (CSS) is a copy management system designed to control access to DVD films, it prevents copying by encrypting the DVDs digital code. It was developed by Matsushita Industrial Co. and Toshiba Corp between 1996 and 1997. However, it was decrypted by a Norwegian schoolboy in September 1999 using code known as DeCSS, which was subsequently

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[34] See note 25 above, p79.
[35] Dean S. Marks and Bruce H. Turnbull, "Technical Protection Measures: The Intersection of Technology, Law, and Commercial Licences", [2000] 22 E.I.P.R., p201.
[36] ibid., p202.
[37] ibid.

made available over the Internet and was posted on a hacker's website known as 2600 magazine[38].

4.7 The Internet and Security

The Internet consists of a basic hardware based communications infrastructure overlaid by interactive data delivery services, which in turn are based upon open technical standards such as TCP/IP[39]. Open technical standards are by their very nature vulnerable to security breaches because their openness and the exponential growth in the demand for Internet services can easily overload network infrastructures. Usage patterns can be unpredictable so it can be very hard to keep track of data packets that can easily be lost[40]. The situation is exacerbated by the fact there is no effective way of differentiating between one kind of digital file, or another, as it passes through a network. The Internet depends upon the ready ability to link between one IP address and another, a phenomenon known as 'linking'. While this facilitates freedom of movement on the Internet it also creates huge security problems for website owners. One simple solution is to use password protection. However, such protection can be bypassed by linking to internal web pages i.e. 'deep linking'. A more sophisticated solution is dynamic paging, which works by building a website only after the execution of a program. Hence there are no fixed links for a linker to point to. This has the drawback that user access is restricted, and if revenue streams depend upon user access this could be highly undesirable[41].

4.8 The Legality of Self-help Devices

Historically mankind has tended to implement self-help solutions because of their speed and low cost, or because of the lack of viable alternatives. The courts initially took a dim view of self-help since it was a source of civil unrest, and it was not until

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[38] *Universal City Studios, Inc v.Remeirdes* 00Civ. 0277 (LAK) (S.D.N.Y., 2000).
[39] William Stallings, *Network Security Esssentials*, Prentice Hall 2000, p203.
[40] Dorothy Denning and Peter J. Denning, *Internet Beseiged,* ACM Press 1998, p121.
[41] See note 39 above, p92.

the fourteenth century that the courts took a more favourable view of self-help[42]. Electronic self-help systems are prevalent in the United States software industry as means of securing payment. The term can be used to describe "any method of self-help used by a software company to deny access to its software or to regain access to its software, on either a temporary or permanent basis." In the software industry there are three main kinds of self-help. These are (i) logic bombs i.e. pieces of encrypted code that render a program dysfunctional after it is triggered by a particular event; (ii) termination by remote access, which has the advantage of allowing termination of user access without the use of logic bombs or going to the users premises; and (iii) the removal of source code, this last option does not prevent the use of the program, but will prevent its subsequent modification[43].

Digital locks are similar to physical locks in so far as they contain mechanisms that block access. Whereas physical locks use mechanical means to block access, digital locks use particular formations of digital code to block access[44]. A digital lock may consist of something as simple as password protection or may employ complex mathematical algorithms such as those employed in strong encryption. However, in either case it is possible to break digital locks by changing the programming of the lock, by working out passwords, or by using computer programs, which in some way disables or deceives the locks programming so that the hacker is perceived to be a legitimate user. Moreover the technology used to circumvent digital locks will usually be considerably less expensive than the digital lock itself. It is therefore not difficult to see that such devices will have a serious effect on the business of the distributor of the original program as well as on the owners of content protected by a digital lock that is circumvented[45]. Another problem with digital locks is that they are sometimes damaged in some way so that even legitimate users cannot access the content protected by them. As a consequence legitimate users may try to circumvent the

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[42] Craig Dolly, "The Electronic Self-help Provisions of UCITA: A Virtual Repo Man?, 33 J.MAR.L.R. Spring 2000, p670.
[43] ibid., p673.
[44] Howard C. Anawalt, "Using Digital Locks in Invention Development", Computer High Tech. L.J. [1999] 15, p367.

digital lock and could become liable for an act of circumvention, especially where this is contractually prohibited. Further, hackers may use this as an excuse for their unlawful activities. In the United States the Librarian of Congress dealt with this problem in his Triennial Rulemaking on the DMCA by adding an exception permitting the circumvention of access control mechanisms by legitimate users where the mechanism has malfunctioned and the problem cannot be resolved by negotiating with the copyright owners[46].

In recent years German courts have upheld the use of digital locks; however, a distinction must be drawn here between a digital lock or dongle and so-called drop-dead devices. These are devices, which prevent operation of a computer system after the elapse of a period of time or failure to fulfil certain conditions. This may give rise to tortious liability where the computer user is not aware of its presence. In case No. 3-11 O 26/95 of 4 April, 1995 the Frankfurt district court refused to order the replacement of a digital lock which had been stolen, even though the program in question could not be used without a functioning digital lock. The court being of the view that the defendant had fulfilled his contractual obligation under the software agreement, there being no obligation to provide additional hardware in the event of the theft of the original hardware since this was the responsibility of the user[47]. On 19 September 1996 the Karlsruhe Court of Appeals prohibited the offer of removal of hardware lock program protection. This was to have been achieved by altering the programming of the lock and communication with it. This was held to be contrary to the copyright owners exclusive right of adaptation under s.69(c)(2) of the UrhG (the German Copyright Act of 1965). The court held that even where the adaptation of the lock is for error correction purposes, the user being entitled to use the program without technical problems, the right of the copyright owner to prevent unauthorised uses of the program must prevail[48]. Seemingly the Karlsruhe case could not be right under U.K. law where the lock is not fit for its purpose or of merchantable quality.

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[45] Andreas Raubenheimer, "Munich Court of Appeals Prohibits Circumvention of Software Copyright Protection (Dongle, Hardware Lock) Yet Again", I &C.T.L. 1996, 5(1), p76.
[46] 37 CFR Part 201.
[47] See note 45 above, p51.
[48] ibid., p54.

However, copyright law is becoming ever stricter and the same result might be achieved through the criminal law. Section 296 of the CDPA prohibits devices used to circumvent technological protection measures. The interpretation of this section is very wide as is shown by the High Court case of Sony Computer Entertainment v. Owen[49].

Under English law the insertion of digital locks into computer systems by stealth is probably unlawful. In Rubicon Computer Systems Ltd. v. United Paints Ltd[50], the Court of Appeal considered whether the defendants were in repudiatory breach of a contract for the supply of a computer system after they had activated a "time lock", without the plaintiff's consent, rendering the system inoperable. This occurred because the plaintiff withheld part of the contract price due to the defendant's failure to transfer information from the old system to the new system. By the time the lock was deactivated the computer system had become obsolete. The defendants claimed breach of contract and the plaintiffs counterclaimed on the grounds of the defendant's repudiatory breach (i.e. their activation of the time lock).

In the district court the judge held that the activation of the time lock was a repudiatory breach, which had been accepted by the plaintiffs. This being so the defendants were not entitled to recover the balance of the monies payable, and that the plaintiffs were entitled to recover all sums paid in respect of the contract. On appeal to the Court of Appeals the court held that: (1) there was a supply of goods and the activation of the time lock was a breach of the implied term under s.12(2)(b) of the Sale of Goods Act 1979, which permits buyers to enjoy quiet possession of goods once they have been received and the rights of the unpaid seller did not entitle them to unilaterally disable the plaintiff's computer without their consent, unless there was an express provision in the contract of sale to this effect; (2) the installation of the time lock without the plaintiff's consent effectively repudiated the contract, and that repudiation was accepted by the plaintiffs; (3) the damages for breach should be set at a level at least equal to the purchase price plus interest ; (4) the district judge was

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[49] [2002] EWHC 45 (Ch.D.).

wrong to hold that there was no duty to mitigate, especially if the plaintiffs had claimed damages for loss of profits, but since this was not the case and damages merely equated to the cost of purchase no duty to mitigate arose; (5) any tax relief received by the plaintiff's holding company for the purchase of the equipment was not a matter that concerned the appellants. Accordingly the appeal was dismissed.

Similarly courts in the United States have adopted a consistent policy of refusing to enforce software agreements where self-help measures have been used as an extra-judicial means of contract enforcement[51]. In Franks & Sons, Inc. v. Information Solutions Inc[52] a drop-dead device (logic bomb) was installed in software without the knowledge of the purchaser of the software licence. Subsequently a dispute arose over payment for the software and the defendant threatened to activate the device if payment was not forthcoming. The plaintiff sought an injunction enjoining the defendant from activating the device. The district court granted the injunction primarily on the grounds that the plaintiff was not informed of the existence of the device either before or at the time the contract was signed. However, in American Computer Trust Leasing v. Jack Farrell Implement Co[53], a case in which the plaintiff was informed of the existence of a drop dead device in their software prior to formation of contract, the court refused to grant an injunction where the plaintiff claimed that activation of the device would constitute extortion. This result obtained because the plaintiff was given notice that the defendant would deactivate the software upon default. More recently software companies have received legislative backing for the use of self-help in the form of s.9-503 of UCITA, which permits private repossession in certain situations without judicial intervention. The only meaningful limitation placed on this form of repossession is that it be achieved without breach of the peace[54].

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[50] (2000) 2 T.C.L.R. 453 (CA).
[51] See note 42 above, p675.
[52] Case No. 88-C-1474E (N.D. Okla. 1988).
[53] 763 F.Supp. 1473 (D. Minn. 1991).
[54] See note 42 above, p677.

4.9 Copyright Management Systems

CMS are mechanisms (electronic, manual or a mixture of the two) that support the authorisation process required for the use of copyright works. This process is usually managed by third parties rather than the copyright owners and will usually involve a database, an identification/rights transaction procedure, and a payment/accounting procedure[55]. In fully automated systems the licensing function will include a searchable online catalogue containing prices, content available, permitted uses, and a licensing function that operates 24-hours-a-day, seven days a week[56]. CMSs are based upon the concept of 'trusted systems' or 'secure digital envelopes', which secure the content of copyright works and control access and copying in accordance with the wishes of the copyright owner. The administration of such CMS requires a minimum level of accounting data, referred to as Rights Management Information (RMI)[57]. Article 14 of the WIPO Basic Proposal defines RMI as "information which identifies the work, the author of the work, the owner of any rights in the work, or any numbers or codes which represent such information, when any of these items of information are attached to a copy of the work or appear in connection with the communication of a work to the public"[58]. Most conventional copyright management systems work through prior authentication of users by a trusted third party; normally achieved by checking the user's name against a database. This assumes the use of embedded RMI used to identify the rightholder. This further facilitates payment debited against the user's account, and credited to the account of the rightholder[59]. In open systems data will have to be encrypted. Encryption systems such as RSA[60] require a trusted third party to keep track of the encryption keys so that they may be made available to

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[55] Daniel J. Gervais, "Electronic Rights Management and Digital Identifier Systems", J.E.P., 3 April 1999, p1 available at http://www.press.umich.edu/jep/04-03/gervais.html.
[56] ibid., p2.
[57] Jonathan Cohen, "Some Reflections on Copyright Management Systems and the Laws Designed to Protect them", Berkeley Law & Tech. J. 1997, 12(1), p162.
[58] ibid., p168.
[59] John Bing, "The Contribution of Technology to the Identification of Rights, Especially in Sound Audio-visual Works: An Overview", I.J.Law &Tech., 1997, 11(1), p238.
[60] A public key cryptosystem invented at MIT in 1977 by Rivest, Shamir, and Adleman.

authorised users[61]. This form of CMS is administratively complex and requires more communication than in intelligent CMS, which have a self- contained verification algorithm. While this adds to the complexity of the software, the need to communicate with an external database, which requires continuous updating, is avoided[62]. Although intelligent CMS make administration of rights more efficient they do not provide a secure means of identification, so where works are digitally encoded RMI have to be embedded into the code indelibly[63].

There are a number of reasons why CMS only offer partial protection. Trusted systems may be bypassed, for example by linking to web pages other than a password protected home page, and downloadable executables may be metered out since they need to be downloaded before they are executed. Hardwired CMS resident in hardware installations also present problems since the public has to be persuaded to buy hardware, which includes a CMS. Given the widespread ethos of the free availability of information on the Internet, it is likely that CMS are perceived as a threat to user's rights, or at best an inconvenience. Even if the owners of CMS pay due attention to public policy considerations, it seems probable that CMS will inhibit actions that are permitted by copyright law[64]. Further, it would not be reasonable to prevent users from hacking into the CMS since this would be to confer greater rights on copyright owners than is allowed under copyright law merely by the act of placing material on a CMS[65]. Given that CMS are frustrated by the structure of the Internet, which is open and designed to facilitate the free flow of information[66], they will require a high degree of intelligence if they are to provide both a workable and convenient means of administrating copyright material. One possible solution is the use of Java 'applets', small programs resident within large applications, which could execute RMI programs to determine the identity of the work being exploited[67].

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[61] See note 59 above, p248.
[62] ibid., p243.
[63] ibid., 247.
[64] See note 57 above, p177.
[65] See note 57 above, p178.
[66] John Perry Barlow, "Property Panel: Managing Electronic Copyright Infringement in Electronic Fora", 1994 Survey of American Law, p357.
[67] See note 59 above, p243.

This automated approach to rights management is an ideal way of implementing so-called one-stop-shops because they enable content transactions via various digital rights management (DRM) technologies across multiple media[68]. The current problem with this kind of solution is that there are multiple DRM vendors and no established standards[69]. Where just a few companies adopt this technology it is unlikely to be an effective solution, especially if the various components of the technology are not interoperable[70]. To counteract this problem certain companies such as ContentGuard are attempting to develop a rights specification language: XrML (eXtensible rights Markup Language). This language is designed to support the seamless exchange of RMI across multiple systems[71]. Apart from these technical challenges the main challenge faced by CMSs is to make all the functions involved in rights transactions available in a user-friendly way[72]. Should this not happen users will become disgruntled and turn to alternative or even illegal sources. If piracy then increases as a result of unfriendly user-interfaces or the lack of real incentives to use CMS, then prices will rise and the problem will become cyclical.

One of the most frequently encountered arguments against the use of CMS is that they are not capable of managing fair use exceptions. However, the author would argue that a CMS that is not capable of managing fair use or other exceptions is not a CMS, but some lesser form of technical protection. Even where it is easy to find copyright owners and obtain licences for their work the unauthorised use of a copyright work may be fair. This was the case in Campbell v. Acuff-Rose[73] where unauthorised adaptation of a rap song was held to be fair use despite the fact that a licence for the piece of music copied had been refused. In just the same way that rules constraining consumer behaviour can be incorporated into standards, rules constraining the behaviour of copyright owners are also incorporated into such

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[68] Thomas Pack, 'Digital Rights management: Can the Technology Provide Long-Term Solutions?', ECONTENT, May 2001, p25.
[69] ibid., p26.
[70] ibid., p27.
[71] ibid., p24.
[72] See note 55 above, p18.

standards. While it might be argued that fair use rules would make these standards overly complex, the development of complex rules mapping ownership and licensing information to copyright works does not seem to be preventing the development of standards. While it is not yet known how these standards will end up or even what works they will be managing there is no conceptual reason why fair use rules cannot be incorporated into them. The two main models for a fair use infrastructure are first to design fair use controls into the rights management system itself. Secondly, rights management controls might be overridden through an application to an external decision maker[74]. While the first type of infrastructure would have immediate effect it would not be of the same quality as a judicial determination. This will be needed for some determinations of fair use since they will be very situation specific. However, judicial procedures would tend to be so slow and expensive that very few users would go to the bother of using them. While AI programming is not at a stage where it can duplicate human judicial decision making it is still sophisticated enough to decide the simpler cases. Where the outcome is disputed decisions could be made subject to appeal before a human decision maker[75]. A third argument against a system of pre-authorisation is that it would compromise user's anonymity. This argument is a tautological one since rights management technology is likely to do this anyway. A trusted third-party system could be designed for anonymity[76]. However, the author suggests that only more security conscious users would deploy such a system.

4.10 Copyright Management Systems and Fair Use

One of the key objections to CMSs is that they do not permit fair use, however, the technology that allows us to identify users and control, which files they access must surely be able to make some provision for fair use exceptions. This could be achieved by deliberately building constraints into de facto standards, thus by allowing standards

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[73] 510 U.S. 569 (1994).
[74] Dan L. Burk and Julie E. Cohen, "Fair Use Infrastructure for Copyright Management Systems", Paper presented at 28th Annual Conference on Communications, Information, and Internet Policy, Alexandria VA, 24 September 2000, p12. Available from: http://www.law.georgetown.edu/faculty/jec/prcfairuseinfra.pdf.
[75] ibid., p13.

to control user behaviour those standards become de facto laws in their own right[77]. Standards are undoubtedly necessary for CMS to function effectively on an international or even regional level. While the degree of intelligence that can be built into a CMS is limited, it is possible to incorporate rules into standards (i.e. rules concerning access rights). One would have to be very careful with regard to what content is so controlled, and much would depend on how information is tagged. However, such standards are always picking between the lesser of a number of evils. Appeal to a human judge could be allowed where the issues at stake were sufficient to justify this. Building fair use into standards is not necessarily a very flexible way of ensuring access to works but the value we place on certain rights and the relative harm to right owners would have to be considered before this route is taken. The author is not suggesting that such a standard would guess right every time, but that in certain limited scenarios some of the rights of the rightholder might be sacrificed in the name of the "public good".

Another form of fair use is reverse engineering i.e. the process of software disassembly used to reveal the algorithms underlying the code[78]. While reverse engineering involves a certain amount of intermediate copying it is held to be fair use because the engineers object is not to make copies of the code, but to get at the ideas underlying the code, especially where there is no other legitimate means of doing so. There are four functional elements of reverse engineering, namely (1) reading about the program; (2) observing the functioning of the program once it is loaded up into computer memory; (3) examining the static computer code; and (4) examining program code while the program is running. The first method may involve reading information that is hard to obtain or incorrectly describes the program, and the remaining methods all involve copying the program into a computers RAM[79].

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[76] ibid., p19.
[77] ibid., p8.
[78] Stan Karas, "Sony Computer Entertainment, Inc. v. Connectix Corp.", Berkeley Tech.L.J. 2000, 16(33), p35.
[79] ibid., p136.

In Sony Computer Entertainment, Inc. v. Connectix Corp[80] the ninth circuit Court of Appeals decided a case involving the alleged infringement of the Sony PlayStation by the manufacturers of games software produced by reverse engineering the plaintiff's software. While PlayStation was three years in development costing the plaintiffs over $600 million the defendant's product called the Virtual Games System ("VGS") was designed for display on a computer screen rather than a TV screen and cost a mere $150,000 over a period of months. The plaintiffs emulated the defendant's operating system in order to achieve this, including its BIOS, this was protected by copyright. To this end the defendant's engineers downloaded the BIOS onto floppy disk on a number of occasions. The software produced while not duplicating the plaintiff's code was functionally the same. The court below granted the plaintiffs an injunction preventing sale and distribution of the defendant's software on the grounds that there was probably infringement of the plaintiff's software, and because the defendant's software was not sufficiently transformative to justify a finding of fair use. Furthermore, the defendant's software competed directly with the plaintiff's software and was likely to harm their sales. Reversing the injunction the Court of Appeals found for the appellants on fair use grounds.

With regard to the first fair use factor the court found that the plaintiff's BIOS program was not one of those works copyright was most intended to protect because it contained unprotectable elements. In relation to the second fair use factor the court found that the defendant's copying was "necessary" because there were functional elements of the BIOS program that would be inaccessible unless the program was copied during the reverse engineering process. In considering the third fair use factor he court found that the number of times the defendants copied the program was irrelevant in relation to a finding of fair use. Despite the fact that VGS is similar to PlayStation in terms of function and screen output the court found that the product was moderately transformative"[81]. In relation to fourth fair use factor it therefore followed that any damage to the respondents market for value resulted from legitimate competition.

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[80] 203 F.3d 596 (9th Cir. 2000).

4.11 Payment and Metering Systems

Copyright is fundamentally concerned with the public domain, its creation and preservation. The concept of public domain exists in tension with concepts of private property rights. This tension is balanced out or resolved in the interplay between technology, the limits of technology, and the law. However, the laws ability to balance such interests is limited, and in the lacunae thus created social norms take-over. New technologies such as those used to facilitate payment and metering challenge social norms, and where there is an insoluble conflict between technology and social norms, the law may intervene, but social norms will ultimately prevail. However, where the law intervenes this may force compromise where there was none before. Indeed this seems to have been the case following the litigation over Napster and MyMP3.com[82].

As bandwidth falls in price and as the number of users sharing a network increases the value of intellectual property approaches zero[83]. In cases such as the Napster case the law on contributory infringement has been stretched to its conceptual outer limits[84]. This has occurred because there is a misfit between the law, technology, and the economic models that underlie it. This situation is often exacerbated by outdated business practices, which the law places undue weight upon. Whatever business practices are used metering is possible. Fair use will therefore be pre-empted by the way in which the market and the business model develops[85]. Although it is very simple for an entrepreneur to make information available world-wide over the Internet just using a PC, it is far more difficult to charge users for services rendered on a website and to collect the payments that are due. Conventional centralised billing systems are cumbersome and involve the formation of a service agreement with users

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[81] See Id. at pp606-607.
[82] Christine Haight Farley, "Beyond Napster: Debating the Future of Copyright on the Internet", Symposium, 16 November, 2000, 50 A.M.U.L.R. 365.
[83] ibid., p369.
[84] ibid., p371.
[85] ibid., p376.

who must locate the access point, and keep track of passwords and bills[86]. Billing for electronic services differs from billing for physical goods in four key ways. First, there is a geographic separation between service providers and users. While credit cards are commonly used for this sort of transaction, they are highly insecure because of the difficulty in verifying the identity of the parties. Secondly, the high processing speeds available over the Internet make it very difficult to cancel orders. Thirdly, the advance pricing of electronic goods is difficult, since it may be impossible for the purchaser or even the vendor to view the goods prior to purchase. Fourthly, the easy duplication of digital files makes the notion of product "returns" irrelevant since users will be able to copy electronic files before returning them[87].

Currently no open technology allows multimedia creators and publishers to associate rules and levels of permissions with digital works in a way that can persist through the derivative use of the work. Thus copyright has inhibited the development of multimedia products, not least because there is no efficient centralised way of administering these rights across the Internet. This adds a high level of frustration and expense to the development of multimedia products. Furthermore, it is often argued that the producers of multimedia works will not put their content online because of the difficulty involved in maintaining the correct attribution of works, and in preventing copyright infringement and software piracy. Also the absence of any reliable widespread means of locating content on the Internet discourages the creation of multimedia works[88].

Various techniques of enhanced attribution have been developed in recent years to try and solve these problems. Essentially enhanced attribution techniques aim to ensure that credit is given where it is due. This may consist of affixing a set of minimum permissions to a particular work in a way that facilitates fair use permissions, or metering and subscription solutions. One way of doing this is to create a world-wide

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[86] Marvin A. Sirbu, "Internet Billing Service Design and Prototype Implementation", ARL IP Workshop, 1999, p1. Available from: http://www.cni.org/docs/ima.ip-workshop/Sirbu.html.
[87] ibid., pp2-3.
[88] John S. Erickson, "Rights Management Through Enhanced Attribution", Internet Society, 1998, p1. Available from: http:/info.isoc.org/isoc/whatis/...s/inet/96/proceedings/b3/b3_4.htm.

content asset library on the Internet, in effect a virtual clearinghouse. Thus users will have the opportunity to review ownership details, and examine permissions through a single interface. While a single solution has advantages such as centralised access, and economics of scale, a number of solutions will allow proper differentiation between different media formats. While many technical and security issues remain unresolved, especially in relation to the harnessing of digital object technology, time must be allowed to develop systems for front-end commerce, as well as the necessary server, and browser technology. Finally, all these technologies must be interoperable; therefore the development of appropriate standards is essential[89].

In terms of tracking digital files the most basic methods of tracking involve the location of identifiers. The most common identifier on the Internet is the Uniform Resource Locator (URL). In the book industry, for example, the use of the International Standard Book Number (ISBN), and the International Standard Serial Number (ISSN) have played a fundamental role in facilitating communications between booksellers and publishers[90]. The use of such identifiers allows the unique identification of a work, including its particular characteristics. However, while URLs have been very effective in many respects, they do not logically specify content, but merely inform us as to where that content is located. Furthermore, the parameters passed using URLs such as file name and host name are often ephemeral[91]. The IETF has in response to criticisms of the URL system developed a less transient identifier known as a Uniform Resource Name (URN). This consists of a naming authority identifier assigned through a central registry, and an object identifier, which is defined by the naming authority identifier in relation to the specific object. Browsers do not yet understand URNs, and as an intermediate measure OCLC has developed a persistent URL (PURL). This is achieved by reference to a central registry, maintained by the OCLC and updated by content providers[92].

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[89] ibid., p3.
[90] Clifford Lynch, "Identifiers and Their Role in Networked Information Applications", ARL Newsletter, 29 December, 1997, p1. Available from: http://www.arl.org/newsltr/194/identifier.html.
[91] ibid., p2.
[92] ibid., p3.

The International DOI Foundation (IDF) is a non-profit organisation established to support the needs of the intellectual property community, and governs the DOI standard. The DOI standard regulates three types of service, namely registration services, infrastructure services, and governance[93]. The key challenges facing the DOI standard are financial commitment to the development process, commitment to the process of user education in relation to the use of DOI's, and ensuring interoperability with the emerging web infrastructure[94]. However, the DOI standard does not yet have ubiquitous support, and this is likely to remain the case until the Internet can support automated business-to-business rights transactions. This would require a network of directories capable of handling user, object and business rule meta data, an installed base of XML business messaging servers[95], and an installed base of rights management business servers. However, the DOI is likely to find its first practical application in the delivery of electronic journal materials[96].

Hypertext Mark-up Language (HTML) is the predominant computer language used on the Internet and is used to define the format of textual documents. HTML works on a system of tags, which define the style, structure and semantics of documents. However, these different attributes have become mixed up in such a way that much of the structural data is lost or is subject to regional anomalies. These problems led to the development of XML, which is a subset of Standard General Mark-up Language (SGML). SGML is a complex mark-up language developed during the 1960's. However, SGML is a very powerful language capable of supporting the metadata needed in the rights management process i.e. names of authors/right holders; permissions, and so on. XML was first proposed in 1996 in order to free web page authors of the limitations of pre-defined tags[97]. Essentially, XML is a structured method for putting data in text files, XML looks like HTML, however, it is only intended to define the structure of documents, the interpretation of the data is left to

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[93] John S. Erickson, The DOI and Rights Management: Tying up Loose Ends", TRIALOGUE, Summer 1999, no.11, p1. Available from: http://www.ybp.com/yrm/trialogue/199/1199doi.htm.
[94] ibid., p2.
[95] ibid., p4.
[96] ibid., p5.
[97] Steve Patient, "Survival of the fittest", Internet Magazine, June 1998, p49.

the application that reads it[98]. XML is written in textual format only to allow debugging, and error correction. XML is a family of applications, most significantly Namespaces, which allows users to associate a URL with every single tag and attribute in an XML document. This is particularly important in relation to the management of intellectual property since each object in a digital document may have its own copyright, and can be priced separately from the document as a whole. XML is a rather verbose language, however, because of the increased processing power available on today's computers this is not a significant problem[99]. The XML language is licence-free, it is not platform dependent, and it allows users to build their own applications[100].

The Internet is built around a series of protocols, which allow different applications to communicate with each other. The most significant of these is the Internet Protocol (IP), the bottom layer of the protocols supporting the Internet. This supports Internet services including the World Wide Web, e-mail, ftp, and telnet[101]. As the Internet evolves IP must be changed accordingly. IP version 4 developed in 1981 has a 32-bit, fixed length address, however, as the number of addresses on the Internet expands this fixed length address becomes increasingly inadequate[102]. In terms of the management of Intellectual property on the Internet a larger address field is required to support more sophisticated and more permanent addresses. The Internet Engineering Task Force (IETF) and the Internet Advisory Board (IAB) administer IP. Under the supervision of these bodies IP is being upgraded from version 4 to version 6. IPv6 will have a 64-bit fixed length address to support more levels of addressing hierarchy and a far greater number of addressable nodes[103]. This in turn would support network management, topological flexibility, auto-configuration ("plug and play functionality") and security. Current deployment of IPv6 is very slow, and

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[98] W3C, "XML in 10 points", W3C,1999, p1. Available from: http://www.w3.org/XML/1999/XML-in-10.points.htm.
[99] ibid., p2.
[100] ibid., p3.
[101] Eric Montiero, "Scaling Information Infrastructure: The Case of Next-Generation IP on the Internet", The Information Society, 1998, vol.14, p229.
[102] ibid., p233.
[103] ibid., p240.

difficult to test properly. However, until this transition has taken place it will not be possible to implement effective rights management solutions on a global level[104].

4.12 Cryptography

The key principles behind trusted systems are first the necessity of identifying and authenticating authorised users. The issue of a digital certificate usually facilitates authentication by a certification authority. Certification allows trusted systems to check that the user is who they say they are, thereby bridging the gap between the mathematics of the encryption algorithm and the user's signed assertions. Second, trusted systems must assign different capabilities and levels of access to authorised users. This is a relatively easy task in a closed system; in open systems like the Internet this can prove difficult because the current version of HTTP does not automatically identify users or allow resources to be labelled. One solution is to include metadata in digital files i.e. data describing the properties of those files. Chip manufacturers such as Intel have developed schemes that 'bake in' the processor serial number (PSN) so that all Internet transactions become easily identifiable by content providers[105]. Such unique identifier schemes could vastly enhance the content providers' ability to discriminate amongst consumers both in terms of price, and access rights[106]. However, even where files include metadata the scale of the problem is greatly increased at the same time as the administrative support available to deal with security issues is diminished. The Web has no systems administrator and without implementing some sort of independent solution it is not possible to manage rights beyond a particular network[107]. Web transactions can be secured at three levels (1) in the TCP/ IP transport layer; (2) in the message itself; and (3) in the file content i.e. the applications layer. Protection in the transport layer will only secure the bit stream while protection of the applications layer will only secure content. A third solution is to build end-to-end solutions which merely use the HTTP protocol as means of

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[104] ibid., p241.
[105] Jonathan Weinberg, "Hardware-based ID Rights Management, and Trusted Systems", 52 STNLR, May 2000, p1253.
[106] See note 101 above, p255.
[107] See note 105 above, p1256.

transferring files thus circumventing web security all together. This may be as well since FTP files are easily corrupted, passwords can be cracked, and IP addresses are spoofable. Having said this making PCs part of a trusted system will inevitably result in a loss of anonymity for the user and would take away the processors ability to manipulate data independently[108].

This loss of anonymity is already happening. When RealNetworks included a global unique identifier (GUID) in RealPlayer this transmitted information back to the maker including the names of all the CDs the user played, the number of songs stored on their hard disk and the type of MP3 player they used[109]. The kind of systems architecture envisaged by some hardware would include each users PC in a giant trusted system. While this might be secure it would give content providers far more information than they actually need, and would be almost impossible for ordinary consumers to disable[110]. The biggest obstacle to such a system is the inconsistencies between different platforms[111]. Even so the type of trusted architecture outlined would be potentially very anti-competitive, and in Europe would fall foul of key provisions of the Database Directive. This level of monitoring is simply not necessary for the construction of trusted systems. Aside from this, it is possible for content providers to build trusted systems that preserve individual privacy[112].

4.13 Watermarking

A digital watermark is an unobtrusive mark, visible or invisible to the naked eye, that identifies a copyright work i.e. the name of the copyright owner and date of publication. All this is done without making substantial changes to the outward appearance of the document. These marks also allow authentication or validation of digital works, helping content owners to track/prove illegal uses and enforce their rights. Software agents such as webcrawlers can be used to discover copyright

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[108] ibid., p1257.
[109] ibid., p1261.
[110] ibid., p1267.
[111] ibid., p1269.
[112] ibid., p1255.

violations by performing identity checks for as many documents or images as it can find[113]. The watermark is usually incorporated into digital works in such a way that any attempt to remove it will destroy the work[114]. Digital watermarks are embedded in documents by making subtle alterations to the digital description of a document. While this may not be recognised by the human eye it will easily be detected by a software 'reader', which will be able to identify and decode the watermark. Digital watermarks can survive simple processing, but might not survive 'lossy' digital compression techniques such as JPEG. To avoid damage caused by such techniques watermarks will have to be distributed throughout a document or image, and in order to be robust must be embedded in the perceptually most significant parts of an image or document[115]. This kind of watermarking may be very important in the future, but is difficult to achieve at present because of the many kinds of image manipulations such watermarks have to survive[116]. However, this problem does not pose a major threat since these techniques are likely to damage the document itself reducing its value to the end user[117]. As yet there is no totally robust blind digital watermarking algorithm, and the number of bits that can be embedded into a document or image of a given size is still uncertain. There are three main ways in which watermarks can be technically attacked i.e. robustness attacks, presentation attacks, and interpretation attacks. Robustness attacks are designed to reduce the presence of the watermark in a work without harming that work; presentation attacks attempt to manipulate watermarks so they cannot be detected; and interpretation attacks attempt to neutralise the evidential value of a watermark by rearranging its content[118]. The use of digital watermarks on open networks such as the Internet is still very dependent on the interoperability of different watermarking techniques. The standards needed to achieve this must be able to define the number of bits to be inserted into the data, and watermarking algorithms

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[113] Minerva M. Yeung, "Digital Watermarking", Communications of the ACM, July 1998, vol.41, p37.
[114] Lesley Ellen Harris, *Digital Property: Currency of the 21st Century*, McGraw Hill 1998, p74.
[115] See note 113, p40.
[116] See note 113 above, p43.
[117] Thomas Page, "Rights Management: Digital Watermarking as a Form of Copyright Protection", C.L.S.R. 1998, 14(6), p391.
[118] See note 113, p51.

must be homogenous. Furthermore, there must be compatibility of format, in other words the kind of information which watermarks contain[119].

Under Article 11 of the WIPO Copyright Treaty (WCT) Member States are required to provide "adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in the exercise of their rights under this Treaty or the Berne Convention, which are not permitted by the authors concerned or permitted by law." Article 12 stipulates the need to provide adequate remedies in more detail, but with the proviso that the perpetrator of an act of circumvention does so knowingly. Article 12(2) of the WCT defines rights "management information" as "information which identifies the work, the owner of any right in the work, or information about the terms and conditions of use of the work and any numbers or codes that represent such information, when any of these items is attached to a copy of the work or appears in connection with the communication of a work to the public". Many of the features of the WCT have been incorporated into Information Society Directive. Article 7(1) of this puts member states under a specific obligation to provide content owners with protection against those who knowingly remove or alter rights management information. The subsection also prohibits the knowing importation or distribution of protected subject matter from which electronic rights management information has been removed without authority. In addition to protecting digital watermarks as rights management information the Directive may also protect them as "technological measures. Article 6(3) defines these as "any technology, device or component that, in the normal course of operation, is designed to prevent or restrict acts, in respect of works or other subject matter, which are not authorised by the rightholder of any copyright or any right related to copyright as provided for by law or the sui generis right provided for in Chapter III of Directive 6/9". However, watermarking may not satisfy the above definition in terms of tracking readers and /or author/owner identification. Even so the the protection given to watermarks by Article 7(1) of the Directive is broad enough to

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[119] Stanley Lai, "Digital Copyright and Watermarking, E.I.P.R. 1999, no.4, p174.

deal with most forms of tampering[120]. Finally, it is worth noting that where technical attacks fail watermarks can be legally attacked. There may be difficulty over the interpretation of the identification numbers contained within watermarks, and even where the numbers are clear they may not prove ownership of a copyright work. Where the results of watermark detection are even slightly ambiguous their interpretation may be challenged in court[121].

4.14 Digital Signatures

For many kinds of legal transaction, especially higher value transactions, a written signature is required. Signatures are a means of authenticating documents, and traditionally this is done by making a hand written mark made on paper, however, writing on the VDU screen will not achieve the desired effect in the digital environment, hence the development of digital signatures. Apart from its role in authenticating documents the signature can fix the identity of its maker; however, digital signatures can also time stamp documents in order to prove the time of formation of contract. To be effective digital signatures must be unique, and extremely difficult to forge. In addition to this digital signatures should make the transmitter readily identifiable, thereby making it difficult for them to resile on a signed agreement at some later date[122].

At this point it is important to distinguish between 'electronic signatures' and 'digital signatures'. The Millennium Digital Commerce Act 1999 (U.S.A.) defines an electronic signature as "an electronic sound, symbol or process attached to or logically associated with a record and executed or adopted by a person with the intent to sign that record." A 'digital signature' is much more narrowly defined since it is dependent on PKI (public key infrastructure), which requires two keys, one to encrypt data, and the other to decrypt it. PKI is fundamentally asymmetrical unlike the

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[120] ibid., p173.
[121] See note 113 above, p49.
[122] Daniel Tunkel and Stephen York, *E-Commerce: A guide to the Law of Electronic Business*, 2nd ed., Butterworths 2000, p87.

technologies used for electronic signatures that use symmetrical encryption techniques such as password protection and single cryptographic keys[123]. Digital signatures are more secure than electronic signatures since documents encrypted with one key can only be decrypted with the other key. The problem with PKI technologies is that they slow down communications, they are difficult to install, they require a centralised authority to administer keys, and may give rise to other problems related to the lack of standard software[124]. Under European law Directive 99/93 establishes a framework for electronic signatures. Article 1 of Directive 99/93 defines an electronic signature as "data in electronic form which are attached to or logically associated with other electronic data and which serve as a method of authentication." Further, Article 2(2) defines the so-called 'advanced electronic signature' as an electronic signature that is (a) uniquely linked to the signatory; (b) capable of identifying the signatory; (c) created using means under the sole control of the signatory; and (d) linked to signature data in such a way that subsequent modification is detectable. This type of signature is at present only supportable using PKI architectures. Article 3 of the Directive makes it clear that certification of digital signatures is not to be made subject to prior authorisation, and that such schemes are to be transparent, proportionate and non-discriminatory. The most substantive part of the Directive is Article 5, which asserts that electronic signatures are to be placed on an equal footing with hand-written signatures provided the minimum requirements are satisfied. That electronic signatures are admissible in legal proceedings, and that electronic signatures satisfying those requirements are not be denied full legal effectiveness simply on the grounds that they are in electronic form, not based on an electronic certificate, or not created by a secure signature creation device. In the U.K. Directive 99/93 was implemented on 25 May 2000 by the enactment of the Electronic Communications Act 2000. Section 7 of the Act gives electronic signatures the same legal status as hand written signatures and defines an "electronic signature" as anything incorporated or logically associated with an electronic communication in order to establish its authenticity. Further, s.8 of the Act gives the appropriate Minister the power to

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[123] Thomas O. Wells, "Electronic and Digital Signatures: In Search of a Standard", I.T. Pro, May/June 2000, p26.
[124] ibid., p30.

modify legislation in order to facilitate electronic communications i.e. to abrogate formal requirements of writing, which obstruct electronic commerce through non-recognition of electronic signatures or through the imposition of unnecessarily burdensome formalities.

In the U.S.A. the first attempt to produce a comprehensive set of fundamental rules on digital signatures at a federal level was enacted on 1 October, 2000 in the Electronic Signatures in Global and National Commerce Act. (the E-Sign Act). The E-Sign Act is not technology specific and both s.106 of the E-Sign Act and s.2 of UETA define an electronic signature as "an electronic sound, symbol or process attached or logically associated with a contract or other record executed or adopted by a person with intent to sign the record." The basic rule of validity of the Act is found in s.101, this gives electronic signatures the same status as hand-written signatures and prohibits the denial of legal effect to electronic signatures merely on the ground that they are in electronic form[125]. Additionally s.101 allows retention of electronic records in the place of paper records and gives legal status to contracts created or delivered by electronic agents. However, in the case of consumer contracts the consumer must affirmatively consent to the receipt of electronic records where there is a requirement of writing in the existing law. Significantly s.102 of the E-Sign Act gives it pre-emptive effect except where a state has adopted UETA, in which case a state will have greater latitude concerning the governance of particular technologies[126]. Section 103 of the Act specifies the various exemptions to it, for example wills, family law, and large parts of the UCC. The E-Sign Act is modelled on UETA, which has already been adopted by 22 states. Section 5 and s.7 of UETA are broadly equivalent s.101 of the E-Sign Act, although s.101 of the E-Sign Act has additional provisions such as those relating to electronic agents, and the retention of electronic records.

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[125] Mark E. Plotkin and Stuart C. Stock, "Implications of the Federal E-signatures Law for Electronic and Financial Services", J.I.B.L. 2000, 15(12), p299.
[126] ibid., p300.

4.15 Technical Protection and the Internet

A number of commentators have argued that the Internet will make effective exploitation of copyright impossible, however, it has to be remembered that this has also been said of many new technologies, yet copyright itself is a creation of technology. Internet security covers a broad range of issues including data protection, copyright infringement, and computer crime. In fact criminal sanctions are increasingly being used to deter copyright infringement, for example the indictment of Dimitry Sklyarov under s.1201 of the DMCA, and the indictment of Jon Johansen under Norwegian Criminal Code 154(2). In Europe data protection legislation such as the U.K. Data Protection Act 1998 make the use of technical protection devices increasingly necessary. The use of technological protection measures inevitably has to balance security interests against functionality and cost, however, the Internet also has certain unique features, which must not be seriously compromised if electronic commerce is to remain a viable proposition. This is especially so given that on the internet traditional copyright rights have given way to so-called access rights.

4.16 Linking

Linking involves the use of the HTML HREF command to connect one website to another. The link is simply an instruction to your browser program to go to a particular site and to hook up to the server at that site. Once this is done your browser can send instructions to that server to download files located at an address specified in the link's URL. Hypertext links can also connect multimedia files including sound and graphics files and may incorporate a multitude of data types and styles. The HTML IMG command allows users to insert graphics images into hypertext documents, these inline images form part of the document text and do not form part of a separate window, but the source, however, is separate from the HTML code. These images form unidirectional links, which may be activated in the same way as hypertext links. When links are selected this opens up a new window into which the selected

document is imported[127]. In terms of securing websites HTTP servers can grant or deny access by troublesome domains to specific directories[128], also many HTTP servers' support the use of an executable. Common Gateway Interface (CGI) scripts rather than just returning information to the requester first process the information and then returns it to the requester. However, it is possible for intruders to subvert these scripts; the Computer Incident Advisory Committee (CIAC) has warned that this is one of the areas of greatest vulnerability for HTTP servers[129].

4.17 Framing

Framing is a form of "in-line linking", i.e. linking into other information. This is a browser feature that allows sites to create an on-screen border which stays in place even as the user clicks on links and transfers content from other sites. This may cause confusion among users since it gives the impression that they are viewing information located on site rather than in a remote site[130]. In any consideration of the copyright implications of linking it is important to consider frames. Frames are important in any technical overview of the Internets structure because they are one of the main ways in which copyright information is displayed and transmitted. They also have legal implications, especially where they are used as a means of infringement, by one Internet company of the copyright resources of another. Unfortunately this consideration is complicated by the fact that they exist on several levels in network architecture. At the most basic level a frame is an encoded block of data, which is transferred from one computer to another via a digital or analogue telecommunications medium. At another level, a frame is the representation of data, graphical or textual, which is presented to the user in a window of their VDU screen. A frame is essentially a data flow concept, it is the division of data into manageable packets, which can be stored on the computer's stack memory and then displayed on

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[127] J. Conklin, "Hypertext: Introduction" in Encyclopaedia of Microcomputers, vol.18, p408.
[128] William Stallings, *Internet Security Handbook, Mecklermedia Ltd. 1995, p91.*
[129] ibid., p93.
[130] J. Ebersole, "A Sampler of Issues in the Digital Age: Intellectual Property Contracts, Litigation and the Internet", Telecommunications Section of the D.C. Bar, Winter Convention, 26 February, 1997, p13. Available from: http://www.ctls.org/Ebersole.htm.

the user's VDU screen. Frames are a convenient way of breaking large documents into packets so that the document can be readily transferred, stored, and displayed. Frame protocols allow documents to retain their logical structure without being transmitted as a huge asynchronous block of data, which could easily be damaged or interrupted in transit. In terms of copyright, frames may create disputes over content and the copying and presentation of content. A document viewed via a frame relay network is not viewed all at once. It is copied and assembled bit by bit in the computer's stack memory. When a document, which is divided into frames is viewed, it is viewed a frame a time. This gives rise to questions as to what constitutes a 'substantial' part of a copyright document and whether storage of documents as frames constitutes copying. Those with a functional knowledge of HTML can force web browsers to open a web page in a new, separate browser frame. This displays the page from which the link was activated[131]. Some news sites such as the Total News site have programmed their site in this way in order to prevent framing[132]. Unfortunately this kind of action is usually only taken after the damage has been done.

4.18 Caching

Caching is a method of storing packets of data in a computer's RAM so that the computer does not have to access the original data source each time the computer receives instructions to go to a particular site. Caching may be at multiple levels, local caching occurs where files are stored on the users' computer, and proxy caching occurs where packets of data are stored at server level. Caching has many benefits; it improves user access time, reduces bandwidth used by both users and servers, and generally reduces the amount of traffic on the Internet[133]. As well as reducing network congestion, caching has the drawback of making outdated copies of web pages appear to be current to users and reduces the ability of website owners to control what

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[131] Gregory C. Lisby, "Web Site Framing: copyright infringement through the creation of an Unauthorized derivative work", Comm.L.Poly 2001, vol.6, p556 fn76.
[132] ibid., p552.
[133] Lisa Sanger, "Caching on the Internet", 1996, p13. Available from: http://www.seamless.com/eric/cache.html.

information is delivered to end users[134]. Another problem associated with caching is that it interferes with a website's analysis of its users[135]. Caching creates the potential for copyright infringement of websites vis a vis reproduction, public display and public performance[136]. Caches effectively copy whole web pages and their protected parts. Caching also makes websites undercount page impressions, thereby reducing a site's advertising revenues. The negative effects of caching may be eliminated or reduced by displaying expiry information on web pages so as to activate the refreshing process or through the use of dynamic pages, which are displayed only after the user activates a server resident program called a 'cgi-script'. However, these systems frustrate the purpose of caching by increasing the level of network congestion[137].

4.19 Tracking Digital Files

Tracking files on the Internet, as it currently exists, is difficult because it has no systems administrator, and there is no easy way of associating particular individuals on an Internet-connected network with their user names. Rights management on the Internet is difficult because there is no middle ground for the enforcement of rights between blocking everyone outside of a specific network and giving access to anyone with Internet access[138]. In order to control access to and use of digital files on a global scale, it is necessary to know the real identity of those seeking access. Trusted systems are intended to provide the infrastructure that content providers need to authenticate messages and the identity of those claiming that they are authorised to access and copy a digital work. According to one school of thought, if PC owners are to be allowed to take part in such transactions, their PCs must form part of the trusted system. An unfortunate ramification of this is that PC owners loose the anonymity that they have so far enjoyed[139].

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[134] Eric Goldman, "cache 22", Cooley Goward LLP, 26 August, 1996, p1. Available from: http://www.cooley.com/publications.ixe?section=Article+Reprint&id=58.
[135] ibid., p2.
[136] ibid., p3.
[137] ibid., p4.
[138] See note 105 above, p1256.

While making all or most PCs part of a giant trusted system is one way of securing digital content, it is not the only solution. In order to transfer packets of data over the Internet using the TCP/IP protocol an IP address is required to get packets of data to their destinations. These addresses uniquely identify every computer that is connected to the Internet[140]. Further, packet headers contain origin of destination headers. These are clearly visible, although it is possible to hide them. However, ISP's give users a different IP addresses each time they log on using Dynamic Host Configuration Protocol (DHCP). While this makes it impossible for most users of the Internet to trace IP addresses, an appropriately resourced regulatory body can track IP addresses using the records of the ISP. Under IP version 6 neither the DHCP nor the PPP server will set IP addresses where the computer connection involves an Ethernet card or certain specified types of hardware. Instead a unique identifier associated with that hardware will automatically be allocated making it much easier to match IP addresses to individual computers[141].

Traditional notions of "copy" rights, which derive from the age of the printing press, do not hold in the digital environment. In the age of the printing press tracking printed material was relatively easy because printing presses were very large and expensive machines, which would leave a clear audit trail. However, with the invention of the von Neumann computer and the development of the Internet, the creation and distribution of printed materials became easy and cheap. The very concept of an audit path has become meaningless except for very tiny slices of time, and there is no longer such a thing as an "original" because, once works are digitised, the originals are also copies. In an environment where a "machine room" is a Gigabit network where a virtual process is performed in tiny slices of time, on multiple PC processors, the whole notion of digital copyrights begins to dissolve, and locating the locus of control for auditing purposes becomes impossible[142].

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[139] ibid., p1257.
[140] ibid., p1259.
[141] ibid., p1260.
[142] Branco Gerovac and Richard J. Solomon, "Protect Revenues, Not Bits: Identify Your Intellectual Property", ARL IP Workshop, 1999, p3. Available from: http://www.cni.org/docs/ima.ip-workshop/Gerovac.Solomon.html.

Effective solutions to this problem depend not upon the creation and manipulation of bits, but upon the tracking of revenue streams. This process depends upon the creation of universal headers that can be tracked. In the motion picture industry the Society of Motion Picture and Television Engineers (SMPTE) set out to do just this. Unfortunately there are number of barriers to overcome before such headers can be effectively implemented. Firstly, these headers must be universally incorporated into video and associated data streams. Secondly, the header must uniquely identify the data stream to which it is attached. Thirdly, the header format must be "fully defined" and unambiguous. Fourthly, the header should give compliant machines "necessary and sufficient" information to interpret the payload i.e. enough information to tell it how to proceed. Furthermore, cost plays a major role in such implementations since receiving devices must be low cost, compliant, and compliant data steams must contain minimal header information[143]. Where receivers are not low cost they will never achieve a sufficient level of market saturation for a standard header to work effectively.

4.20 Commercial use of Technological Protection

In a survey of 23 small to medium sized electronic publishers 12 (52%) were found to use some form of technological protection, however, 13 (57%) used niche marketing to protect their digital products, 6 (26%) used consumer trust, and 9 (39%) used pricing as a form of protection[144]. The firms interviewed in this survey were not of the view that widespread unauthorised use of copyrighted materials presented a significant barrier to electronic publishing. Instead they cited problems such as lack of financial resources, uncertainty of payback, and keeping up with technology as the most serious barriers to entry. This is not so surprising since the life cycles of digital products are becoming shorter making the getting of products to market in sufficient

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[143] ibid., p5.
[144] Puay Tang, "How Electronic Publishers are Protecting Against Piracy: Doubts About Technical Systems", The Information Society, 1998, vol.14, p25.
[143] ibid., p28.

time perhaps the most major hurdle faced by multimedia producers. Factors deterring firms from using technical protection included the lack of an industry standard, the extra cost of technical systems, and the technical support required by customers[145]. It is also noteworthy that a number of firms expressed the view that pirates were so sophisticated that it would only be a matter of time before they cracked a protection system. This worry is born out by the cracking of CSS in 1999, and the breaking of Microsofts Digital Rights Management System in 2001[146]. However, the firms in the above survey are small to medium sized firms with limited resources. Technical protection measures are more likely to be employed by large well resourced companies in order to protect pre-existing monopolies[147].

4.21 Technical Protection and the Economics of Enforcement

Before implementing technical solutions rightholders must consider the economics of enforcement i.e. whether the costs of enforcement outweigh the benefits of enforcement, these costs arise in the form of the costs of enforcement itself and the cost of administering copyright in the first place. This situation is exacerbated by other factors such as the increased cost of enforcing copyright on a country-by-country basis, the cost of tracing infringers, and the cost of taking action against many infringers simultaneously.

According to the International Digital Software Association (IDSA) the entertainment software industry will lose an estimated $3 billion dollars to piracy in 2001, despite well publicised breaches of the technology the Content Scramble System (CSS) is still the dominant technology used to protect DVD recordings. Apart from the fact that the CSS code has been broken this kind of technology runs the risk of bringing multimedia products outside of their usual technical specifications by taking up large

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[145] ibid., p28.
[146] John Borland, "Hacker cracks Microsoft anti-piracy software", news.com, 19 October, 2001, p1. Available from: http://news.cnet.com/news/0-1005-200-7590303.htm.
[147] See note 144 above, p26

amounts of disc space or by making some disc sectors unreadable[148]. Furthermore, such technologies can significantly increase the price of multimedia products since royalties must be paid to both the content owners and DVD technology patent holders. At the same time as the cost of software is pushed up by technological protection devices, the cost of hardware continues to fall, the net result can only be yet more piracy. Furthermore, the relationship between law enforcement and effective security is an inverse one, the more effective local law enforcement is, the harder it is for the manufacturers of security products to make money, and conversely the worse local enforcement is, the easier it is to make money from security products. The enactment of laws prohibiting circumvention will inevitably increase the cost of technological protection since only licensed professionals will be able to repair or otherwise interfere with the technology[149].

4.22 Conclusion

While the answer to the machine may be in the machine, technical solutions can only solve technical problems, and even then not for long. In terms of copyright law the present hard-line approach that increases the number and extent of owner's rights is not workable in the long term since it distorts the balance of copyright in the owners favour without creating corresponding access rights for the public. Technical solutions can only ever offer a partial solution since trusted systems, for example, may be bypassed, and downloadable executables may be metered out. Hardwired solutions are likely to be unpopular with consumers, and in any event technical solutions will require a high degree of intelligence, if they are to have the functionality and ease of use that the public is likely to demand. However, this seems a long way off at the moment because there is no generally accepted standard for digital rights management systems. In terms of self-help devices, especially digital locks the major limiting factor is the low cost of circumvention technology as opposed to the relatively high cost of

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[148] Debbie Galante Block, "Paying for Protection: The Cost and Complications of DVD Piracy Prevention", Emedia Magazine, June 2001, p60.
[149] Email from Sean Donelan entitled "Re: Burglar's Tools - Fixing the DMCA" to CYBERIA-L@LISTSERV.AOL.COM dated 15 August 2001.

self-help devices. While the courts in Europe and the U.S. have generally taken a more favourable view of the use of self-help devices this prevails only where self-help devices are disclosed to the consumer.

While access control can be effective it is indiscriminate, and copy protection involves complex programming and can often be circumvented. The structure of the Internet itself is designed to resist technical solutions, and given the number of people with technical expertise using the Internet, any technical solution will be broken sooner rather than later. Digital signatures help to affirmatively identify individuals; however, they will not stand up to the full range of processing. Encryption technology is difficult to install, and there is no central administration for keys. With regard to linking, caching and framing, there is technology that will prevent their misuse, however, the use of such technology is relatively rare because it tends to frustrate the operation of the Internet.

Despite the ease with which information products and services can be distributed using the Internet the key problems are the same as for analogue media, most notably the problem of payment and metering. In particular it is very difficult to keep track of derivative uses. It is impossible to allow prior viewing by consumers, as is any notion of product returns. While standards such as XML and IP version 6 have been developed with the aim of facilitating transactions in copyright works, adoption of such standards is slow, not helped by the fact that the Internet has no centralised administration. Also security cannot really be guaranteed beyond a particular network due to this lack of control. While tracking can facilitate enforcement of rights, it is still difficult to establish a clear audit trail and any identifiers used must be unique and provide clear identification of a work and the rights involved. Ultimately enforcement has to be cost effective and it is the cost factor that most inhibits the use of technological measures.

Tracking can help to detect copyright infringement, but for this to be really effective a system of unique identifiers that would threaten users' privacy and anonymity would

be required. Standard setting offers great assistance to the development of copyright management systems, however, standards can and will be manipulated by industry, as is clearly illustrated by the Microsoft litigation. The only real solution is to have copyright laws that are fair, and are seen to be fair. The erosion of copyright limitations and exceptions can only make matters worse. What is required is a general notion of fair use that is programmed into copyright management systems and a more flexible approach to statutory interpretation combined with legislation that is not too technology specific. While this approach could be in conflict with TRIPS and the very narrow exceptions set out in the Copyright Directive a lot would depend on how we go about achieving this. Certainly Article 13 of TRIPS says that exceptions should apply to certain special cases and should not prejudice the interests of right holders. However, so long as a fair use policy does not take an explicit statutory form, it should be possible to satisfy these requirements in terms of judge made law. In relation to the Copyright Directive and its narrow exceptions, it should be possible to interpret those exceptions in a liberal way so as to achieve what amounts to a general exception.

For example the courts may not need to treat the exemptions in the Directive as an exhaustive list and could allow existing statutory exceptions to copyright to stand until successfully challenged in court. Furthermore, the courts could exercise leniency in those infringement cases where there are good policy grounds for allowing an exemption, and where there is no financial harm to the plaintiff. However, if one follows the approach of the American courts to the interpretation of the DMCA this would not be the result. This is not to extend U.S. law to Europe, but to borrow ideas from U.S. case law. In any event there is already a lot of statutory borrowing going on between the U.S.A. and Europe, especially from the DMCA. Chapter 5, which follows, describes the fundamental structure of copyright licensing and the problems that this poses for the licensing of multimedia products in the online environment.

CHAPTER 5

Licensing Information and Multimedia Products Distributed via the Internet

5.0 Introduction

This chapter seeks to define the basic structure of licences and to describe some of the different kinds of software[1] licence. Further, this chapter is intended to provide an overview of the fundamental law including recent developments relating to software licences and how these are applied to the distribution of software over the Internet. Software licences are essentially contractual in nature; the creation of a valid licence in cyberspace therefore involves electronic contracting for information products and services. This will require new rules regarding warranties. In terms of technical protection many software producers want the right to embed 'technical self-help' features which will be activated when licensees fail to pay royalties for software. Many software developers are already selling their software on the Internet; this is advantageous in terms of licensing since it is easy to present users with the terms of contract, which must be accepted before downloading may proceed. This will entail clicking on an icon on the user's screen, a click that could constitute a meaningful acceptance of the terms of the licence, acceptance that is not usually present when software is sold in a shop. However, even where the purchaser accepts the licence terms they are not binding against the world but only the contracting parties. Also where this acceptance is not obtained prior to ordering, the terms and conditions of the licence will not bind the purchaser[2].

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[1] Here the term "software" is used in the sense of software in the form of computer programs as described in Chapter 2.

[2] Fred M. Greguras et al, "Online Software Licensing", 1996, p3. Available from: http://www.batnet.com.oikoumene/olswlicense.html.

5.1 Traditional notions of Formation of Contract and Exclusion Clauses

Under the common law contract formation requires that an offeree accept an offer from the offeror, the parties must intend to create a binding contract and be capable of so doing. In some jurisdictions consideration may also be required. Once formed a contract may include clauses limiting liability or specifying procedures to be adopted where there is some failure to perform the contract. These clauses must be part of the contract if they are to be enforceable. In Thornton v. Shoe Lane Parking Ltd[3] the plaintiff drove his car into an automatic car park which he had not visited previously. On the outside of the car park was a notice stating charges that also declared that all cars are "parked at the owner's risk". A machine dispensed the tickets for the car park. When the plaintiff returned to collect his car he was involved in an accident in which he was badly injured. The ticket issued to the plaintiff contained an exclusion clause and the defendants sought reliance upon it. The case therefore hinged on the time of formation of contract and on whether the plaintiff had been given reasonable notice of the exclusion clause. These in turn determined whether the exclusion clause on the ticket was incorporated into the contract. In the High court it was held that the plaintiff was 50 percent to blame for the accident and he was therefore awarded a reduced sum of damages. Subsequently the defendants appealed to the Court of Appeal claiming that the court below should have allowed them to rely upon the exclusion clause since it was incorporated into the contract. In dismissing the appeal Lord Denning found that the defendants had the onus of proving that reasonable notice of the exclusion clause was given, this notice was to be explicit and having failed to prove that explicit notice was given they were held liable to the plaintiff[4]. According to Megaw L.J. this notice was to be given before the contract was formed[5]. The mere fact that the exemption clause was printed on the ticket itself did nothing to alter the contract once formed[6].

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[3] [1971] 2 Q.B. 163.
[4] See Id. 170 C-D.
[5] See Id. 173 A-B.
[6] See Id. 169G.

In terms of electronic commerce this judgment runs contrary to those cases like ProCD v. Ziedenberg regarding the validity of shrink-wrap licensing. In relation to exclusion clauses and the Unfair Contract Terms Act 1977 the decision indicates a caveat vendor approach to contract law. However, it is important to note that the ProCD decision was made in a court that had the power to bind few other U.S. courts, and the U.K lacks some of the provisions in the U.C.C. on which the ProCD case relied Even cases holding that the continued use of a product would indicate acceptance of contractual conditions are contradicted by this judgment. While some of the older contract cases seem remote from the age of the Internet they determine the legal precepts upon which new determinations are made. In the often cited case of Carlill v. Carbolic Smoke Ball Company[7] the Court of Appeal ruled that the defendants were liable in respect of an advertisement that offered anyone contracting influenza 1001, after using the carbolic smoke ball in the specified manner three times a day for two weeks. Bowen L.J. here emphasises the need to give such documents their plain meaning, however, this has the effect of dividing documents into two classes. One class is an offer to the world made in plain language, another class are technical legal documents made between just two parties. Prior to formation of contract, however, web documents can be both. In determining which class a web document belongs, one looks first to the wording and nature of the document itself and then all the circumstances surrounding a transaction have to be considered.

In Esso Petroleum Ltd v. Commissioners of Customs and Excise[8] the plaintiffs were suppliers and dealers in petroleum which supplied garages with tokens called "World Cup coins". The plaintiffs commissioned commemorative coins to promote sales of petrol. These were produced very cheaply and one was to be "given free" to those purchasing four gallons of petrol. Subsequently a dispute arose with the defendants as to whether the coins were chargeable goods under the Purchase Tax Act 1963. Specifically the defendants argued that the coins were not "produced...for general sale" as was required by s.2(1) of the Act. In the court of first instance the plaintiffs sought a declaration that the coins were chargeable goods, however, the court

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[7] [1893] 1 Q.B. 256.

dismissed the application. That decision was reversed on appeal to the Court of Appeal from whence the case was appealed to the House of Lords. The court had to consider two main questions, firstly, was there a contract of sale, and secondly, was there any contract at all with regard to the coins. By a majority of four to one the House of Lords held that the offer of the coin was not intended to create binding contractual relations. Furthermore, while there was a binding contract for the purchase of petrol. In relation to the coins the facts of the case negated any intention to create a binding contract on the part of the plaintiff. In particular the coins were to be "given free", and were themselves of minimal intrinsic value. Accordingly it followed that the purchase of the coins did not attract tax. The case demonstrates the importance of the actual wording of an offer; however, it also demonstrates the courts willingness to draw on extrinsic evidence where there is doubt as to parties' intentions. While on the facts of this case the court found against the subsistence of a contract, a case with only slightly different facts might produce a very different decision.

In a more recent decision of the Court of Appeal in Harbour and General Works Ltd v. Environment Agency[9] it was held that the failure of a party to correctly read a contractual clause in an arbitration agreement was not a circumstance sufficient to trigger the power of the court under s.12(3)(a) of the Arbitration Act 1996 so as to permit an extension of time.

While the existence of a contract may depend upon surrounding circumstances the intention of the parties is not an abstract concept. Rather intention is determined by what the parties to the contract actually say and do. In Paal Wilson & Co. A/S v. The Hannah Blumenthal[10] the House of Lords had to consider the interpretation of an arbitration clause where proceedings had been frustrated by the actions of the plaintiffs. The Court of appeal ruled in favour of the plaintiffs and the defendants

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[8] [1976] W.L.R. 1.
[9] The Times 22 Oct, 1999.
[10] [1983] 1 Lloyds Rep. 103.

appealed. In relation to the relevant state of mind of the parties. Lord Diplock states at p116: "what is necessary *as it has been communicated and understood by the other* (even though that which has been communicated does not represent the state of mind of the communicator) should coincide. That is what English lawyers mean when they resort to the Latin phrase consensus ad idem and the words that I have italicised are essential to the concept of consensus ad idem, the lack of which prevents the formation of a binding contract in English law." Thus a contract is established even where the receiver of information has misunderstood the message. In relation to electronic contracts this means that consumers need not understand licence terms for a valid contract to be formed, however, those parts of a website falling under the principle in Carlill must be given their plain meaning.

In the recent decision of the House of Lords in Shogun Finance Ltd v. Hudson[11] the issue of when a contract is formed was revisited in relation to the validity of a hire purchase agreement that had been brought into being through fraud. The facts were that a rogue dishonestly acquired documents belonging to an innocent party. The rogue then used these documents to persuade the respondents to enter into a hire purchase agreement with him in person, on the basis of the personal and financial details of the innocent party. After the car had been sold to the appellant the rogue absconded and a dispute arose between him and the respondent as to whether he had good title to the car.

Held, dismissing the appeal, that while the contract was rendered voidable by the fraud, the contract had not been avoided at the time the car was sold to the appellant. The appellant therefore obtained good title to the car. The issue of whether the contract was entered into in person or by correspondence was immaterial to the formation of contract, and the respondents mistake as to the true identity of the rogue was not sufficient to vitiate the contract. It was the respondent who took the risk that the rogue was not the person he purported to be, and this being so, the respondent should bear the consequences. While the court was entitled to determine what one

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[11] [2003] UKHL 62.

party was entitled to conclude from the attitude of the other, the whole history of this transaction was recorded in the written contract. Prior to this case a distinction was drawn between contracts made in person and contracts made at a distance. This case creates a uniform rule to determine when consensus ad idem is reached.

The above cases give guidance as to when a contract is formed and accepted, where contracts are formed entirely online we can apply general contract principles but much will depend upon whether we classify software as goods or services. This situation with regard to contract formation, especially in respect of the requirement of reasonableness in s.3 and Schedule 2 of the Unfair Contract Terms Act 1977 (UCTA) is examined by Scott Baker J. in St. Albans City and District Council v. International Computers Ltd[12]. In that case the appellants were held liable for damage caused to St Albans City Council by a bug in bespoke software that was used to count the number rate payers for the purpose of setting the level of council tax[13]. Here there is a step by analysis taking into consideration resources, insurance cover, the relative bargaining position of the parties, whether there is some inducement to agree to a particular term, and the customers knowledge of the term (taking into consideration trade customs and the existence of a previous course of dealing).

The legal treatment of software as goods as opposed to services is exemplified in the judgment of the Court of Appeal in the same case[14]. Scott Baker J. does not expressly rule on this matter but states in obiter[15], that he would classify software as goods. In the Court of Appeal Glidewell L.J. is clearly of the opinion that the supply of software with a tangible element such as a floppy disk is supply of goods, whereas without any tangible element it would be supply of services[16]. This is reflective of U.K lawmaker's reluctance to treat information as property. This conception fundamentally weakens consumer rights in relation to software transactions because the law is far less strict

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[12] [1995] F.S.R. 686.
[13] Interestingly there was no supply of goods in the St Albans case because the software was installed directly onto the purchaser's hardware.
[14] [1996] 4 All E.R. 481 at 556.
[15] [1995] 22 F.S.R. 686.
[16] [1996] 4 All E.R. 481 at 493.

with regard to the supply of services. In the U.S., however, information is increasingly being treated as property, especially in the context of the Internet.

The other major strand of this case is that which relates to the status of the parties as regards the UCTA. Here the contract contained the appellant's standard terms that limited their liability to £100,000, which was well below the contract price. Despite the fact that the parties were of more or less equal bargaining power Scott Baker J. in the High court struck down the appellant's exclusion clause under s.3 of UCTA after holding that the defendants were dealing on their standard terms. Scott Baker J. achieved this by determining that the purchasers were dealing as consumers for the purposes of s.12 of UCTA, which only applies to goods. However, the Court of Appeal just accepts the analysis of Scott Baker J. in relation to s.3 of UCTA and s.12 of UCTA. What this tells us so far as electronic transactions are concerned is that wholly electronic transactions are likely to be treated by the U.K. courts as a supply of services. The case also demonstrates a willingness on the part of the courts to strike down exclusion clauses under s.3 of UCTA as unreasonable, especially where the upper limits of compensation bear no relation to the value of the contract. In the later case of South West Water v. International Computers Ltd[17] the Court of Appeal interpreted s.3 of UCTA to cover situations not accounted for by the contract. Specifically where no system capable of being tested was delivered, the exclusion clause completely failed the reasonableness test where the contract was for a 'turnkey' system[18].

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[17] [1999] Build L.R. 421.

[18] Andrew Stokes, "Standard Exclusion Clauses May Not Hold Water: South West Water v International Computers Limited", C.L.S.R., 2000, 16(1) p48.

5.2 Incorporation

The Terms of a contract which are not necessary for it's functioning, or are not required by law, are not automatically incorporated into the contract. This is especially the case in relation to exclusion clauses which can only be incorporated by signature, notice, or by a consistent course of dealing. A signature is the most effective method of incorporation. In L'Estrange v. Graucob Ltd[19] the High Court held that an exclusion clause was incorporated into a written contract for the purchase of an automatic slot machine even when the signature of the plaintiff was only on the order form. The fact that the plaintiff had not read the contract was deemed immaterial. Where an exclusion clause is incorporated by notice, those seeking to rely on an exclusion clause must take sufficient action to make that notice effective. On or before the formation of contract, the other party must be at least aware of an exclusion clause if it is to be incorporated into the contract. Whether sufficient notice is given is a question of fact to be determined by the judge or jury. While there is disagreement as to how much notice is required to incorporate an exclusion clause into a contract, the Internet provides us with a simple solution in relation to online contracts. That is to force the user to consent to a particular clause before proceeding further.

The frequently cited dicta of Scrutton L.J. in L'Estrange v. Graucob presume an objective view of contract law that uphold traditional notions of freedom to contract. Consequently the objective assessment of the parties' intentions overrides their actual intentions. Thus a signature can bind a party to the terms incorporated in a document he has not read[20]. While the courts have justified this on the economic grounds that it ensures the integrity of business transactions, this approach has been the subject of considerable debate. Spencer criticises the approach on two grounds, firstly, the difficulty of justifying binding members of the contracting community by norms shared

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[19] [1934] 2 K.B. 394.

[20] Bruce Clarke and Stephen Kapnoullas, "When is a Signed document Contractual? – Taking the 'Fun' out of the 'Funfair', Queensland University of Technology Law & Justice Journal , 2001, 1(1), p39. Available from: http://www.law.qut.edu.au/about/ljj/editions/v1n1/pdf/clk_kap.pdf.

by the various members of that community, and secondly, on the basis that identifying such norms in the first place may be difficult. Thus a party may raise the defence that they simply do not agree with a particular term in a contract[21]. Other commentators have argued that the limits of contractual obligations are derived not from an assessment of social practices, but upon 'moral reflection'[22].

In Parker v. The South Eastern Railway Company[23] a retrial was ordered where the plaintiff sued on a contract for the deposit of articles at a railway station cloak room. Here the clause written on the back of the receipt given to the plaintiff purported to limit liability to 10l where articles were lost or stolen. In the Court of Appeal[24] it was stated that the plaintiff would only be bound by the exemption clause on the ticket if he were aware that there was writing on the ticket. The plaintiff was not bound to read that writing but would be bound by it if he were aware of its existence.

A clause may be incorporated into a contract by a course of dealing; however, the document containing or at least referring to the clause must be introduced prior to the formation of the contract. In Olley v. Marlborough Court Hotel Ltd[25] hotel residents had valuables stolen from their room as a result of the negligence of the defendants. There was a notice exempting the defendants from liability in the hall of the hotel and a further notice in the plaintiff's room. On appeal to the Court of Appeal Singleton L.J. and Denning L.J.[26] held that the notices were brought to the plaintiffs attention only after the contract had been formed and therefore were not part of it.

In Kendall & Sons Ltd. v. Lillico & Sons Ltd[27] the respondents negotiated an oral contract for the supply of meal for feeding pheasants. The meal was contaminated and poisoned the pheasants. The sale notes included written conditions of sale that

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[21] J.R. Spencer, "Signature, Consent and the Rule in L'estrange v Graucob", (1973) 32 Camb.L.J. , p105.
[22] T. Scanlon, "Promises and Practices", (1990) 19 Phil . & Public Affairs, p199.
[23] (1877) C.P.D. 416.
[24] Mellish L.J. at p423.
[25] [1949] 1 K.B. 533.
[26] See Id. at 539.
[27] [1969] 2 A.C. 31.

contained a latent defect clause. The respondents regularly did business with the appellants and the conditions of sale were normally included in the sale notes. The respondents sought reliance on the clause. The court held that the latent defect clause was incorporated into the contract although the clause was not effective in excluding liability. On appeal the House of Lords affirmed the decision of the court below. Where incorporation takes place as the result of the standard practices within a particular industry, incorporation is presumed unless the party so bound expressly rejects the clause. In SIAT di del Ferro v. Tradax Overseas S.A.[28] the parties' representatives negotiated a shipping contract for Soya bean meal. The contract was subject to an exemption clause and the rules of trade association called GAFTA. When the defendant's banks rejected altered bills of lading, the defendants sought reliance on their exclusion clause vis a vis GAFTA Rule 100 cl.11 which presumed the incorporation of the clause into the contract. On appeal to the Court of Appeal Megaw L.J. held that the exclusion clause was incorporated into the contract by accepted practice in the making of contracts[29].

In St. Albans City & District Council v. ICL Scott Baker J.[30] sitting in the Queens Bench Division held that an exclusion clause was incorporated into a contract for the purposes of s.3(1) of the Unfair Contract Terms Act 1977 and was therefore subject to the requirement of reasonableness imposed by s.3(2) of the same Act. He proposed that the incorporation of the term was to be determined on the facts and that in his judgment the standard terms of business remained untouched. According to Scott Baker J. the ratio of Potter J. in the Flammar Pride[31] asserting that where alterations were made to standard terms in favour of the plaintiff fell outside the ambit of s.3 of the Act could be distinguished. This was because only negotiations that led to alteration of the vital parts of the contract were sufficient to achieve this effect. This is what had happened, so the parties were therefore dealing on the defendant's standard terms of business. According to the subsequent Court of Appeal case of South West

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[28] [1980]1 Lloyd's Rep. 53.
[29] See Id. p57.
[30] [1995] 22 F.S.R. 686 at 706.
[31] [1990] 1 Lloyd's Rep. 434 at 438.

Water v. ICL[32] even where the plaintiff presents its own terms and conditions, and attempts to modify the defendant's standard terms, this would not alter the defendant's position so long as their standard terms were not altered.

The Unfair Terms in Consumer Contracts Regulations 1999 currently regulate the articulation of consumer contracts, these being the U.K.'s implementation of Directive 93/13 on unfair terms in consumer contracts. The Regulations concern unfair terms in contracts between businesses and consumers where the term in question has not been individually negotiated. Regulation 5 defines a term in a consumer contract as 'unfair' "if contrary to the requirement of good faith, it causes a significant imbalance in the parties' rights and obligations arising under contract, to the detriment of the consumer." However, Regulation 4(2) exempts certain terms in standard form contracts from any assessment of unfairness where they are written in plain and intelligible language. Such terms are those that concern the main subject matter of the contract or the adequacy of the price or remuneration, as against other goods or services sold or supplied (see Regulation 6(2)). It is also notable that Regulation 7(1) obliges suppliers to write contracts in plain intelligible language and that under Regulation 7(2) where there is ambiguity in relation to the meaning of a written term in a consumer contract "the meaning most favourable to the consumer is to prevail". The Regulations have two main problems, firstly, Regulation 3 does not define what is meant by a "trade, business or profession", and secondly it does not define what is meant by "unfair terms".

These provisions were recently tested in the House of Lords in Director General of Fair Trading v. First National Bank Plc[33]. In that case the court had to consider the validity of a term of a loan contract that allowed the bank to recover interest on the amount owed after the date of a court judgement. This avoided the effects of the County Courts (Interest on Debts) Order 1991, which excludes the imposition of interest on regulated agreements under the Consumer Credit Act 1974. Following an

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[32] Andrew Stokes, "Standard Exclusion Clauses May Not Hold Water: South West Water v International Computers Limited", C.L.S.R., 2000, 16(1), p47.
[33] [2002]1 A.C. 481.

appeal from the Court of Appeal the House of Lords had to determine whether the fairness provisions of the Regulations applied to the term in question and whether in the event of this being so, the term was unfair and on what basis it was unfair. Reversing the decision of the court below the House of Lords held that Article 3(2) of the Directive (Regulation 4(2)) was not available to the bank since the term in question involved neither the subject matter of the contract nor the adequacy of interest paid on the loan. Secondly, the fairness of the term was to be assessed using a composite test, which considered whether the term was expressed fully, clearly, without hidden pitfalls, the effect of the term, and the competing interests involved. The supplier was obliged not to take advantage of the consumers' weaker bargaining position, whether deliberately or otherwise, and on this basis the term was not unfair. The concept of "good faith" was not an artificial or technical concept, but was consistent with fair and open dealing. Thirdly, in assessing the fairness of the term in question, it was relevant to consider the position of the typical parties at the time of formation of contract. This decision adopts a caveat vendor approach and is consistent with a long line of English case law going back to the 1970's and beyond.

5.3 Establishing the time of Formation of Contract

The time when a contract is formed is not just important for establishing the existence of a contract, it may also determine contract price, the place of formation and associated questions such as jurisdiction. Where the method of communication is instantaneous then so is formation of contract. However, where third parties are involved and the communication is deferred, acceptance may occur when the message is sent, (i.e. the postal rule). Contracts formed via media such as the Internet may be deferred or instantaneous, under English law this is significant because liability is allocated to one party or the other depending on the circumstances. This may be contrasted with the approach under German law where the risks of transit are apportioned according to the zone of control where a message is located at a given

time[34]. Electronic mail for example uses intermediate servers to store data, and before this data can be retrieved the intended recipient must log into such a server. Further, data is delivered in packets that have no checksum[35], these may be delivered in any order and it will not immediately be apparent if an error has occurred. Conversely, interactive websites have direct online links so communication is instantaneous. The Internet consists of a large number of inter-linked Value Added Networks (VANs). These are mostly commercial networks that provide access to the network backbone along with other services such as email. In such complex networks it may be difficult to determine whether communication is simultaneous or deferred. The German approach may therefore offer more equitable way of determining the time of contract formation on the Internet.

In Entores Ltd. v. Miles Far East Corporation[36] Lord Denning opined that for simultaneous communications the conclusion of a contract takes place where the offeror hears the acceptance. Where the communication is interrupted at the moment of acceptance, the obligation of affirming acceptance therefore falls on the offeree. This doctrine is elaborated upon in Tenax Steamship Co v. The Brimnes[37] where Edmund-Davies L.J. held that a notice of withdrawal of a vessel from a charter-party sent by telex during normal office hours was effective even though the message was not sent until the next day. Similarly in the Australian case of Mondial v. Astare Shipping Ltd[38] the Commercial court held a fax message to be effective at the point when one could expect it to have been read. In the U.S. case of Corinthian Pharmaceutical Systems Inc. v. Lederle[39] the plaintiff dealt in the wholesale purchase of medicinal drugs and ordered a consignment of drugs through an automated telephone ordering system just before the date when a price increase was due to be implemented. The plaintiff was allocated a "tracking number" by the manufacturer's

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[34] Jan-Malte Niemann, "Cyber Contracts – A Comparative View of The Actual Time of Formation", Comms L., 2000, 5(2) p49.
[35] A checksum is a parity bit located at the end of a block of digital characters used to check that all of the bits are present.
[36] [1955]2 All E.R. 493.
[37] [1975]1 Q.B. 929.
[38] 1995 C.L.C. 1011.
[39] 724 F Supp.605 (S.D. Ind. 1989).

computer system that operated entirely without human intervention. The manufacturer then refused to sell the plaintiff the drugs at the pre-increase price and litigation ensued. The court held that the tracking number issued by the computer did not constitute acceptance of the offer, and was merely an acknowledgement of receipt of the order. The plaintiff was therefore not entitled to purchase the drugs at the lower price. This case indicates that even where communication is instantaneous there need to be unambiguous provisions as to the exact meaning of automatically generated contractual documents. Where a contract is subject to mistake English law makes it plain that where a third party in the process of transit makes a mistake then the contract formed will be voidable. In Brinkibon Ltd. v. Stahag Stahl[40] a case concerning a time sensitive transaction involving metal ingots the House of Lords held that a telex sent from the acceptor's office to the offerors could be treated as an instantaneous communication between principals. The court gave three reasons for this: (1) the priciple in Entores Ltd v Miles Far East Corporation[41] had worked without producing significant problems for the business community; (2) once the telex was received by the offeror's telex machine the obligation to handle the information promptly fell upon the offeror; (3) the sender of the message can usually tell if the message has been received by the offeror's machine[42].

In 1980 the United Nations Convention on Contracts for the International Sale of Goods was enacted, and entered into force in 1988. It now forms part of the law in some 51 Member States and amongst other things deals with the rules concerning formation of contract. Amongst its most significant provisions is Article 14, which asserts that an offeror is bound where the offer is "expressly or implicitly sufficiently definite". That is definite in terms of the goods involved, the quality of the goods and the price. Article 18 makes it clear that silence does not constitute consent, however, "the statement or conduct of the offeree indicating assent" does amount to acceptance. According to Article 15 an offer is effective when it reaches the offeree. Furthermore, Article 20 stipulates that in the case of instantaneous communication the

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[40] [1983]2 A.C. 34.
[41] [1955]2 Q.B. 327.
[42] See Id. p43 E-F.

time for acceptance will run from the moment when it is received by the offeree. This has some problems since not all electronic communication is instantaneous. For example, there is no reason why an offeree should suffer loss because of an offeror's failure to download his email. Significantly, Article 16(1) and Article 18(2) of the Convention have the effect of making acceptance take place when a letter of acceptance is received by the offeror. This is contrary to the so-called "postal rule". Furthermore, the offeror cannot revoke the offer once it has been accepted. The English postal rule has been the subject of much criticism, so it is not too surprising if it has not been adopted as an international norm. The Convention has given rise to some 250 decisions world-wide. However, the majority of these come from central European countries such as Germany, and not as one would expect from the U.S.A., the U.K. and China. The areas of law where dispute arises most are not to do with formation of contract. In fact the areas giving rise to greatest dispute are the duty to notify the seller of defects within a "reasonable time" and calculation of interest on arrears[43].

5.4 Authentication of Electronic Contracts

Traditionally written contracts were concluded using a signature, digital signatures establish the identity of the parties and ensure data integrity. Lloyd cites a 1990 report of the United Nations Commission on International Trade Law (UNCITRAL), which identifies four historical reasons for concluding contracts in writing. These were (1) the avoidance of disputes, (2) to make the parties of the consequences of the agreement, (3) to provide evidence of the agreement, and (4) to facilitate taxation, accountancy and regulatory functions.

Furthermore, Lloyd[44] illustrates some of the legal problems associated with digital signatures by quoting the definition of "writing" included in the Interpretation Act 1978, which states that writing includes:

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[43] John O. Honnold, "Symposium – Ten Years of the United Nations Sales Convention: The Sales Convention: From Idea to Practice", (1998) 17 Journal of Law and Commerce, 1998, p184.
[44] Ian J.Lloyd, *Information Technology Law*, Third Ed, Butterworths, 2000, p575.

"typing, printing, lithography, photography and other modes of representing or reproducing words in a visible form, and expressions referring to writing are construed accordingly."

Section 7 of the Communications Act 2000 implements a simplified form of the Digital Signature Directive. Here it defines a 'digital signature' as "so much of anything in electronic form as –

(a) is otherwise incorporated into or otherwise logically associated with any communication or electronic data; and
(b) Purports to be so incorporated or associated for the purpose of being used in establishing the authenticity of the communication or data, the integrity of the communication or electronic data or both."

The function of the signature depends upon the type of document in question. Not all contracts require a digital signature; and if they do what is valid for one type of contract i.e. a contract for the sale of land may not be valid for another type of contract. Much will also hinge upon the jurisdiction where the contract is formed. While contracts are conventionally validated using a hand written signature, the courts have not adhered to this so strictly that only this form of authentication is necessary for the formation of a valid contract. In the case of Re a Debtor (No 2021 of 1995)[45], Laddie J. held that a faxed copy of a signed proxy form satisfied the statutory requirements for signature. There was no distinction of one form of mark over another so long as the notion of non-human agency expressed as a mark on paper was legally accepted. By contrast electronically generated and transmitted documents do not satisfy the requirements of writing under German law, s.126 of the BGB (German Civil Code) requires that valid contracts must have a hand written signature. Also s.286 of the ZPO (German Code of Civil Procedure) leaves the admission of such

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[45] [1996] 2 All E.R. 345.

documents, in civil proceedings, at the discretion of the court[46]. This leaves sellers in an uncertain position in terms of proving the content and conclusion of digital contracts. However, electronic contracts can be recognised as valid under Art.3 of the German Information and Communication Law of August 1, 1997. This Act establishes a regime for authenticating digital signatures based upon certificates issued by public certification bodies, and the use of public key encryption. Under this system the public key is provided by the document itself while the certification authority issues the private key[47].

In the United States as elsewhere, digital signature legislation has proved to be very popular, and these statutes have taken a variety of different forms. In Utah for example the legislation has focused on the rights and responsibilities of digital certificate authorities. In other states the legislation simply accepts the validity and enforceability of digital signatures without dealing with issues of liability in situations where the digital signature is stolen or used fraudulently[48].

The U.S. Ninth Circuit Court of Appeals recently upheld the summary judgment of the district court in Radio Television Espanola S.A. v. New World Entertainment, Inc[49]. This concerned the alleged infringement of a licence to broadcast certain programs. In so doing the court affirmed that certain internal documents and faxes failed to satisfy the requirements of writing set out under sec.204(a). However, it is important to note that the decision in this case applies to exclusive licences as opposed to non-exclusive licences, furthermore, the faxes at issue in the case failed to satisfy sec.204(a) because they provided evidence as to the preliminary discussions leading up to the formation of the licence agreement rather than evidencing the terms of the agreement. This prelude to the law on digital signatures analyses the relevant case law on digital signatures from a number of jurisdictions but is not intended to be global in its application.

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[46] Brunhilde Steckler, 'Current Legal Aspects of Electronic Commerce Regarding German Contract Law', E.I.P.R., 1999, Issue 5, p250.
[47] ibid., p251.
[48] Mark Lemley et al., *Software and Internet Law*, Aspen Law & Business, 2000, p1055.
[49] No. 97-56418 (9th Cir., July 16, 1999).

5.5 Digital Signatures

The term 'digital signature' refers to the cryptographic encoding of digital data in order to secure that data, and at the same time to verify its origin and integrity. This usually entails the encryption of plain text data into ciphertext and the decryption of the ciphertext back into plain text data[50]. The 'digital signature' is just the most widely accepted form of a range of technologies used to achieve these objectives. Some digital signature tools allow the user to make a conventional signature on an electronic pad, or on the computer screen. This has the advantage of being analogous to a conventional signature on paper, and may therefore gain more rapid acceptance in commerce. Although the 'digital signature' technique offers more guarantees in terms of security, it relies on cryptographic technology, which is not so readily understood by the business community. Digital signatures are not merely a specific technology, but a standards regime, and although standards are non-binding they are just as important as the legal rules that they facilitate. This increasingly occurs to a point where de facto standards become more important than legal rules in terms of evidence. Once a standard becomes accepted by business it may form a rule by default. However, legal rules requiring that certain documents require written signatures can be highly obstructive in a digital environment.

5.6 The Electronic Communications Bill and the Electronic Commerce Directive

The Electronic Communications Act 2000 is a wide-ranging bill designed to facilitate transactions conducted over networks such as the Internet. The Bill was published on 15 March 2000 stripped of controversial clauses related to law enforcement powers requiring the surrender of encryption keys. The Act was enacted on 15 May 2000, and is to be phased in gradually, although it will automatically be abrogated if it is not fully implemented within five years. The Act has three parts; the first deals with the

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[50] Nabil R. Adam, *ELECTRONIC COMMERCE: Technical, Business, and Legal Issues*, Prentice Hall 1999 p12.

registration of cryptography support services such as trusted third parties and services relating to electronic signatures. The second part relates to the legal status of electronic signatures whilst the third part deals with telecommunications licences. Section 1 of the Act permits the Secretary of State to maintain a register of approved providers of cryptography support services. In the second part s.7 gives electronic signatures incorporated or associated with an electronic communication equivalent legal status with conventional signatures. This includes the treatment and admissibility of evidence relating to the authenticity of electronic communications. Furthermore, s.8 reinforces this position by giving the responsible minister the power to modify existing legislation, which restricts the use of electronic commerce.

As the Internet began its explosive growth during the early 1990's, at about the same time as the birth of the concept of the Information Society, the Commission turned its attention to goods and services distributed via networks. Their response was to arrive in the form of the proposal for a Directive on digital signatures. This dates back as far as April 1997 and was followed by a proposal for a Directive on certain legal aspects of electronic commerce in the Internal Market presented in November 1998. After amendment, following its first reading in May 1999, the draft Directive was almost approved at the end of February 2000. The draft Directive was adopted on 12 April 2000, the primary purpose of the draft Directive is to ensure the free movement of information society services between Member States, thereby maintaining the proper functioning of the Internal Market[51].

In line with this Clause 1 of the draft Directive requires that Information Society Services made available by service providers must comply with the laws of the Member State where it is established. This angered many consumer interests, however, this principle will not be applied to consumer contracts nor will it affect the party's freedom to elect applicable law. Furthermore, Clause 16 allows for industry self-regulation and telecommunications licensing. Article 5 deals with the minimum information service providers give to consumers including name, address and place of

establishment. Under Articles 6 and 7 commercial bodies are required to provide similar information in order that consumers may identify them. Article 9 is intended to ensure homogeneity in the national legislation of Member States so that most types of contract can be concluded electronically. Article 11 is intended to ensure that the time of contracting will be the same in all Member States by making it necessary for service providers to give electronic receipts. Article 17 carries a general permission for caching for service providers. It also encourages principles such as procedural efficacy, independence, and transparency[52]. Indeed while the regime suggested by the draft Directive encourages trade by electronic means it does far too little to protect the interests of consumers.

Directive 1999/93 on a Community framework for electronic signatures[53] is concerned with the harmonisation of the legal framework, the avoidance of obstacles to the functioning of the internal market, and the development of the market in terms of user demand and innovation. It is also intended that the Directive should be technologically neutral, and should cover cross-border recognition as well as existing contractual relationships. In terms of standards, ensuring systems interoperability is paramount at both the European and the international level. Article 1 of the Directive defines its scope in terms of the promotion of increased usage and improved recognition of digital signatures. It lays out the legal framework for digital signatures, and electronic certification services. Article 2 of the Directive is significant in that it draws a distinction between a 'digital signature' and an 'advanced electronic signature'. Here a 'digital signature' is defined as "data in electronic form attached to, or logically associated with, other electronic data and which serves as a method of authentication". By contrast an advanced electronic signature must be uniquely linked to, and be able to identify the signatory. Furthermore, the means of creating the signature must be under the sole control of the signatory, and must identify the data to which it is attached in a way that prevents subsequent alteration. This second

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[51] Donatella Marino and David Fontana, 'European Parliament and Council Draft Directive on Electronic Commerce', [2000] C.T.L.R., Issue2, p45.
[52] Michael Doherty and Roland Fletcher, 'Responding to the legal problems of electronic commerce', Comms Law, 2000, 5(1), p6.

definition conforms to the ISO X.509 standard, but goes further by making signatures verifiable through licensed certification authorities[54].

According to the DTI Consultation Paper on "Building Confidence in Electronic Commerce" digital signatures are defined as "something associated with an electronic document that is the electronic equivalent of a manual signature". The proposal for a EU Directive on the legal recognition of electronic signatures[55] opts for a more sophisticated definition whereby the signatory must be uniquely identified by the signature. This must be created using a means that is under the sole control of the signatory, and which cannot be subsequently altered without the alteration becoming apparent[56]. Article 3.1 of the draft Directive makes it clear that member states should not use licensing requirements to deny digital signatures legal effect. However, the DTI Consultation Paper would create a de facto compulsory standard by establishing a rebuttable presumption of authenticity in favour of digital signatures authorised by licensed authorities[57].

5.7 Legal Nature of Software Licences

According to the Oxford English Dictionary a licence may be "a permission to hold a certain status or do certain things". In the alternative, a licence may be a permission to use property (traditionally real property) for a specified purpose. In the first definition the emphasis is on the grant of purely positive rights whereas the second definition implies a promise not to enforce certain rights against the licence holder. The difficulty with the first type of licence is that it could be totally discretionary, the second definition, however, implies a promise not to do something. Both of these models are used in intellectual property transactions. The second more binding model is predominant where right owners wish to obtain a return on their investment. It is

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[53] O.J. L13/12, 19.1.2000.
[54] See note 50, p143.
[55] C325/7, 23 October, 1998.
[56] Kit Burden, "Looking to the Future: the DTI Consultation Paper in "Building Confidence in Electronic Commerce", C.L.S.R., 1999, 15(4), p248.
[57] ibid., p249.

also true that a valid licence may be agreed freely and non-contractually, however, this kind of arrangement is very informal and is unlikely to be used for high value transactions. The reasons for this are primarily evidential, non-contractual licences can be very flexible but proving the terms of agreement may be difficult, they are therefore reserved for those transactions that are less likely to give rise to dispute (i.e. non-contentious or low value transactions). The dichotomy outlined above is very much in evidence in British case law. In Hurst v. Picture Theatres Ltd[58] the plaintiff, the holder of a theatre ticket was ejected from the theatre he was attending on the instigation of the manager who was under the false impression that the plaintiff had not paid for his seat. The plaintiff then sued the defendants for assault and false imprisonment. On appeal the Court of Appeal held that the plaintiff could recover substantial damages since the defendants could not arbitrarily revoke the licence granted to the plaintiff. However, in Powell v. Rosehill Racecourse Company[59], a factually similar case the opposite result was reached. In that case the plaintiff, a spectator at the racecourse was forcibly removed even though he had a valid ticket. In the subsequent action for damages for assault, the High Court of Australia held that the licence was revocable at common law. However, at that time there was no fusion of law and equity in Australia. Latham C.J. reached this conclusion because licences do not grant the licensor proprietary rights[60] but a mere contractual right against the seller. Secondly, without a signature an equitable remedy would not be granted[61].

Thus far it is clear that a licence is a permission authorising the use of property. What is also clear is that this use must normally be for a specified period of time. In Winter Garden Theatre (London) Ltd. v. Millennium Productions Ltd[62] the plaintiffs granted the defendants a licence to use their theatre for six months from July 6, 1942 with an option to continue for a further six months at an increased rent. Subsequently the plaintiffs purported to determine the licence and the defendants claimed that the licence was not revocable except upon breach of its terms or alternatively that they

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[58] [1915] 1 K.B. 1.
[59] (1937) 56 C.L.R. 605.
[60] See Id. at 615.
[61] See Id. at 617.
[62] [1948] A.C. 173.

were given insufficient time to withdraw from the contract. In the subsequent legal proceedings the House of Lords held that the licence was not perpetual because the parties did not contemplate a prolonged duration. This was found to be the case because the original contract was set at a fixed rent, and there was no obligation on the tenant to make internal repairs. It was further contended that the respondents had not been given insufficient time to withdraw from the contract. However, the licence was in fact a sub-licence that breached the terms of an earlier licence, so notice calculated on this basis was in fact over generous because the sub-licence was void.

From the above a simple definition of a licence might be "the restricted transfer of use of a property right under limited conditions and for a specified term"[63]. Note that the above case acknowledges the existence of perpetual licences. Such licences will, however, normally make provision for changing the terms of contract.

So how do these cases relate to software licences? While a software licence is not quite the same as a ticket permitting us to view a spectacle, there are fundamental similarities. Firstly, software licences are often subject to detailed conditions, the breach of which can cause the revocation of the licence. Secondly, licences do not grant proprietary rights, and will normally last for a specified period of time. Where software licences do differ from other forms of licence is in their mode of delivery and the degree of down-stream control that can be exercised over the user through them. Hence it becomes far more important to ascertain what positive rights the licensee does have and whether the terms of the licence have been incorporated into any resulting contract. Further, it is more important to protect consumers from unscrupulous licensors because of the high degree of control they have over their product and the monopolistic nature of the software industry.

Computer software exists in two main forms known respectively as source code and object code. Source code is the text produced and maintained by programmers, it can be read by humans and is therefore capable of modification. Object code on the other

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[63] Mark L.Gordon, *Computer Software: Contracting for Development and Distribution*, John Wiley & Sons 1986 p73.

hand is compiled in a binary form not readily comprehensible by human beings, but which can be rapidly processed by digital computers. Once computer code is compiled into object code it is very difficult to modify or maintain it, this being the form in which most commercial software is supplied to the end user. Licensors therefore do not normally provide source code licences because this would allow the licensee to modify and maintain the software himself. Where such licences are provided the price may be up to three times that of an object code licence[64]. In Saphena Computing Ltd v. Allied Collecting Agencies Ltd[65] the Official Referee held that where only object code is supplied under contract the licensor has no obligation to supply the source code just to enable the licensees to repair their software[66].

As suggested at the beginning of this section software licences do not grant a positive bundle of rights, but rather a promise not to take action against the licensor. This raises a question as to how far a licensor can go before losing this right. Perhaps the most fundamental restriction found in software licences is the prohibition on transfer. This may be from one person to another, from one storage device to another, or from one site to another. Here it is notable that the first form of transfer is different to the latter two because it moves beyond the scope of the original agreement. However, where a licensee receives additional payment for assignment of software to a third party, it is arguable that they are exercising their right of distribution twice[67]. In most instances the activities discussed above will involve some form of copying. According to Articles 4(a) and 4(c) of the Software Directive once a copy of software is sold to the purchaser the licensee is no longer entitled to regulate its use. However, this does not affect the right of the licensee to regulate use of the software by means of a licence[68]. It is also arguable that this kind of control is likely to violate Articles 85 and 86 of the Treaty of Rome. However, in Coditel v. Cine Vog Films[69] the ECJ held that the charging of a fee for each showing of a film did not constitute a breach of Articles

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[64] Jonathan Cornthwaite, "Intellectual Property and the Internet", Wedlake Bell Solicitors 1998, p10.
[65] [1995] F.S.R. 616.
[66] See Id. at 637.
[67] Glyn Morgan and Alastair Wilson, "Restrictions On Transfer Of Software", [1996] 2 C.T.L.R. 86.
[68] ibid., p83.
[69] [1982] E.C.R. 3381.

85 and 86 of the EC Treaty because films belong to a class of works designed to be infinitely repeated[70]. In the case of software it might be deemed unreasonable to make further charges for a permitted use for which a price has already been paid. In Intergraph v. Solid Systems CAD Services Ltd[71] the Chancery Division held that it was at least possible to argue that a licence was invalid because it violated Articles 85 and 86 of the EC Treaty[72].

5.8 Shrink-wrap Licences

According to Ian Lloyd an agreement may be made verbally, in writing, or even implied from the parties' actions. The making of contracts electronically, should in principle have no bearing upon its validity, except in relation to matters of evidence. However, the requirement that some contracts be in writing currently imposes almost insurmountable barriers to certain forms of electronic commerce[73]. This barrier to electronic commerce has most impact in relation to more heavily regulated business activities such as financial services, and contracts that have traditionally been subject to the requirement of writing. According to the interpretation Act 1978 writing includes; "typing, printing, lithography, photography and other modes of representing or reproducing words in a visible form, and expressions of writing are construed accordingly." Documents stored solely in digital form will fall outside of this definition since digital data has no visible manifestation unless it is transmitted to an output device such as a VDU or printer. Attempts to modify this type of definition, such as the UN model law of 1996 have simply created more barriers to electronic commerce i.e. the requirement of data retention[74]. However, this situation changed on the 25th of May 2000 with the coming into force of the Electronic Communications Act 2000. Section 7 of the Act gives electronic signatures the same legal status as hand written signatures and defines an "electronic signature" as anything incorporated or logically

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[70] See note 65 above p85.
[71] (Unreported, 20 March 1992).
[72] See note 65 above, p 88.
[73] Ian Lloyd, 'Legal Barriers to Electronic Contracts: Formal Requirements and Digital Signatures' in Lilian Edwards and Charlotte Waelde, Law & the Internet: regulating cyberspace, Hart Publishing 1997, p137.

associated with an electronic communication in order to establish its authenticity. Further, s.8 of the Act gives the appropriate Minister the power to modify legislation in order to facilitate electronic communications i.e. to abrogate formal requirements of writing, which obstruct electronic commerce through non-recognition of electronic signatures, or through the imposition of unnecessarily burdensome formalities.

A purchaser of goods is not generally bound by conditions of a contract unless they are put on notice of those conditions prior to acceptance. Lord Denning in Thornton v. Shoe Lane Parking confirms this principle where he states: "the offer is made when the proprietor of the machine holds it out as being ready to receive money. The acceptance takes place when the customer puts his money into the slot. The terms of the offer are contained in the notice placed on or near the machine stating what is offered for the money. The customer is bound by those terms as long as they are brought to his attention before-hand, but not otherwise". Even where a purchaser is put on notice of the terms of a licence agreement, he is not bound under copyright law. In the U.S. case of Bobbs-Merrill Co v. Straus[75] the Supreme Court held that the purchasers of a book containing licence conditions were not bound by those conditions subsequent to initial sale. In the opinion of the court, although the Copyright Acts granted the right owner the right to reproduce, and to sell their work, they could not bind by notice third parties who were not privy to the contract[76].

Since the early 1980's most computer software has been licensed using a written instrument known as a shrink-wrap licence. This is stored inside a sealed box containing the software. Because it is impossible for the buyer to view the licence before purchase many courts have regarded such transactions as suspect and refused to enforce them[77]. An early example of this is the U.S. case of Vault Corp. v. Quaid Software Ltd[78] where the producers of anti-copying software sued in respect of

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[74] ibid., p139.
[75] 210 U.S. 339 (1908).
[76] See note 64, p14.
[77] John T. Cross, Revisiting the "Shrink-wrap licence: ProCD v. Zeidenberg", I & C.T.L., 1997, 6(1), p71.
[78] 847 F.2d 255 (5th Cir. 1988).

alleged infringement. The defendants produced software designed to defeat their anti-copying software, which was sold with a shrink-wrap licence that specifically forbade reverse engineering. The court refused to enforce the shrink-wrap licence since it was pre-empted by s.117 of the Copyright Act 1976, which permits the making of backup copies, and simply refused to interpret the section so as to exclude activity that constituted reverse engineering.

The first U.S. appellate decision to accept the enforceability of shrink-wrap licences is ProCD v. Zeidenberg[79] where the seventh circuit Court of Appeals found shrink-wrap licences are generally valid contracts and concluded that no contract rights are pre-empted by the U.S. Copyright Act. In that case the manufacturer, ProCD, brought an action against the defendant for injunctive and monetary relief in respect of the alleged infringement of a CD-ROM product called "SelectPhone". This is a database of some ninety-five million telephone listings compiled from around 3,000 telephone directories. The defendant admitted that he had copied the listings and uploaded them to a World Wide Web bulletin board from where they could be processed for a fee[80]. The plaintiffs further claimed that he had infringed the copyright in their software. The defendant argued that the uploaded data was not subject to copyright protection. The SelectPhone package included a licence agreement which was displayed on the purchasers computer screen in such a way that it had to be agreed to before they could proceed. However, having seen this message, the defendant continued to use the package. On appeal the judge held that this licence provision was binding on the defendant even though he had no opportunity to bargain over it[81], and despite the fact that the phone listings were not protected matter, the software used to search them was protected[82]. The court also ruled that the rights under the licence agreement were "exclusive rights" which were not equivalent to rights conferred by s.106 of the U.S. Copyright Act. The judgment in ProCD has since been criticised for its simplistic treatment of the contractual relationship between the parties, the court puts a heavy

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[79] 86 F. 3d 1447 (7th Cir. 1996).
[80] B. Grusd, "Contracting Beyond Copyright", Harv. J. of Law & I.T., 1997, 10(2), p354.
[81] See Id. 358.
[82] See Id. 355.

burden on the buyer by placing on him the onus for cancelling the agreement, and also assumes that the buyer can get a refund[83]. In relation to the U.K. courts the decision is persuasive because of the pragmatic approach taken in relation to the legal effect of shrink wrap licences. The jurisprudence of this case does seem to have been loosely followed in the Adobe decision in Scotland.

The ProCD case was decided in a federal court that cannot bind state courts even in the same circuit. Indeed in Step-Saver Data Systems v. Wyse Technology[84] the third circuit decided that additional terms in a box-top licence would not be incorporated into the parties' contract where the addition of such terms will materially alter the nature of the parties' agreement. However, the ProCD case does reflect a general trend towards the enforceability of shrink-wrap licences, although in the United States this is based upon Article 2 of the U.C.C. In i.LAN Systems v. Netscout Services[85] the judge accepted that "courts... have assumed, without deciding that Article 2 governs software licences ...[but] the U.C.C. best fulfils the parties' reasonable expectations." While the U.K. has no U.C.C. it does have similar common law and statutory provisions relating to unconscionable contract clauses.

The applicability of the decision in ProCD has since been expanded in subsequent U.S. case law to cover computer hardware. In Hill v. Gateway 2000, Inc[86] the defendants purchased a Gateway computer subject to a shrink-wrap licence that contained an arbitration clause, and which made the purchaser subject to the terms of the agreement unless the computer was returned to the supplier within 30 days. The defendants were not put on notice of the licence by a notice on the outside of the box. They opened the box and kept the computer beyond the 30 days before complaining that both the hardware and software was defective. In the class action that followed in the District court for the Northern District of Illinois it was argued that owing to the defective nature of the product the defendants were racketeers, and were guilty of

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[83] See note 77 above, p73.
[84] 939 F.2D 91 (3d Cir. 1991).
[85] (Mass. DC, January 2, 2002).
[86] 105 F.3d 1147 (7th Cir. 1997).

wire fraud and various predicate offences. The defendants sought to enforce the arbitration clause but the judge refused to find that there was any valid arbitration agreement between the parties or that the plaintiff's had received sufficient notice of the arbitration clause.

On appeal before the Seventh Circuit Court of Appeals it was held that a contract does not need to be read to be effective. The terms inside Gateways' box stood or fell together, and since the plaintiff's had the opportunity to read these terms and then return the goods then the contract as a whole must be enforced. Further, the fact that the defendant in ProCD was a "merchant" was of no consequence since ProCD concerned the way the contract was formed, and when it was formed rather than the addition of terms after the formation of contract. ProCD applied because both cases involved the sale of products with terms "making the same sort of accept-or-return offer". Secondly, it was clearly a more convenient arrangement than a sales agent reading aloud a four-page agreement at the time of purchase. Thirdly, the absence of the notice on the outside of the box was a functional distinction rather than a legal one.

The above decision was subsequently upheld by Appellate Division of the Supreme Court for New York in Brower, et al. v. Gateway 2000, Inc., et al[87]. In that case it was argued that an arbitration clause was invalid under UCC 2-207, and under UCC 2-302 the contract was found to be an unenforceable contract of adhesion. This was so since the provision was obscure, and it was unreasonable for the customer to be expected to understand or investigate its meaning and effect. Further, it was claimed that the use of the International Chamber of Commerce (ICC) was an irregular choice of arbitrator which was oppressive to licensees because the ICC is based in France, and its location and rules are not readily ascertainable. The arbitration clause was held to be valid since the contract was formed after the merchandise was retained beyond the thirty-day period and therefore did not alter the oral agreement. UCC 2-207 was irrelevant since it applied in battle of the forms cases, whereas ProCD and the Hill

[87] 1998 WL481066 (NYAD 1Dept).

case both involved a single contract. Also the contract could not be said to be unconscionable since under New York law, this can only be established if there is "some showing of "an absence of meaningful choice on the part of one of the parties together with contract terms which are unreasonably favourable to the other party'". However, the court stated that it was inclined to agree that the forum clause rendered the agreement unconscionable. This was though irrelevant as a matter of fact since Gateway had agreed to substitute a new arbitrator.

In the Scottish case of Beta Computers (Europe) Ltd v Adobe Systems (Europe) Ltd[88] the defenders ordered standard non-customised Informix software from the pursuers in order to upgrade their existing software. The software was then ordered from the manufacturers and delivered to the defenders, it was shrink-wrapped and the conditions of the licence were visible through the packaging. This was a strict end user licence; the packaging also bore the words "Opening the Informix S.I. software package indicates your acceptance of these terms and conditions". The defenders responded by attempting to return the software to the pursuers who then sued for the price of the software, whereupon the defenders argued that the contract was completed only once the conditions of the shrink wrap licence had been accepted. In the Outer House Lord Penrose held that the contract was sui generis consisting of both the sale of goods and the supply of services[89]. It was an essential part of this contract that both the goods involved and the rights of access to the program are made available to the purchaser[90]. Further, given the commercial relationship of the parties to each other, there would be no consensus between them until the owners' conditions for the use of the software had been accepted[91].

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[88] 1996 SLT 604.
[89] See Id. at 609.
[90] See Id. at 610.
[91] See Id. at 611.

5.9 Software Products

The concepts that underpin software licensing were developed in the days when computers were large and expensive, and were not linked to each other. Licences were therefore fixed to particular CPUs, and the price of the licence increased in direct relation to the performance of the computer. Because of the single node mode of licensing it was also important to place tight limits on the number of copies made of a piece of software. Once computers became more commonplace and networks began to develop, this earlier conception of software licensing became inappropriate and expensive, so consumers demanded new methods of software licensing. These had to recognise software as a network resource that floated on top of the network rather than being a fixed piece of infrastructure. Furthermore, licences fixed to particular CPUs were not appropriate, as was pricing based on CPU performance. Equally valuation determined by the number of copies of software on the network was an unworkable way of determining value, which should be based on software use[92].

Licensing issues are one of the key concerns of the software industry; their users on the other hand want solutions, which integrate with their needs. Increasingly the software firms, which survive and prosper, are those that meet these user requirements. Software firms are obviously keen to maximise licence revenue and minimise the amount of revenue lost to piracy, unauthorised use and lengthened sales cycles. These needs conflict with the users need to minimise transaction costs and to optimise operational efficiency, in recent years these conflicting pressures have created adversarial relationships between software companies and their users. Apart from the product itself, product delivery plays a very important part in software licensing. As well as the structural elements already mentioned software licensing consists of a number of components including physical delivery, pricing, metrics

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[92] Richard Mirabella, "License Management: How developers control software licensing" Globetrotter 1998, p1. Available from: http://www.globetrotter.com/art1.htm.

discounts, licence periods, support and maintenance, technical support, bug fixing, platform migrations and product enhancements[93].

Software metrics are vital in the development of any kind of licensing regime based on software use, this further requires asset management tools to measure use over time. Without the data generated by these tools it becomes hard to negotiate an equitable price for software use. On computer networks piracy is a major concern since digital technology facilitates copying. Anti-piracy devices tend to inhibit the flow of information, so software vendors may have to tolerate some loss of revenue for the sake of user convenience. The unwillingness of software companies to suffer these revenue losses is what drives the adoption of new delivery methods and appropriate licence management[94]. Much also depends upon whether software is client-side or server-side software. Client-side software is more interactive than server-side software. Server-side software is seriously affected in terms of the amount of work done, whereas interactive software isn't. This can have a significant impact on software metrics and the ultimate price of a licence based upon use. Where interactive data processing is involved, shared usage data is essential for the accurate pricing of a licence, the lack of this sharing of usage data is potentially one of the most serious roadblocks to the commercial distribution of software on the Internet, or through any other medium[95]. Most corporate customers require volume licences for widely used PC applications. If the current level of software piracy is to be reduced multi-copy arrangements will have to be employed. With the wide availability of more and more software licensing, this will take the form of flexible licensing of applications suites included as discounted bundles of applications[96]. At the moment network licensing is based upon information flows at the applications level, in future licensing will have to

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[93] Mike Schelp, "Software Licensing Problems, Opportunities and a Process for Solution", Globetrotter 1999, p1. Available from: http://www.globetrotter.com/art4.htm.
[94] ibid., p2.
[95] ibid., p3.
[96] Fred Greguras and Sandy J. Wong, "Software Licensing Flexibility Complements the Digital Age", Fenwick & West 1994, p6. Available from: http://www.batnet.com/oikoumene/SoftwareLicensing.html.

work at the object level[97], especially if multimedia products are to be licensed fairly and effectively[98].

While many smaller companies are moving onto the Internet in droves, larger companies are reluctant to distribute their products via the Internet for fear of alienating their distribution network. In fact many vendors have a presence on the Internet only for the purposes of marketing. Traditional delivery methods are still most favourable to many consumers because they have slow modems that will take hours to download a large piece of software. Furthermore, they are faced with the problem of transferring software onto their hard drive once it is downloaded. Until higher transmission speeds become possible this situation is likely to continue[99].

5.10 Licensing Multimedia Products

Multimedia works normally incorporate many works that can be copyrighted in their own right. For those involved in the compilation, distribution, and licensing of multimedia products, it is important to establish whether the material incorporated into a product is subject to copyright. If this material is not original, or has fallen out of copyright, then no further action needs to be taken. Where the rightholder is afforded protection under copyright law his permission must be sought or otherwise legal proceedings may ensue. However, where moral rights are involved permission must be sought from the author. Permission must be obtained for all the rights affected by publication of a multimedia product. This process is known as "rights clearance", and also involves tracking down the correct owner of each discrete right and paying them some form of remuneration in respect of its use. However, this analysis is rather simplistic, obviously practice differs from industry to industry, but rightholders may also attempt to contractually limit the extent to which their work is

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[97] An object is a unit of data with two distinct parts. Firstly, it is a collection of data with certain definable qualities. Secondly, an object consists of code that enables it to perform particular tasks. With this conjunction of code and data it is possible for one object to ask another object to do something.

[98] See note 92 above, p5.

used. Rightholders may want to limit the use of their work to only one named party "exclusivity", or may limit use by period of time, to a specific platform, version, or geographic area. The way the rightholder is paid may also give problems depending on how their fee is derived. Pay per use is probably the most expensive option while a flat fee offers better value for money so long as a large number of copies are sold. The ownership of copyright rights in a work will often depend upon the wording of the contract by which those rights have been assigned. In the United States one line of case law assumes that new uses of a copyright work are not covered by the original assignment of rights even where such use could not have been contemplated by it. In another line of case law new uses of a copyright work are only granted where they are clearly within the scope of the rights conveyed. This problem is exacerbated by the reluctance of right owners to allow their work to be digitised because of the increased opportunities for pirating created by fast data transfer across international boundaries, and the high quality of digital reprography.

5.11 Existing Licences

Many of the licence agreements determining the uses to which copyright material can be put were written before multimedia existed, even in a conceptual form. The parties therefore could not have had multimedia applications of the subject matter of the licence in their contemplation. Whether a licensee can receive the benefit of new applications of an existing work depends upon the precise language used in the contract; in general the broader and more sweeping the language used in the contract the more likely it is that new uses of copyright material, not in the contemplation of the parties on formation of the contract will be permissible. In the U.S. case of Cohen v. Paramount Pictures Corp[100], the Ninth Circuit Court of Appeals held that a licence did not permit distribution of the work in the form of videocassettes. The licence granted the licensees the right to use a musical work in a film, to exhibit the film in theatres and "by means of television". Distribution by television contemplated

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[99] Fred M. Greguras et al., "On-line Software Licensing", 1996, p2. Available from: http://www.batnet.com/oikoumene/olswlicense.html.
[100] 845 F2d 851 (CA9, 1988).

transmission via an intermediary in a form of television signals that were "ephemeral and beyond the viewers grasp". By contrast a more flexible approach is taken by the U.S. First Circuit Court of Appeals in SAPC, Inc v. Lotus Development Corp[101]. Here the dispute concerned the rights to a computer program called "Visicalc", and the assignment of those rights to the defendants. By section 2.1 of that agreement all the rights relating to Visicalc were to be transferred to the defendants. The court interpreted this as transferring to the defendants all the rights to Visicalc in their entirety, and not just the copyrights. This therefore included rights not in the contemplation of the parties at the time of transfer. Another way of dealing with new applications of old content is the implied licence; however, this doctrine is very restricted in terms of copyright law. For example, in

Saphena Computing Ltd v. Allied Collection Agencies Ltd[102], it was held that because the owner of the copyright in a computer program had supplied the source code of the software to the purchaser, the purchaser had an implied licence from the owner to copy and adapt the code for the purposes of his business. In cases where there are contracts between the parties, the general rule is that a licence will be implied only to the extent needed to give business efficacy to the contract[103].

New uses are discussed at length in section 2.11 on publishers' rights. The basic proposition that emanates from the SCRL case is that silence cannot be construed as consent. Equally the U.S. cases of National Geographic and Tasini discussed in that section shows that where publishers use technology to take copyright works out of their existing uses then this cannot qualify as a mere revision of the work. In Europe Germany has taken the lead on the issue of new uses. Section 31(4) of the Copyright Act 1965 (Germany) renders null and void those provisions in licence contracts that deal with future rights where the economic relevance of a particular method of exploitation is not foreseeable at the time of contracting. In the "Klimbim" case[104] the German Federal Supreme court held that a use is known where the interested public

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[101] 921 F2d 360 (CA1, 1990).
[102] [1995] F.S.R. 648.
[103] See note 63 above, p14.
[104] (Secondary Video Exploitation III, January 26 1995).

are aware of the technical elements of the technology and the present or future relevance of the technology. However, where there is specific reference to the technology in the contract then only the technological aspects of a new technology need to be in the public domain. The subsequent case of Pop Group A[105] concerned a publishers' agreement that permitted the recording, reproduction and distribution of the plaintiff's work on LP format and "other optical-acoustic methods". Following the unauthorised exploitation of their work on CD the plaintiff's sought injunctive relief since CD technology was unknown at the time of contracting. The trial court found in favour of the plaintiff and the Court of Appeal dismissed the appeal. On an appeal on points of law the German Supreme court allowing the appeal held that the possibility of sound recordings on CD was unknown in 1972 and was therefore not the subject of a licence. The Court of Appeal had assumed that the effect of s.31(4) applied in relation to the consent of a performer to the use of his performance. However, this view was wrong since the provisions of s.31(4) of the Act applied to the composer of music or the author of lyrics, but not to their performer. From this it is clear that in Germany neighbouring rights are not as protected as copyrights in terms of new uses.

5.12 Statutory Regulation of Licensing

There have been a number of attempts at regulating the licensing of software at both national and international level, the most ambitious legislation emanating from the United States; this has been geared towards online transactions. However, in the United States the regulation of licensing online has proved to be particularly controversial, and intense lobbying has resulted in legislation that is based on the desire of the content industry to harness the commercial potential of the Internet without providing sufficient consumer safeguards. This has resulted in over broad legislation adopted in a piece meal fashion with continued attempts to amend the more unpalatable provisions therein.

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[105] Case IZR 16/00 (10th October 2002).

5.13 The National Information Infrastructure

The NII was launched by Al Gore during the 1991 presidential campaign, as a means of restoring American technological dominance over the rest of the world. The project envisaged development not only of interactive services such as those provided over the internet, but also services which did not yet exist. To this end the Clinton Administration formed the NII Task Force in 1993, in order to co-ordinate the efforts of the various Federal agencies in the implementation of policies to enable the development of new technological applications. The first report of the NIITF defined Information Infrastructure as "a seamless web of communication networks, computers, databases, and consumer electronics that will put vast amounts of information at users' fingertips". This emphasises the American concentration on network infrastructure that may be contrasted with the European concentration on societal factors[106].

In July 1994 the NIITF Working group issued its 'Green Paper', and in September 1995 it issued its 'White Paper', which tackled the important problem of authors/publishers loss of control over their work in digital environments, and the threat that this poses to their incentive to create. The analysis of the White Paper tends is particularly partisan in its emphasis on the rights of copyright owners, and its tendency to elevate form over substance. Essentially the report affords copyright owners more rights than they could attain in relation to analogue media. This includes the ability to control every usage, and to refuse access, amounting to a legitimisation and extension of rights afforded to them by trusted systems. This maximises copyright protection for works flowing through the NII while affording the public with inadequate access to those works. In terms of licensing the 'White Paper'[107] makes it clear that licences do not convert non-infringing uses into infringements, but also

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[106] Michel Catinat, "The National Information Infrastructure" Initiative in the United States-Policy or Non-Policy? Part One", [1998] C.T.L.R. 1998, Issue 3, p71.

[107] Information Infrastructure Task Force, "Intellectual Property and the National Information Infrastructure: The Report of the Working Group on Intellectual Property Rights" (September 1995), p50.

states that such uses may violate the licence. The report encourages copyright owners to offer schools and libraries "special, institutional licences", however, this is without any obligation on them to do so[108].

Most information products distributed on the Internet may be described as, or include "software"; however, there is considerable disagreement as to the precise meaning of the term. On a broad interpretation, software could be taken to refer to virtually any information stored in digital format. Object code programs stored on magnetic disks or tape is always referred to as "software", but the term can also include the physical documentation accompanying a computer program. Object code stored on integrated circuits is sometimes called "firmware" because of the semi-permanent nature of storage. The legal protection afforded to computer software is equally ambivalent since copyright must strike a balance between protecting the rights of the copyright owner and those of the consumer. While certain elements of software, such as original written text are clearly protected, other elements such as the GUI and the program command structure may not obtain protection.

Even the unprotected elements of a computer program may be protected under the terms of a licence agreement. However, where the subject matter of a licence cannot be precisely defined, the existence of a licence for which money has been paid may weigh against the licensor in subsequent legal proceedings. In Apple Computer, Inc. v. Microsoft corp[109] the U.S. Ninth Circuit Court of Appeals upheld the decision of the court below in a case involving an action for copyright infringement of a GUI and the breach of the underlying sub-licence. The case involved the sub-licence of software from which Microsoft derived the Windows desk-top interface. The plaintiffs claim was that contrary to the terms of its sub-licence. Microsoft developed the Windows interface in a form which was 'substantially similar' to Apples' works. The test used by the court, first, assessed the extent to which the work was protected under copyright law, secondly, the court attempted an over all evaluation of the 'similarity of expression'. In the Windows desk-top the idea and its expression are

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[108] See note 63 above, p147.

substantially merged, the court therefore applied the lower standard of 'virtual identity'. In this way the court added a third test in assessing which standard to apply.

According to the U.S. case of Computer Associates Int'l v. Altai Inc[110], where the idea and expression of a computer program are merged the abstraction/filtration/comparison test filters out certain program elements when considering liability for infringement[111]. These include mechanical specifications, compatibility requirements, design standards, industry demands, and programming practices. This places software producers in a very weak position, especially where program features become an industry standard. In the subsequent decision of Lotus Development Corp. v. Borland Int'l[112] the Altai test was thought to be misleading in its emphasis on the expressiveness of the menu command hierarchy. The question was rather one of whether the whole menu command hierarchy was copyrightable at all. This steady weakening of the non-literal elements of computer programs has resulted in the computer industries increased reliance on licensing.

5.14 UNCITRAL Model Law on Electronic Commerce

Since the early 1990's the United Nations Commission on International Trade Law (UNCITRAL) has been of the view that diverse national laws were an inappropriate means of regulating international trade carried on over telecommunications networks. This led to the adoption of the UNCITRAL Model Law on Electronic Commerce in 1996 as a means of enhancing state legislation concerning paperless communication and information storage[113]. The Model law gives no definition of "electronic commerce", but instead relies on a broad definition of "electronic data interchange"[114]. The Model law consists of two parts; the fist part concerns general

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[109] 94 CDOS 7160 (9th Cir. 1994).
[110] 982 F.2d 693 (2d Cir. 1992).
[111] See Id. at 708.
[112] F.3d 807 (1st Cir. 1996).
[113] Guide to Enactment of the UNCITRAL Model Law on Electronic Commerce, 1996, EDI Law Review, 4(2), p147.
[114] ibid., p114.

electronic commerce, whereas the second part concerns electronic commerce in specific areas, mainly carriage of goods[115].

Schmitthoff provides an interesting analogy between the reasons behind the demise of the lex mercatoria and the forces, which have led to the development of laws on electronic commerce. In the middle ages the rules of mercantile custom were developed as a speedy way of resolving disputes. However, when European society began to evolve from its feudal base into an industrial-capitalist society where large numbers of people became engaged in trade, this model was no longer appropriate since it was predicated upon the activities of a small number of professionals operating mainly at a local level[116]. Subsequently this led to the development of the law of contract, described by Goode as 'the foundation on which commercial law rests'[117]. Similarly the law of contract law is now evolving into something new and more precisely defined because of the problems involved in defining the parameters of transactions performed over electronic media. The legal problems are the same; however, the depth of analysis is much greater[118]. As with the old law the questions to be addressed include the nature of an offer; what constitutes acceptance; how is the existence of an electronic contract to be proven; and what is justiciable in terms of the enforcement of electronic contracts?[119]

5.15 Article 2B of the U.C.C.

The Uniform Commercial Code is perhaps the most successful attempt at harmonising United States law. The stated aims of the Code are: (a) to simplify, clarify and modernise the law governing commercial transactions; (b) to permit the continued expansion of commercial practices through custom, usage and agreement of the parties; and (c) to make uniform the law among the various jurisdictions. Article 2B

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[115] ibid. p115.
[116] Assafa Endeshaw, "The Proper Law for Electronic Commerce", I. & C.T.L., vol. 7(1), 1998, 7(1), p10.
[117] ibid., p6.
[118] Comments of Jan Kalbheim at University of Strathclyde Law School on 2 September, 1999.
[119] See note 113 above, p8.

of the U.C.C. was proposed as a means of promoting electronic commerce, and differs from Article 2A insofar as it deals primarily with "computer information transactions". In the July 1, 1997 draft of Article 2B, this would include computer software, databases, CD-ROM encyclopaedias, multimedia products, and interactive computer services. Article 2B also differs from Article 2A in that it is formed around the concept of the "licence" as opposed to the sale of copies, the predominant prototype used for transactions involving traditional printed media. One of the more controversial aspects of Article 2B, as originally drafted, was that it sought to limit the liability of the seller by validating all contracts, except those which were unconscionable. Thus the sellers' contract would be binding except when the terms of the contract were found to be shockingly oppressive.

U.C.C. Article 2B went through many drafts, but early in 1999 it died and was resurrected as the Uniform Computer Information Transactions Act (UCITA), created under the auspices of the National Council of Commissioners on Uniform State Laws (NCCUSL). The Act is intended to harmonise state laws regarding computer information transactions. UCITA applies to transactions involving computer software, interactive multimedia products, computer data, databases, the Internet and online information. The Act is intended to clarify the law relating to computer transactions to facilitate electronic commerce and to unify the law among the various U.S. jurisdictions. UCITA is governed by five key paradigms, namely; (1) transactions as licences of computer transactions rather than a sale of goods; (2) small companies as the base unit of entrepreneurial activities in the field of computer transactions; (3) the preservation of free speech; (4) the preservation of the freedom to contract; and (5) the need to establish a legal framework capable of supporting electronic commerce on the Internet. In terms of electronic contracting UCITA attempts to adapt common law notions of assent to electronic contexts, under s.112 a party is bound to the terms of a contract if that party is aware that its actions would be treated as assent in the context of a particular transaction. This is subject to a right to review the terms of the contract prior to assent. Further, s.206 of UCITA validates contracts created by electronic

agents except where there is a mistake or fraud[120].

UCITA handles problems relating to mixed transactions by limiting its scope to "computer information transactions". Under s.103 of UCITA this includes information embedded in a computer or computer peripheral; where this is not the case UCITA only applies if the provision of computer information is a "material purpose" of the transaction. A "computer information transaction" is defined as "an agreement a primary purpose of which is to require a party to create, modify, transfer, or licence computer information or informational rights in computer information". This definition is written in terms of licence as opposed to sale and effectively puts pay to the so-called "first sale" doctrine. Section 107 of UCITA gives electronic records and authentications legal recognition in terms of enforcement without requiring that they be generated, stored sent or received, or processed.

The most significant part of UCITA is s.211 that deals with mass-market licences; such licences are dealt with in terms of transactions. What is meant by the term "mass-market" transactions is determined by (1) the nature of the market in which the transaction takes place; (2) the terms of the transaction; and (3) the type of information involved. In this context "mass-market" refers to transactions with the general public, including consumers[121]. This section makes shrink-wrap licences generally enforceable where assent has been given, however, a term will not form part of the contract if there is no opportunity to review the contract, it is unconscionable, pre-empted by Federal law, or is in conflict with the contracts express terms. Under s.402 of UCITA an express warranty can be made in relation to computer information transactions by advertising or any other affirmation of promise by the licensor to the licensee, however, mere statements of opinion create no warranty. Where a warranty is found to exist s.406(a) prevents it being excluded by a disclaimer. Further, under s.403, where there is no disclaimer, a warranty as to fitness for the purpose intended may be implied. Under s.405 this even extends to system integration.

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[120] James S. Huggins, "UCITA: Uniform Computer Information Transactions Act", 1999, p12. Available from: http://www.jamesshuggins.com/h/tek1/ucita.htm.
[121] NCCUSL, "Draft Uniform Computer Information Transactions Act", July 23-30, 1999, p44.

UCITA is intended to focus primarily on computer industries, however, given the almost universal impact of digital technology, its effects will be felt by data processing services, libraries, publishers, and online database providers. As with its predecessor UCITA uses licensing to assert control over digital property, and has been strongly criticised for its restrictive approach to fair use, and for its tendency to favour information vendors rather than the public. Many commentators are of the view that UCITA is premature because existing common law copyright principles are capable of dealing with the problems created by digitisation. Nevertheless, UCITA has been sent for approval by all 50 states. However, by 2002 UCITA had been adopted by only two states, and at least four states have adopted anti-UCITA laws preventing another state from imposing the law on their residents. This is especially unfortunate given renewed attempts to regulate Internet commerce. UCITA is a missed opportunity to control the worst practices of the computer industry at a time of unparalleled upheaval. As it stands UCITA is liable to fossilise practices within the computer industry, and maintain unfair practices. For example UCITA validates post-transaction disclosure of terms, which is totally unnecessary for online transactions, UCITA thereby discourages good online disclosure practices[122].

Licensing gives software producers better downstream control of software products, and by effecting enforcement of click-wrap, and shrink-wrap licences UCITA gives the computer industry a stranglehold on the use of information. Public interest considerations have always been a fundamental part of copyright law, and by not giving sufficient weight to these considerations UCITA discourages innovation and the dissemination of information. This problem is exacerbated by UCITA's enforcement of forum clauses, except where they are unreasonable and unjust, thus placing the onus of proof on the consumer. Having said this UCITA also gives a number of new rights to consumers, such as the right to a cost free refund under s.809

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[122] Jean Braucher, "Why UCITA like UCC Article 2B, is Premature and Unsound", 1999, p2. Available from: http://www.2bguide.com/docs/0499jb.html.

when terms prove to be unacceptable, and the prohibition in s.813 of so called "drop dead devices"[123].

5.16 UETA

The Uniform Electronic Transactions Act 1999 (UETA) was produced by the NCCUSL in tandem with UCITA which it supplements. The Act applies to transactions related electronic signatures and records although it does not require their creation, generation or storage. Section 7 of UETA gives digital signatures legal recognition while s.8 requires that electronic records must be capable of retention by the recipient. Under s.12 of UETA where there is a legal requirement that records be retained, that requirement is satisfied so long as the record is an accurate reflection of the information contained in the record, and the record can be referenced at a later date. The first requirement does not apply to transactions just involving the communication and receipt of information, and this requirement may further be satisfied by using the services of another. In terms of attribution s.9 of UETA requires that an electronic signature is the act of the originator, which may be determined by any of the circumstances surrounding the transaction. Where a contract is formed by an electronic agent, s.14 of UETA makes the contract binding even where the parties are not aware of the terms of agreement. Where another individual is involved they are bound by the contract so long as they have the option to refuse performance.

5.17 Open Source Licences

Richard Stallman founded the 'Open Source' movement in the early 1980's. This resulted largely from Stallman's opposition to licence terms imposed on proprietary software which he believes inhibits creativity and creates inefficiency by forcing programmers to reinvent the wheel (i.e. write the same code to do the same things again and again). The terms of proprietary licences usually prohibit both reverse engineering and restrict the creation of derivative works. By keeping the source code

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[123] Ray Nimmer, "Correcting Some Myths About UCITA", 1999, p2. Available from:

secret these licences arguably inhibit the creation of good quality software. In order to negate these problems Stallman developed 'GNU' software, GNU is a recursive acronym for GNU's not Unix. More significantly Stallman also developed a special General Public Licence (GPL)[124]. The fundamental principle of the GPL is that software should be 'free'. In this context free does not mean gratis but rather 'free' in the libertarian sense[125]. The two key differences between open source software and proprietary software are first, the source code is provided or available with the licence, secondly the licence actually encourages the creation of derivative works. These works are communicated back to the developer in order to accelerate the product development cycle. This feedback loop speeds up fault/virus detection and also allows these problems to be fixed more quickly[126]. The GPL is based on nine principles that are as follows:

1. The sale or free distribution of software must not be restricted by the licence;
2. Both the source code and object code must be accessible i.e. either distributed with the licence or available on reasonable terms;
3. The making of modifications or derivative works must be allowable and the resulting code must be distributed on the same terms as the original licence;
4. The integrity of the authors source code may be maintained by restricting redistribution to the original code plus patch files, however, redistribution of software built from the modified source code must be explicitly allowable;
5. The licence must not discriminate against any individual or group of persons;
6. The licence may not discriminate against a particular field of endeavour i.e. business or genetic research;
7. The rights associated with the program must apply to every person to whom the program is distributed without requiring the execution of a separate licence;
8. The rights attaching to the program must not depend on it being distributed as part of a bundle of software;

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http://www.2bguide.com/docs/rne.html.

[124] Hilary E Pearson, "OPEN SOURCE LICENCES: Open Source – The Death Of Proprietary Systems?", C.L.S.R. 2000, 16(3), p151.

[125] ibid., p153.

[126] Shawn W. Potter, "Opening Up to Open Source", 6 RICH J.L. & TECH. 24 (Spring 2000), p3.

9. The licence must not place restrictions on other software distributed together with the licensed software.

The above rules are enforceable as part of the licence contract and this severely limits the rights of the copyright owner. The intersection between contract law and copyright law is not well understood; while licences are very flexible legal devices, their ability to keep up with developments in technology is limited. This is clearly illustrated by the recent U.S. case of Sun Microsystems, Inc. v. Microsoft corp[127] a case in which the plaintiffs filed a suit alleging copyright infringement and unfair competition in relation to open source software. The plaintiffs were the developers of Java technology that has become a de facto standard for object-oriented programming. The defendants developed what they believed to be significant improvements to this technology and were granted a licence to use the plaintiff's version of Java. The open source licence was a non-exclusive licence to "make, access, use, copy, view, display, modify, adapt, and create derivative works of the technology in source code form" and to "make, use, import, reproduce, licence, rent lease, offer to sell, sell or otherwise distribute to end users as part of a product...the technology and derivative works thereof in binary form". The licence also made it clear that the defendant's version of Java must be compatible with the plaintiff's version. The suit alleged that the defendants were creating and distributing an enhanced version of Java that was not compatible with the plaintiff's version. Part of the difficulty with this case is that copyright owners who grant non-exclusive licences to use their copyrighted material can only sue for infringement once the scope of the licence is exceeded since they waive their rights to sue the licensee for copyright infringement which falls within the scope of the agreement.

The district court was of the view that the plaintiffs licence agreement might arguably have been violated in two ways, but did not expand upon why this was a copyright infringement case rather than a contractual interpretation dispute. Firstly, the defendants had added new features to the Java compiler causing it to fail the plaintiff's

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[127] Case no.CV-96-20884 – RMW (D.C. Cir. 1999).

compatibility test. Secondly, by producing software, this was incompatible with the "Java Native Interface". The district court concluded that a presumption of irreparable harm was raised in the plaintiff's favour because the action could properly be regarded as an action for copyright infringement. The minimum requirements for granting an injunction were therefore met. However, the Ninth Circuit Court of Appeals vacated the injunction granted by the court below. The grounds for this were that the court should not have invoked the presumption of irreparable harm, applicable to copyright infringement but not contract claims, before determining whether the plaintiff's compatibility requirements limited the scope of the licence rather than independent contractual covenants. On this basis the court vacated the preliminary injunction and remanded the case for further proceedings. This case clearly demonstrates the weakness of the "free distribution" clauses in open source licences.

A similar problem is encountered in enforcing the scope provisions of open source licences even though U.S. case law supports such a proposition. In Tingley Systems, Inc. v. Norse Systems, Inc[128] the Second Circuit Court of Appeals upheld the judge's instruction to the jury relating to whether the defendant caused or contributed to the violation of the plaintiff's copyright. This determination could not be made unless the jury found that the defendants used the plaintiff's software in a manner that exceeded the scope of the plaintiff's licence, and infringed the plaintiff's copyright. In that case the plaintiffs were a software company, which was in direct competition with the defendants and had licensed software to them. While bidding for a contract for a large computer upgrade the defendant made copies of the plaintiff's software in order to show that their software was superior. As a consequence of this the plaintiffs lost the contract to the defendants and sued them for contributory infringement and tortuous interference. The jury was directed to the effect that infringement would only be proven if the plaintiffs showed that the licence agreement between the parties limited use of the plaintiff's software to the ultimate machines. Since neither the actual agreement nor any part of it was introduced into evidence it was within reason for

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[128] 49 F.3d 93, 98 (2d Cir. 1995).

them to conclude that the plaintiffs had failed to prove that the defendants had breached the agreement.

Finally, one of the most significant problems in the enforcement of the terms of open source licences is the position of third parties which are arguably not bound by the licence. A good example of this sort of scenario is the U.S. case of Advanced Computer Services of Michigan, Inc. v. MAI Systems corp[129]. In that case the plaintiffs were the manufacturers of computer systems and the owners of the software, which ran on these systems. The defendant was a company that specialised in maintaining and servicing a variety of computer systems, including those manufactured by the plaintiffs. During the servicing of the plaintiff's computer systems it was necessary to switch on the machines thereby making temporary copies of the plaintiff's software. The plaintiffs offered customers maintenance contracts, but at a high price, the respondents operated as independent contractors and undercut the plaintiffs. The plaintiffs sued the defendants for contributory infringement claiming that they were breaching their customer's software licences. This claim was affirmed by the district court because while the licensees of the software are permitted access to the software for maintenance purposes under s.117 of the Copyright Act 1976 (U.S.A.) this exemption only applies to the owners of the software. Furthermore, the plaintiff's licence specifically forbade licensees from giving third parties access to the software. In terms of U.K. law the risks are just as great, even given that fair dealing is a much narrower concept than fair use. Third parties to contracts can be bound; however, the problem of contractual interpretation remains. From the above cases it would seem that although quasi-copyright law is not a good way of enforcing the terms of open source licences, they are not enforceable against third parties under U.S. law. More significantly, however, it is clear that great care needs to be taken in drafting the terms of open source licences. This problem is most acute in terms of the scope of the licence, who it binds, and what they can or cannot do with the software, especially in terms of resale, and reuse i.e. creating derivatives and conforming to de facto standards.

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[129] 845 F.Supp. 356 (E.D. Va. 1994).

5.18 Shareware

Shareware is a method of marketing software that allows consumers to try software before they buy it. This works by giving consumers a trial period in which to test software. After this period elapses, consumers must accept or reject the software. If they accept a registration fee is payable to the author of the software. This method may rely simply on the honesty of the consumer, but in more recent years it has become possible to time lock software so that it stops working after the elapse of the trial period, unless registration is obtained. In Trumpet Software Pty Ltd v. OzEmail Pty Ltd[130] the plaintiff's developed Internet communications software known as Trumpet Winsock 2.0B. The defendants entered into discussions with the plaintiffs, an ISP, regarding the possibility of distribution of copies of the software on the cover of Australian Personal Computer. The results of these negotiations were inconclusive. Despite their failure to obtain permission to distribute the software the defendants went ahead anyway. They distributed the software before it could be time locked, and also changed and deleted files in the software, which affected its registration. At the subsequent trial the plaintiffs argued that they revoked any licence that the defendants had, and that even if this were not so, the defendants had breached the conditions of the licence. Further, the plaintiffs argued that the defendants misrepresented the nature of their relationship with them to increase the number of subscribers to the OzEmail network and thereby incurred financial loss to the plaintiffs.

In the subsequent trial before the Federal Court of Australia Heerey J. held that the defendants reproduced, authorised or caused the reproduction of a substantial part of the program which was a literary work. This was done by copying the program onto their computer, reproducing the program on diskette or authorising this, and by distributing copies of the program (or authorising this) in Australian Personal Computer and Australian PC World. The main purpose of shareware was to facilitate evaluation by users. Whereas the defendants sought to give away the shareware in

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[130] (1996) 34 I.P.R. 481.

order to promote its own services. This was not evaluation for the defendant's own purposes or their users' purposes[131]. Even if the licence was not revoked, the defendants had breached its terms, although the judge could not see how a condition stipulating that no commercial gain should be made from distribution of software could be imposed[132]. Further, the judge held in obiter that the grant of a copyright licence was the provision of a service since copyright is a form of personal property[133].

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[131] See Id. at p16.
[132] See Id. at p18.
[133] See Id. at p20.

5.19 Licensure of Intranets and Extranets

Intranets while providing great benefits for their users (i.e. secure locally accessible tailored information resources) create some thorny licensing problems for network administrators. Intranets naturally implicate most of the rights granted under copyright law by a select user group, the nature and extent of copying will therefore tend to reflect the information needs of these users. A number of access options have been developed to overcome such difficulties, however, the flexibility built into these solutions is usually reflected in their price. The main types of Intranet licensing include pay-as-you-go, licensing by seat, by number of employees, and by number of sites. Contractual arrangements allow variations on these licences including number of simultaneous users, packages of accesses, and enterprise-wide access[134]. Licensing by seat (i.e. by number of computer terminals) is probably the most common of these options. It is administratively complex, but offers advantages in terms of metering and accounting arrangements[135]. Licensing by number of employees often does not give a true reflection of usage, and licensing by site is often not really viable for highly distributed organisations since costs may be linked to a sites proximity to a central node. Simultaneous user licences are a clean and predictable solution, but if the peak load is too high it may be an expensive and slow option. Purchasing packages of access will give volume discounts; however, under-utilisation of accesses will be wasteful and expensive[136]. Enterprise-wide licences involve the purchase of blocks of data access for the whole organisation for fixed periods. This has cost advantages where usage is high, and permits tailoring to a particular organisation[137]. The problems encountered in the licensing of Extranets are similar to those for Intranets; however, the problems are exacerbated because extranets involve the sharing of resources between organisations and are therefore administratively more complex. Administratively complex licensing options such as pay-as-you-go and licensing by seat are not really viable for an extranet. Licensing for extranets requires

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[134] Robert Schwartzwalder, 'Providing External Information Through Intranets', DATABASE, June/July, 1999, p52.
[135] ibid., p53.
[136] ibid., p54.
[137] ibid., p55.

administratively efficient forms of licensing such as licensing by simultaneous users, and packages of access which measure actual use rather than measuring some notional indicator such as number of employees[138].

5.20 Intelligent Agents

Intelligent agents are intelligent systems, which at least in theory understand what you want and then deliver it to you. Ideally they can predict what you want before you even know you want it. This is achieved by the evaluation of the consumers stated likes and preferences. Such agents can be very useful, but difficulties can arise where agents start taking control of a consumer's decision behind their backs. This problem will become particularly acute where intelligent systems start mimicking human beings i.e. in terms of appearance, voice, and styles of interaction. The two main problems which present themselves in terms of forming contracts are first, it is not possible to infer intentions from actions, and secondly, these systems are fundamentally complex, fine so long as they work, but when they go wrong, the effects can be disastrous.

While the legal status of click-wrap and shrink-wrap licences is uncertain, the legal status of contracts made by intelligent agents is even more uncertain. This is significant because intelligent agents capable of searching through multiple databases looking for particular web pages, and so called "personal shopping agents" have also been developed. The latter in particular is capable of contracting to buy certain licensed products such as CD-Is on behalf of the consumer. This then raises questions as to the validity of contracts so formed. At the moment agents have only a limited ability to understand the terms of click-wrap agreements, so the approach taken by many of the producers of agent software is to accept click-wrap agreements without querying their terms and conditions. This may be representative of the way many consumers behave; however, it is perhaps an over-extension of the freedom to contract.

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[138] See note 132 above, p71.

In principle the fact that a contract is entered into using electronic means should have no impact upon its legal validity, however, in many countries there is a requirement that contracts be concluded in writing. This inevitably sets up barriers to electronic commerce, or at least creates the need for a technological solution. Under English and Scots law the requirement of writing is restricted to certain classes of contract, such as those involved in the formation of a trust, or the sale of land. However, a number of consumer protection laws in the UK and elsewhere require contracts to be in writing. The potential regulatory problem created by the requirement for writing in the context of electronic commerce was recently exposed in the case of Victor Chandler International v. Commissioners of Customs and Excise[139]. In that case Customs and Excise sought to prosecute a company running an Internet gambling business from outside of the United Kingdom. However, the court held that broadcasting advertisements on tele-text did not contravene s.9(1)(b) of the Gaming Duties Act 1981 since such broadcasts failed to constitute the issue, circulation or distribution of "an advertisement or other document". Under the UN Model Law of 1996 writing is defined in the form of a "data message", however, the definition they devised has been criticised for forcing the retention of a "hard copy". In 1997 the Legislative Working Party of the Society for Computers and Law suggested that writing should be defined as "any recording of a representation of a representation of words symbols or numbers." This definition is recursive and allows for a record to be kept by either the sender or the receiver[140]. While this approach is flexible it also creates the possibility of an evidential nightmare since it legitimates a record of a record of a record, at either end. So where there are multiple records retained which is valid; all of them, none of them, or just certain ones? Given the easily corruptible nature of digital data this could be quite a problem.

5.21 Click-wrap and Browse-wrap Agreements

Unlike shrink-wrap agreements, click-wrap agreements are formed entirely over the Internet. They normally take the form of licence terms prominently displayed on the

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[139] (Times 17 August, 1999).

vendor's website. This is usually so constructed that the purchaser is forced to view the terms of the licence before purchasing goods, and must agree to those terms by clicking on a button saying "I Agree", at the time of, or before physical delivery of the goods. The purchaser therefore has no opportunity to negotiate the terms of sale; this may in itself be regarded as unconscionable. Further, there may be doubt as to whether a valid contract has been formed, exactly what terms are incorporated, or as to whether the purchasers assent has been obtained, since he has not signed any contract but has only clicked on a mouse. Click-wrap agreements are very similar in form to shrink-wrap agreements from whence their name is derived; however, shrink-wrap agreements while theoretically valid, have only been upheld in a minority of cases[141]. Browse-wrap agreements are more ambiguous than click-wrap agreements since they lack affirmative consent. Usually the user's attention is drawn to a link that links to a licence document, and use of the goods or services provided is deemed to constitute consent. The case law concerning the enforceability of browse-wrap and click-wrap agreements is sparse, and there are as yet no appellate decisions that consider this issue directly. The first case concerning the enforcement of such agreements is the U.S. case Hotmail, Inc v. Van$ Money Pie Inc, et al[142]. In that case the defendants entered into a contract in the way described above. Hotmail is a provider of email services, and the terms of this agreement prohibited the distribution of unsolicited commercial email or spam. The defendants subsequently sent spam over the Hotmail network in contravention of their licence. In addition to this the defendant's disguised their emails as that of the plaintiff, and following numerous complaints creating enough traffic to disrupt Hotmail services injunctive relief was sought. In the interim proceedings that followed the plaintiffs alleged that this conduct constituted trademark infringement, unfair competition, breach of their terms of service, and violation of the Computer Fraud and Abuse Act.

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[140] See note 73 above, p139.
[141] Martin H. Samson, "Click-Wrap Agreement Held Enforceable", New York Law Journal, June 30, 1998, p1.
[142] Case no. C98-20064 (N.D. Cal., April 20, 1998).

At the hearing before the California district court the judge granted the plaintiff's motion for an injunction, holding that the defendant's conduct was likely to cause the public to confuse their emails with those of the plaintiff and thereby cause damage to the plaintiff's reputation. The plaintiff was therefore likely to succeed in its claims for false designation of origin, and unfair competition. The defendant's conduct was likely to violate the Computer Fraud and Abuse Act since this constituted trespass on a chattel. Furthermore, it was held that "the evidence supports a finding that the plaintiff will likely prevail on its breach of contract claim." Unfortunately this ruling is only of limited guidance because it only involves interim proceedings not specifically addressed to the enforceability of click-wrap agreements. However, for the court to hold as it did, the judge had to recognise the defendant's as parties to an enforceable agreement, thereby indicating his willingness to uphold the validity of a click-wrap agreement.

In the earlier decision of Compuserve, Inc v. Patterson[143] an attorney in Houston entered into a shareware Registration Agreement (SRA) with Compuserve. Patterson consented to the agreement by typing the word "Agree" at various places in an online document. In their decision the Ohio court stated that he had "entered into a written contract with Compuserve" and that his "assent to the SRA was first manifested by his computer. In Texas". While this decision suggests that contracts formed online are enforceable, the proof of consent is much stronger than a mere click of a mouse.

The final case in this line of authority is the U.S. case of M.A. Mortenson Co., Inc v. Timberline Software Corp[144], here the appellants sought to upgrade their existing software using a specialised package used in the preparation of construction bids licensed from the respondents via Software Data Systems ("SDS"). The software was supplied in sealed envelopes which had a licence agreement printed on the outside, this contained terms limiting Timberlines liability for defects in the software, the licence was also displayed on the screen of the users computer, and had to be accepted before the user could proceed. The software had an obscure latent bug, and

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[143] Case no. C98-20064 (N.D. Cal., April 20, 1998).

was used by the appellants to submit a bid. Subsequently, it was found that the bid was two million dollars below what it should have been, on investigation it was discovered that the respondents, who had concluded that it was not of major significance, knew the bug existed.

The plaintiffs sued the defendants in respect of breach of express and implied warranties, arguing that the licence was unenforceable since its contract with timberline was complete on execution of the purchase order. In the district court it was held that the purchase order was not germane to the contractual relationship and therefore was not an integrated contract. Further, the licence agreement itself was conspicuous as opposed to being unconscionable. On appeal it was held that the break-the-seal licence was an enforceable part of the contract between the parties. Furthermore, it was argued that "pay now, terms latter" contracts were common commercial transactions, and the plaintiff had affirmed his acceptance of the licence terms by installing and using the software rather than seeking a refund. Also there was a pre-existing course of dealing between the parties, and the appellant's conduct was such as to constitute consent. Even on the most favourable interpretation the facts did not support the existence of an integrated contract. On Appeal to the Washington Supreme Court the above decision was affirmed[145] on the grounds that the incorporation of the contractual documents in the shrink-wrap was a finding of fact that the court was entitled to make based on the circumstances surrounding its formation. This was so even where some terms are left undetermined. Hence the court specifically approved the kind of layered contracts made in ProCD, Hill and Brower.

More recently in the U.S. case of Pollstar v. Gigamania Ltd[146] the district court for the Eastern District of California considered the validity of a browse-wrap licence. In that case the plaintiff operated a website providing free concert information, and alleged that the defendant by misappropriating this information for commercial use on their own site was guilty of common law misappropriation, breach of state

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[144] Case no.41304-0-I (Wash. App. Div. One Feb. 1, 1999).
[145] Case no.67796-4 (Wash Sup. Ct. May 4, 2000).
[146] 170 F.Supp.2d 974 (E.D. Cal. Oct 17, 2000).

competition law, and breach of the licence agreement referenced by their website. In denying the motion the court upheld the competition law claims based on the narrow exception for factual works created by National Basketball Ass'n v. Motorola, Inc[147]. However, the court had grave reservations with regard to the validity of the browse-wrap licence because the user was not immediately confronted with the licence, the link to it was not underlined and the licence itself was written in small grey text on a grey background. In the subsequent case of Specht et al v. Netscape Communications Corp[148] the U.S. district court for the southern district of New York considered the validity of an arbitration clause in a browse-wrap agreement. The case involved a website belonging to suppliers of free software used to improve the efficiency of the downloading process. The defendant's website invited users to click on a link to further information, which in turn leads to a web page containing a link to a licence agreement containing an arbitration clause. The sixth plaintiff owned a website that linked to the defendant's website in a way that allowed users to obtain software without having the opportunity to view the licence agreement. Four of the six plaintiffs obtained the defendant's software from a shareware website without viewing the licence agreement, and the remaining plaintiffs obtained this software by clicking on the download button in the defendant's website. The plaintiffs tried to enforce the defendant's browse-wrap agreement in order to prevent the defendant interfering with their privacy when downloading free software. The defendants in response sought a stay of proceedings and a motion to compel arbitration. In denying the motion the court considered that the applicable law regarding contract formation was state law, however, federal law applied in relation to the interpretation of the arbitration clause. The main purpose of clicking on the download button was to obtain a product, but there must be assent to the licence agreement before the court could consider the validity of a clause in the agreement. The court analogised the supply of shareware software to the supply of a free newspaper, which is available without any contractual exchange. Further, the court took the view that assent must be express, the language of the defendant's notice being so mild as to be a mere invitation. There was no pre-

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147 105 F.3d 841, 845 (2d Cir. 1997).
148 150 F. Supp.2d 585 (S.D.N.Y. 2001).

existing relationship between the plaintiff and the first defendant, and if the plaintiff's allegations were accepted this would render any notion of assent meaningless.

5.22 Conclusion

Licences are contractual instruments originally used for transactions in real property. They are essentially promises not to assert legal rights over property in exchange for money. Like a contract a licence is formed where there is an offer, the offer is accepted, and the parties intend to create binding relations. Offers can be to the world or to individuals and must be taken at their face value. In some circumstances the time of formation of contract may be critical, and with electronic media much may depend upon whether processing is instantaneous or deferred. Websites can combine both types of offer, and the question of which is involved in a particular transaction will depend on the wording of the offer and all the other circumstances surrounding the transaction. Under English common law there is no need for the parties to understand the terms of agreement, however, these terms must be brought to the attention of the party to be bound.

Furthermore, this must be done before or at the time of formation of contract, only if the terms of agreement are incorporated into the contract will they bind both parties. In relation to electronic goods/services much rides upon whether one is dealing with goods or services, and whether the parties involved are dealing as businesses or consumers. The UCTA applies primarily to consumer transactions and dealings in goods are better protected than those in services. Where a dispute arises over an exclusion clause and involves consumers it may be struck down under s.3 of UCTA for being unreasonable. UCTA has since been superseded by the Unfair Terms in Consumer Contract Regulations 1999.

There are a number of ways in which a party may indicate their consent to the terms of a licence, the most obvious being a signature. Consent is a particular problem where a party acts through an agent; this is particularly the case where the agent is not human. Electronic agents, for example, may be able to contract on behalf of their

owners. This can give rise to a generic rule that such contracts are binding, or conversely such contracts may be unenforceable. This situation could though become very problematic as electronic agents begin to replicate humans. Handwritten signatures are not possible in the online environment, for many transactions this may not matter, but for certain transactions, such as those involving land, physical signatures are a legal requirement.

The Electronic Communications Act 2000 and the Digital Signature Directive attempt to regulate the authentication of electronic contracts by creating a system of registration for cryptography support services. The Act gives electronic signatures the same legal status as physical signatures, and further prescribes minimum standards in relation to information to be provided to consumers and create certain exceptions to facilitate the technical functioning of the Internet i.e. caching. With regard to licensing little is said except that licences are not to interfere with the provisions of the legislation as regards the validity of electronic contracts.

Normally licensees must be able to see the terms of a contract before it can legally bind them, however, in relation to the distribution of computer software, a slightly different practice has evolved in relation to mass-market licences. So-called "shrink-wrap" licences allow vendors to place a notice on packages containing software that refers to the terms and conditions sealed inside. There has been considerable doubt as to the validity of such licences, however, some case law in the U.S.A. and the U.K. suggest that shrink-wrap licences are valid so long as the consumer is given a chance to reject the software. However, this analysis has been criticised as being too simplistic, as favouring the licensor over the licensee, and because it places the onus of cancelling the agreement on the licensee.

Similarly statutory schemes that regulate licensing have been criticised as being over broad and too favourable to the interests of the content industry. In particular the National Information Infrastructure White Paper in the U.S. concentrates on issues of network infrastructure, but with regard to intellectual property issues it allows right

owners to control every use of a work and to refuse access to it. Notably many of the White papers provisions have been given effect through the implementation of the WIPO Internet Treaties. By giving right owners more rights in relation digital works than they have over analogue works these Treaties have converted many uses of works that were previously non-infringing uses into infringing uses (i.e. those previously covered by copyright exceptions). While licences cannot in themselves do this, affected uses would violate the licence. Although the report does encourage the issue of special licences to schools and libraries, it places licensees under no obligation to do this. Another significant instrument in this area is the UNCITRAL Model Law concerning paperless communication. This was developed because it was felt that diffuse national laws were an inappropriate way of regulating international trade. The Model Law can be divided into two main sections, the first covers electronic commerce generally, the second concerns special areas of electronic commerce, mainly carriage of goods. What is evident from this instrument is that while the legal problems are the same as before (i.e. time of formation of contact, and offer and acceptance) the depth of analysis is much greater.

In the United States commercial transactions are to a large extent regulated by s.2 of the U.C.C., however, this is not designed to cover online transactions. Consequently a s.2B of the U.C.C. was proposed to simplify and modernise the law regarding commercial transactions, to allow continued expansion of custom and practice, and to harmonise the law in the various jurisdictions of the United States. The new section went through many drafts, died and was resurrected as UCITA. This is designed to regulate "computer information transactions" and was to govern such transactions as licences rather than sale of goods. UCITA validates shrink-wrap licences and recognises electronic authentication, it gives consumers a right of review the terms of a contract prior to assent, but pays scant regard to fair use considerations. It also validates contracts formed by electronic agents and has been criticised for being premature and for overtly favouring the computer/content industry over consumers. However, by 2002 UCITA had been adopted by only two states, and at least four states have adopted anti-UCITA laws preventing another state from imposing the law

on their residents. UETA was developed in tandem with UCITA in order to give near full recognition of digital signatures. Under its terms digital signatures are to have equal status with their analogue counterparts and the terms of electronic contracts are deemed binding even where the parties are not aware of the terms of agreement.

Although licences can be a flexible means of conducting commercial transactions, it is also arguable that some licence terms can inhibit creativity and create inefficiency because they allow right owners to enforce their rights following an initial sale. Open source software was developed as a response to this, and the key feature of this type of software is that it is not encumbered in this way. Open source licences were developed to enforce this freedom and to promote creativity. However, this does not always work in practice because licensors can sue for infringement only if the licence is a contract and it is breached. Further, licences do not usually bind third parties. Furthermore, licensors can only sue to the extent that the licence is exceeded, and if a licence is poorly drafted this leaves would-be infringers with a lot of scope. Another form of software designed to promote creativity is shareware, this allows potential licensee's to try software before they purchase it. However, this can also present problems if the licence is not tightly drafted. Again the licence will not bind third parties, and may not prevent unauthorised distribution, especially where any benefit derived by the infringer is indirect. Another problem with the enforcement of licences stems from the popularity of intranets and extranets; these are essentially private networks that cannot be accessed by the public. Consequently, when infringement occurs on such networks it is very hard to detect. Furthermore, extranets in particular can be administratively complex. Thus licensing of such networks requires a very sophisticated licensing package, and/or very complex metrics and billing software.

On a slightly different level licensing is inhibited by electronic agents since the contractual status of the agreements made by them is uncertain, especially in relation to click-wrap agreements. Electronic agents operate on the principle of agency. With regard to acceptance of click-wrap agreements it is simplest for agents to routinely accept click-wrap agreements; however, the validity of these contracts is questionable.

Some U.S. statutes, notably UCITA would automatically treat such agreements as legally binding. So far as the general validity of click-wrap agreements is concerned U.S. courts seem quite ready to accept their validity. However, the same courts find the legal validity of browse-wrap agreements questionable. The jurisprudence behind this is based on acceptance determined by the circumstances surrounding the contract. Critically assent in relation to browse-wrap agreements is generally less affirmative than for click-wrap agreements. Also these courts have adopted a layered approach to contract formation that favours acceptance based on the behaviour of the parties. The reasoning behind this treatment of browse-wrap agreements seems to be that without affirmative assent the court cannot go on to consider the terms of the licence since there may be no binding contract without it. With click-wrap agreements the user is forced to view the contractual document for clicking on a button saying "I Agree" so there is little question as to whether the terms are incorporated into the contract, also there is at least some physical manifestation of consent. Clearly there can still be acceptance of browse-wrap terms by continued use of the licensed product and the fairness of the licence terms are still relevant in determining whether the contract is void or voidable because those terms are unreasonable.

While the public policy exceptions to the law of copyright have been eroded the use of software licensing has expanded to become the foundation of electronic commerce. The laissez-faire attitude to the freedom to contract in Britain and America has made licensing an efficient way of protecting copyholders rights downstream from their source in a way that is just not possible under copyright law. Simultaneously the development of network infrastructure and the World Wide Web browser based virtual environment has evolved to a point where they can support multimedia transmissions needed to produce a virtual shopping environment, in which non-substitutable goods can be sold. These multimedia products can be protected using restrictive licences, which are not subject to the same kind of public policy considerations as copyright law.

Although licences are flexible enough to cope with the more unpredictable usage

patterns, which are prevalent in digital environments, they do not adapt well to unforeseen applications of content. Indeed the legal systems that created licensing, as we know it, also give rise to the kind of legal barriers, which are currently slowing the development of electronic commerce. Even if this were not the case the development of confidence in any new medium of trade takes time. This problem is most clearly manifested in terms of the development of new payment systems and the digital signature arrangements needed to provide transaction security. The most fundamental problem with digital licensing is its economic structure. Licensing seeks to extract maximum value from intellectual property by selling rights in the form of non-exclusive licences. This gives the licensee the right to do certain things with intellectual property, i.e. post it up on a website, rather than selling it outright. This creates a situation where licensees have to work out which rights they need and establish whom they are going to licence them from. This makes an already overburdened and complex right clearance system totally unmanageable; hence the need to introduce collective rights management systems. When we combine these problems with the inherent qualities of digital data that make copying easy and lead to compromise of security, then the problem becomes really acute. This is why so many firms engaged in electronic commerce use the Internet as a means of marketing support rather than a primary means of generating revenue. In Chapter 6 the general legal protection afforded to digitised copyright works distributed over the Internet is analysed. This includes consideration of statutory protection from both general-purpose copyright statutes, technology specific statutes, and protection based on international conventions.

CHAPTER 6

Legal Protection of Multimedia Products Distributed via the Internet

6.0 Introduction

The basic problem faced by copyright owners who place their work on the Internet is that the same technology that facilitates easy distribution of their work also allows pirates to transmit it around the world in an instant. Equally there is no guaranteed way to protect copyright works or to keep track of them. The Internet gives its users global reach, and the ability to download digital files in a variety of formats at little or no cost. Obtaining payment via the Internet is perceived as insecure or hazardous because the mechanisms for payment are not well established. When problems arise in relation to Internet transactions, most of the time laws applied to the Internet take effect after the event, and that's if you can find somebody to sue. Further, the borderless communication provided by the Internet makes international enforcement mechanisms essential. Even with the WIPO treaty individual countries may act as havens for piracy. Technical protection mechanisms are sometimes seen as a panacea to these problems; however, their shelf life may be very short given the number of individuals who specialise in breaking this kind of technology.

Technical protection of multimedia products delivered over the Internet can only work effectively in a harmonised legal environment. While legal problems are not the only reason for rampant piracy, good laws can help stem the tide of rising levels of piracy around the world. This chapter surveys some of the key laws in the E.U. and the U.S., which supposedly protect consumers and the products they purchase online. However, in the course of this investigation it will become abundantly clear that some of these instruments do not protect consumers or harmonise the legal environment, and in fact stifle the creation of new works that copyright is intended to promote.

While it is possible to discern trade oriented policy objectives in these laws it is also easy to see a clear and illogical bias towards the content industry. This bias is illogical because the content industry is not the most important economic player, and because the implementation of draconian laws without appropriate exceptions will ultimately promote piracy and inhibit free trade.

6.1 Cross-border trade in services in the European Union

Some Wide Area Networks such as the Internet are large enough to encompass several jurisdictions, and this combined with high-speed data transmission makes them an ideal medium for cross-border trade. However, since the emergence of the nation state, regulatory barriers have inhibited cross-border trade in goods and services. In the E.U. these barriers are seen as contrary to the purpose of the Community where they create an obstruction to free trade. Article 3(c) of the E.C. Treaty makes specific reference to this, in setting as an objective for the Community the establishment of "an internal market characterised by the abolition, as between the Member States, of obstacles to the free movement of goods, persons, services and capital". Article 28 of the Treaty of Rome further prohibits "quantitative restrictions on imports and all measures having equivalent effect". According to the ECJ in the Dassonville case (Case 8/74) Procurer du Roi v. Benoit and Gustave Dasonville[1] the meaning of "measures having equivalent effect" was interpreted fairly widely so as to include direct and indirect effects which actually hinder intra-Community trade, or have the potential to do so.

Member States have always found inter-state regulation of trade to be highly contentious and for this reason there is little Community legislation in this area, so the development of the law has been left to the ECJ. In the often-cited Cassis de Dijon case[2] it was established that, even where a regulatory barrier applies without making a distinction between domestic and imported goods, it may still fall within the scope of Article 28 if it is capable of restricting inter-state trade. This case applies to goods,

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[1] [1974] E.C.R. 837.

however, while there are many similarities between goods and services, cross-border transactions in goods involve physical objects crossing borders. Cross-border transactions in services involve the movement of intangibles across borders. Apart from being harder to regulate services are also hard to define. In the Alpine Investments case[3] the ECJ was asked to rule on the validity of a Dutch law prohibiting a marketing technique known as "cold calling". The plaintiff company was based in Holland wished to offer investment services and employed "cold calling" as part of its marketing strategy, but was prevented from doing this by a Dutch law which outlawed "cold calling". This was so even where services were being marketed in states where the practice was legal. According to A-G Jacobs whether the law in question fell within Article 49 would depend upon its impedance to the provision of intra-Community services. Only where this was substantial would a law fall within the scope of the Article. Since the plaintiff's ability to offer services to recipients in other Member States was severely curtailed by the Dutch rules, this amounted to a restriction on their right to provide services.

5.2 Jurisdiction

While the U.S. courts have tried to produce formulae for determining jurisdiction over websites, the English Court of Appeal has disavowed such formulae in favour of a case-by-case approach. In Euromarket Designs v. Peters[4] Jacobs J. states[5] that: "This inquiry involves asking who is actually likely to pay attention to the advertisements and to whom is the advertisement actually directed". Once this is determined the judge is concerned with what the notional surfer will understand upon accessing the site. In 1-800 Flowers[6] Buxton L.J. in obiter suggests "the essence of the problem is to fit the actual circumstances of Internet use into the substantive rules of law applying to the many and very different legal issues that the Internet affects". He goes on to state: "It is therefore unlikely, and is nowhere suggested, that there will be one

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[2] C-120/78 Rewe-Zentral-AG v. Bundesmonopolverwaltung fur Brantwein [1979] E.C.R. 649.
[3] C-384/93 Alpine Investments v. Minister van Financien [1995] E.C.R. I-1141.
[4] [2000] F.S.R. 288.
[5] See Id. at p293.
[6] [2001] All E.R. (D) 218.

uniform rule, specific to the Internet, that can be applied to all cases of internet use." However, in relation to "use" of works he requires an active step by the user going beyond the provision of facilities that bring the work into the jurisdiction, except where there is direct encouragement (i.e. advertising) which could give rise to jurisdiction on its own. Unfortunately in the recent case of Loutchansky v. Times Newspapers[7], a libel case not directly involving issues of jurisdiction, the English Court of Appeal extended what was said in 1-800 Flowers. The court held that even a tenuous association with England was sufficient for the assertion of jurisdiction there, even where there is a more appropriate forum.

In the European Union jurisdiction is determined primarily through the concept of establishment, a concept, which has renewed significance because of the growing importance of electronic commerce. More optimistic projections suggest that by the year 2003 global sales will involve over 300 million consumers and will contribute $3.2 trillion to the global economy[8]. Further, one of the key elements of any tax system is the ability to estimate liability to taxation. Where geographic boundaries are uncertain, as they are on the Internet this can be difficult. This situation is mitigated to some extent by the principle of comity, which requires that states should not apply their laws to persons in other states unless it is reasonable to do so[9].

The ECJ provided a definition of 'permanent establishment' in the Snafer case[10] where it stated: "The concept of branch, agency or other establishment implies a place of business which has the appearance of permanency, such as the extension of a parent body, has a management and is materially equipped to negotiate with third parties, so that the latter, although knowing that there will if necessary be a legal link with the parent body, the head office of which is abroad, do not have to deal directly with such parent body but may transact business at the place of business constituting the extension." Unfortunately many websites do not have the three fundamental elements

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[7] [2001] 4 All E.R. 115.
[8] James Catchpole, "The regulation of electronic commerce: a comparative analysis of the issues surrounding the principles of establishment", I.J.L & I.T. 2001, 9(1), p3.
[9] ibid., p5.
[10] C-33/78 [1978] E.C.R. 2183.

that appear in this definition. These being the use of fixed premises, the presence of staff, or the ability of those staff to take on certain transactions within a particular jurisdiction, to add to the confusion such premises or equipment as there are may not be owned by the person running the website[11].

6.3 The Electronic Commerce Directive

On 4 May 2000, the European Parliament and Council of the European Union adopted the Electronic CommerceDirective[12]. The Directive is intended to improve the operation of the internal market[13] by ensuring the free movement of information society services between Member States[14]. The Directive covers "any service normally provided for remuneration, at a distance, by electronic means"[15]. The Directive requires that transmissions should be provided `at the individual request of a recipent'[16], however, point-to-point services such as video-on-demand and interactive transmissions are included[17]. Where a dispute concerning a website does fall within the application of Article 3 of the Directive (i.e. not specifically exempted and not covered by the Brussels Convention) then applicable law will be that of the country in which the service provider engages in economic activity. This must take place in an establishment for an indefinite period regardless of the mere presence or use of any equipment used for Internet service provision[18]. While the country of origin rule set out in Article 3 of the Directive has no direct bearing on copyright[19], it has indirect impact upon electronic commerce in its failure to deal with jurisdiction in consumer

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[11] See note 8 above.
[12] Directive 2000/31 of 8 June 2000 on certain aspects of information society services, in particular electronic commerce, in the Internal Market, [2000] O.J.
L178/1.
[13] The main goal of the Internal Market is to ensure free movement of goods and services throughout the E.U. without obstruction by national legislation.
[14] See Article 1.
[15] Article 1(2) of Directive 98/34 laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on information society services, as amended by Directive 98/48 on the legal protection of services based on, or consisting of, conditional access.
[16] Geoffroy de Foestraets, `E-Commerce: a New European Framework', (2000) 28 J.I.B.L., p390.
[17] ibid., p390., note 8.
[18] ibid., p15.
[19] Cecilia Kye, "E-Commerce in the EU: Bringing Business and Consumers Aboard", (2001) 17 C.L.S.R., p26, note 6.

contract disputes[20]. Contracts (i.e. licences) are a commonly used method of legal protection for website content often used in combination with copyright and technical protection measures. Article 14 of the Directive exempts ISPs from liability in relation to illegal content transmitted through their networks, provided they have no knowledge or constructive knowledge of its existence, and they act expeditiously to remove such material or to disable access to it. Further, the Directive provides some measures to protect consumers, i.e. minimum standards for information provision and formation of contract, and is subject to review in 2003[21]. According to the OECD the concept of permanent establishment is poorly adapted to electronic commerce, to the point where bilateral and multilateral tax treaties may have to be amended or scrapped. However, in its Electronic Commerce Directive the E.U. determines establishment on a regional basis, thus negating many of the problems encountered in national legislation and double taxation treaties[22].

The applicable law of almost any jurisdiction can affect consumers who use the Internet because of its global reach. The most significant jurisdiction is the United States since most commercial traffic on the Internet still emanates from there. In the U.S. the Due Process Clause of the 14th Amendment regulates the courts jurisdiction, and the violation of that clause is prevented by the minimum contacts test. The nature of this relationship was defined in International Shoe Co. v. Washington[23] where it was stated: "Due process requires only that in order to subject a defendant to a judgement *in personam*, if he not be present within the territory of the forum, he must have certain minimum contacts with it such that the maintenance of the suit does not offend 'traditional notions of fair play and substantial justice' ". Hence the key factors involved in satisfying the test are *'traditional notions of fair play and substantial justice'*.

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[20] See Article 9(a).
[21] See note 19 above, p27.
[22] See note 8 above, p19.
[23] 326 U.S. 310 (1945).

6.4 Jurisdiction in the United States

In relation to the Internet the U.S. case Bensusan Restaurant Corp v King[24] is significant, here an action was brought against a jazz club called 'The Blue Note' located in Colombia, Missouri, in respect of its website which infringed the plaintiff's registered trade mark. The plaintiff was a famous jazz club 'The Blue Note' located in New York City and alleged violations of the Lanham Act, trademark dilution and unfair competition. The district court rejected their claims since they had failed to establish jurisdiction. The Court of Appeals affirmed this decision because of the narrow language of the New York statute upon which jurisdiction was based. This only asserted extraterritorial jurisdiction in respect of tortious acts to persons who expect or reasonably expect them to have consequences in that state and in circumstances where the defendant derives considerable revenues from interstate commerce. The plaintiff contended that the defendant engaged in interstate commerce in so far as they engaged artists from all over the country. This was rejected by the court, which asserted that the defendant would have to be physically present in New York if jurisdiction were to be established.

According to the Supreme Court in Hanson v. Denkla[25] for jurisdiction to be asserted under the minimum contacts test there must be an act: "by which the defendant purposefully avails itself of the privilege of conducting activities within the forum State. thus invoking the benefits and protection of its laws." For the purposes of asserting jurisdiction there are three types of website, namely, passive, intermediate and interactive websites. The first class of website merely distributes information and /or advertisements, the second class of website has some degree of interactivity, and the third class is used purposively to transact business over the Internet. Indeed in Zippo Manufacturing Company v. Zippo Dot Com, Inc.[26] the court observed that the mere fact that the defendant did not physically enter the forum state did not allow him

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[24] Case no. 1383 (CA 2nd Cir., 10 September 1997).
[25] 357 U.S. 235, (1958).
[26] 952 F.Supp. 1119 (W.D.Pa 1997).

to avoid liability. The case was subsequently followed by the Court of Appeals for British Columbia in Braintech, Inc. v. Kostiuk[27] where the plaintiffs, a company with research and development facilities in Texas obtained a default judgement against a resident of British Columbia in respect of allegedly defamatory statements. In determining whether a "real and substantial" connection existed the British Columbia Supreme Court established a sliding scale test to establish whether jurisdiction could be constitutionally exercised over a foreign website. This scale treats passive websites as giving rise to the lowest level of liability while placing fully interactive websites at the top end of the scale. In allowing the appeal the Supreme Court held that the website at issue was passive, thereby dismissing the action. However, more recently this doctrine has been abandoned by the Canadian courts in favour of an "effects based" test. Under this test a website will have a "real and substantial connection" with a Canadian province or territory where its business model targets customers in that province or territory. This principle was applied in the case of Pro-C Ltd. v. Computer City, Inc[28] where jurisdiction was asserted over a passive website owned by a company in Delaware, which contained an infringing trademark.

The most recent case on U.S. jurisdiction to date is Yahoo, Inc. v. La Ligue Contre Le Racisme Et L'Antisemitisme et al[29] in which the defendants sought to enforce an injunction made by a French court against a company established in California. The defendant is an ISP operating in the U.S as well as number of E.U. states, including France. The plaintiffs are an organisation set up to combat racism. The defendants set up an Internet auction site in France, which amongst other things sold Nazi memorabilia. While the defendants were not a party to these transactions, this contravened R645-1 of the French Criminal code. The plaintiffs obtained an injunction against the defendants forcing them to eliminate access to the auction site by French citizens, to post appropriate warnings on the site vis a vis the sale of hate related materials, and to remove all connected links and index headings in France. The defendants complied with the notice requirements but some illegal material still

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[27] (1999), 171 D.L.R. (4th) 46 (B.C.C.A.).
[28] (OJ), (2000) 7 C.P.R. (4th) 193 (Ont. Sup. Ct. Jus.).
[29] Case no.C-00-21275 JF (N.D. Cal., 7 November, 2001).

remained on the site. The defendants claimed that total adherence to the injunction was technologically impossible. Subsequently the French court affirmed the injunction and the plaintiffs sought to enforce the injunction in the California district court. The district court rejected the application on jurisdictional grounds. Firstly, because the injunction was contrary to the defendant's right of free speech under the First Amendment; secondly, because enforcement of the injunction would seriously jeopardise the First Amendment; and thirdly, because the injunction was too broad and could never have been issued by a U.S. court. Recently the judgment of the district court was overturned by the Ninth Circuit Court of Appeals[30]. Essentially the ruling holds that while the plaintiffs were entitled to act as they did, their actions in the U.S. were not sufficient to purposely avail themselves of the privileges of conducting activities in the forum.

6.5 The Hague Convention

The draft Hague Convention on Jurisdiction and Foreign Judgements in Civil and Commercial Matters is the latest international instrument concerning civil jurisdiction, and is currently still being negotiated. Article 7 of the draft Convention regulates jurisdiction in consumer contracts, and the latest version (i.e. the draft negotiated between the 21st and the 27th of April 2004) regulates contracts between consumers and vendors who knowingly contract to supply goods or services in the course of their trade or profession. Apart from two exceptions, actions arising from the promotion or negotiation of consumer contracts must take place in the state where the consumer is habitually resident. This being so unless (a) the consumer arranged for completion of the contract in another State, and (b) the consumer was present in that State while the goods or services were being supplied. This Article will only apply where there is no forum clause in the consumer contract. Article 10 of the draft Convention governs actions in tort, and gives litigants the option of (a) suing in the State where the alleged act or omission occurred, or (b) in the state in which the injury arose. Both paragraphs still apply in relation to a possible act, injury, or

[30] Case No.017424 (August 23, 2004).

omission. However, they do not apply where reasonable steps have been taken to avoid directing activity into that State. Claims must arise out of the defendant's 'frequent or significant' activity directed into a particular State(s) subject to the principle of comity. Further, where the injured party is habitually resident in the State in which the injury arose or may have occurred, jurisdiction will arise in that state alone.

6.6 The Software Directive

The European Commission sees the protection of intellectual property as a major element in its vision of the "Information Society". The legal protection has for a long time been weak in European countries, especially in terms of enforcement. Thus with the aim of strengthening and harmonising national laws in the arena of software protection Directive 91/250 on the Legal Protection of Computer Programs was enacted on 14 May 1991. Consequently the level of copyright protection afforded to software developers throughout Europe is relatively uniform, and without any special requirement for originality in terms of copyright. Of course the national implementation of the Directive is far from identical because Directives allow Member States a degree of latitude regarding their implementation[31]. A further difficulty stems from the fact that copyright is essentially a creation of national law, but what a European directive or an international treaty provides is a minimum level of treatment among signatory nations[32].

Article 1(1) of the Directive defines which works should be the subject of copyright protection, namely computer programs and associated design material. These are protected as literary works, however, the concept of the idea/expression dichotomy is also strongly emphasised. Contrary to the decision in Feist a low standard of originality is adopted by Article 1(3) that requires only that the work be the "authors

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[31] Thomas C. Vinje, "harmonising Intellectual Property Laws in the European Union: Past, Present and Future", [1995] 8 E.I.P.R. p364.

[32] Kenneth L. Horton, "The Software Copyright Directive and the Internet: Collision on the Information Superhighway?", Jean Monnet Papers, 1995, p5. Available from: http://www.law.harvard.edu/Programs/JeanMonnet/papers/96/9608ind.html.

own intellectual creation"[33]. In this way the directive seeks to remove uncertainty with regard to which works are entitled to copyright protection. However, the directive also provides no definition of "program" and specifies no means for defining the difference between idea and expression. While these omissions may increase the longevity of the Directive they also create uncertainty, and could potentially disrupt the harmonisation process[34]. Other problems include the Directive's failure to deal with differing treatment of legal personality for the purposes of copyright law in civil as opposed to common law jurisdictions. This is significant because teams of people working mostly for corporations produce multimedia software. Common law jurisdictions are more geared to the interests of corporate rightholders whereas civil jurisdictions are not.

Article 4(a) of the Directive sets out and clarifies the extent of author's rights in relation to computer programs. These are said to include permanent or temporary reproduction of a computer program by any means and in any form, in part or in whole. These acts are subject to the authorisation of the rightholder where a program is stored displayed or transmitted. Similarly authorisation is required in relation to the adaptation, translation, or reproduction of the results thereof[35]. The Software Directive is significant in that it is the first piece of legislation to give protection to anti-copying devices. These provisions form the substance of Article 7(1)(c) of the Directive, which states that:

"Member States shall provide... appropriate remedies against a person committing... (c) any act of putting into circulation or the possession for commercial purpose of , any means the sole intended purpose of which is to facilitate the unauthorised removal or circumvention of any technical device which may have been applied to protect a computer program".

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[33] ibid., p8.
[34] ibid., p9.
[35] ibid., p10.

6.7 Rental Rights Directive

The Rental Rights Directive[36] was adopted on the 19th of November 1992, it deals with rental, lending, and related rights for copyrighted works. It was enacted in pursuance of Article 3(f) of the Treaty of Rome 1956 in order to prevent internal distortion of the internal market and was to be implemented by all Member States by 1 July 1994. Recital 4 of the Directive makes it clear that one of its key aims is to secure the income of authors and to ensure a return on investment for high risk ventures such as the production of films and phonograms. Article 1 of the Directive gives Member States the right to prohibit or authorise the lending of original copyright works and defines 'rental' in subparagraph 2 as "making available for use, for a limited period of time and for direct or indirect economic or commercial advantage". The term 'lending' is defined in subparagraph 3 as "making available for use, for a limited period of time and not for direct or indirect economic or commercial advantage, when it is made through establishments, which are accessible to the public". Article 5 of the Directive derogates from the exclusive public lending right in order to provide authors remuneration in respect of public lending, but creating an option to exempt certain classes of establishment from payment.

Article 2 of the Directive gives the exclusive right to authorise or prohibit rental and lending to authors, performers, phonogram producers, and directors of cinematographic or audio-visual works. Article 2(5) does though allow transfer of the rental right by contract except where this is prohibited by Article 4 of the Directive. Article 4 gives authors and performers an unwaivable right to equitable remuneration. This right may be entrusted to a collecting society, and where this is the case may be subject to regulation by Member States. In relation to the right to prohibit fixation of a copyright work Article 6 of the Directive gives an exemption in relation to broadcasters, but not to cable distributors where they merely retransmit broadcasts. However, Article 8 of the Directive allows authors to authorise or prohibit wireless

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[36] Directive 92/100 on rental right and lending right on certain rights related to copyright in the field of intellectual property.

broadcasts to the public except where the broadcast performance is made from a fixation. The distribution right set out in Article 9 of the Directive is framed in much the same way as the rental and lending right described in Article 2 of the Directive. Article 9(2) of the Directive does though make it clear that exhaustion does not apply to this right except where there is a first sale. The above rights are subject to the limitations in Article 10 of the Directive which concerns private use, reporting of current events, ephemeral fixation by broadcasting organisations, and use for teaching or scientific research purposes. Under Article 12 of the Directive these rights are also subject from the date fixation is made, to a twenty-year duration.

In the U.K. the Rental Rights Directive has been implemented by the Copyright and Related Rights Regulations 1996[37], which also implement the Satellite Directive, this came into force on 1 April 1997. Under s.20 of the Copyright, Designs, And Patents Act 1988 the broadcasting of works other than typographical arrangements is a restricted act. The 1996 regulations adjust the definition of 'uplink' in s.6(4) of the 'CDPA so that the place from which a broadcast is made is the place from which the 'uplink' is made is the place from which the broadcast and therefore the place where any consequential legal proceedings must be brought. In relation to rental rights a limited right existed under s.18A of the CDPA in relation to films, sound recordings and computer programs. The new s.18A(2) gives the owners of dramatic, musical and artistic work (although not works of applied art) the right to prohibit rental and lending. Under the Directive the main right granted to owners of copyright work is that of equitable remuneration. Under the new s.93A of the CDPA transfers of ownership between authors of literary, dramatic, musical or artistic works, and film producers, the transfer of the right of equitable remuneration is automatic, although this does not apply in relation to film directors. In relation to sound recordings the same rights are provided by the new s.93(B) of the CDPA. Section 93(B) applies where there are specific transfers of the right of equitable remuneration to a sound recording producer, or film producer, and also where there is a deemed transfer of the right to a film producer.

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[37] S.I. 1996 No.2967.

Regulations 16 and 17 enact a publication right that applies to publisher's first publication of previously unpublished works where copyright has expired and been revived by the Term Directive. This right only applies to literary, dramatic, musical, or artistic works, and films. The new s.9(2) of the CDPA makes the producer and principal director of the film it's co-authors. Further the new s.10(1A) of the CDPA makes films works of joint authorship, except where the producer and the principal director are the same person. Under the 1996 Regulations performers have a distribution right and a rental lending right in relation to recorded performances, they also gain an unwaivable right to equitable remuneration whenever a commercially published sound recording is broadcast or played in public. While the author's rental right is a form of copyright, the performers rental right is a form performer's property right. Those liable to pay equitable remuneration are the current owners of the rental right. The question of how much remuneration is equitable is not dealt with directly by the Directive or the Regulations. Recital 15 of the Directive does, however, state that "remuneration must take account of the importance of the contribution of the authors and performers concerned to the phonogram or film".

The Rental Rights Directive has introduced an exclusive right that frustrates the principle of the exhaustion of distribution rights. In Metronome Music GmbH v. Music Point Hokamp GmbH[38] this argument along with various unfair competition allegations made under Article 30 of the Treaty of Rome 1956 were put before the ECJ by the Cologne district court. Here the ECJ evaded the problem by drawing a distinction between distribution and rental rights. Although the distribution right can be waived by consent or exhausted by the first sale within the E.U., the rental right is not subject to exhaustion. Furthermore, while the right to pursue a trade or profession under Article 30 forms part of the general principles of Community law, those principles are not absolute but must be viewed in relation to their social function. Similar issues also arose in Foreningen auf danske Videogramdistributor v.

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[38] (C-200/96) [2000] E.C.D.R. 11.

Laserdisken[39] where the ECJ held that the E.U.'s law on exhaustion did not prohibit the distribution of videodiscs for rental in one Member State even where this had been authorised in another Member State. In that case the defendant had, since 1987, rented out various laserdiscs of films imported mainly from the U.K. where the rightholders had implicitly accepted the practice of rental by third parties. Subsequently the Danish copyright law was changed creating a rental right similar to that existing under U.K. law. The plaintiffs then sought an injunction against the defendant, prohibiting rental without their consent. The lower court then referred the complaint to the ECJ. The court held that the principle of exhaustion did not apply to rental rights since this would prevent Member States from capitalising upon multiple rental transactions on any given copy of a film, video, or sound recording.

6.8 The Satellite Directive

At a time when the growth of terrestrial Internet services is growing at an astronomic rate it is important not to overlook at the impact of satellite services. These services can be accessed using mobile devices and the growth in the market in mobile phones is testament to the potential of the satellite communications market. In terms of intellectual property these services present three main challenges, namely, maintaining access, ensuring fair competition, and jurisdiction and enforcement issues. For rights owners the last of these is the most serious threat because satellite based systems are hard to track, and even where this is possible, the problems involved in determination of jurisdiction are a lawyer's nightmare. Most of the new satellite services are now on stream; however, they are expensive and will therefore do not yet present a huge problem for rights owners[40]. However, this is unlikely to remain so for long if the development of satellite services follows that of other telecommunications services i.e. mobile phones. Satellite systems consist of mobile terminals, the satellite itself, and earth stations and gateways. Mobile terminals will be similar to conventional cellular terminals both in terms of size and weight. These terminals will at first be used just as

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[39] (C-61/97) [1998] E.C.R. I-5171.

[40] Stephan Le Goueff, "Licensing Global Mobile Personal Communications by Satellite: The Quest for the Holy Grail", C.T.L.R. 1997, 3(4), p161.

telephones, either in single mode or dual mode i.e. just as a cell phone or as a cell phone and a satellite phone. However, ultimately they will have multimedia capabilities. This third phase is already happening in the Japanese mobile phone market. The satellite may just bounce radio signals between earth stations or may have an on board switching capability (e.g. Iridium, Teledesic). Earth stations relay signals between the satellites and the gateways. In order for such a system to have truly global coverage a number of satellites located in both Low Earth Orbit (LEO) and Medium Earth Orbit (MEO)[41] are required.

According to the Amended Proposal for a European Parliament and Council Decision on a common framework for the harmonised development of satellite personal communications services in the European Union[42] the Council of the E.U. is keen to promote a harmonised approach that considers the global nature of such services. This is to take a deregulated approach and market entrants are to be restricted only by rules, which are based upon objective transparent, proportionate and non-discriminatory selection criteria. On 27 September, 1993 the European Parliament enacted Directive 93/83 on the co-ordination of certain rules concerning copyright and rights related to copyright applicable to satellite broadcasting and cable retransmission. The most significant contribution of the Satellite Directive is stated in Article 1.2(b) where the default rule for jurisdiction regarding 'communication to the public' firmly places jurisdiction in the uplink state. The chain of communication must be uninterrupted and under the sole control of a single broadcasting organisation. Article 2 of the Satellite Directive creates an exclusive right to authorise communication to the public by satellite and Article 3 makes explicit provision for the acquisition of such rights through collecting societies. The directive is implemented into U.K. law by the Copyright and Related Rights Regulations 1996, which came into force on 1 December, 1996. However, Pascal Kamina has criticised these Regulations in that they only protect recordings of audio-visual works rather than the works that underlie them. While this weakens over all protection for audio-visual

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[41] ibid., p162.
[42] COM(96) 467 final.

works, it also increases the possibility of protecting their individual elements[43]. In Europe the Council Regulation on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters ("the Brussels 1 Regulation") is the primary means of determining jurisdiction, Article 2 of the Convention states that plaintiffs must sue in the state of domicile of the defendant. However, in Shevill v. Presse Alliance S.A.[44], a libel case involving a publication in a French newspaper, the ECJ decided that the plaintiff could sue either in the jurisdiction where the defendant is domiciled or in the place where damage occurred. So in a case involving a satellite WAN the plaintiff could sue where data is accessed, or in the country of domicile of the defendant. Determining either of these may not be easy, that is assuming the defendant is caught inflagranti.

Another legal document that is of interest in this area is the Council of Europe's Convention relating to questions on copyright law and neighbouring rights in the framework of transfrontier broadcasting by satellite. While this was adopted in June 1996, it has not entered into force, for this to take place seven states including five Member States of the E.U must sign and ratify the Convention. So far only two states have done so. The Convention classifies broadcasting as involving both the up-link to the satellite and the downlink to earth. Even where a non-signatory state is involved in an intellectual property dispute, according to Article 3(3) the broadcast is taken to originate from the state in which the up-link is situated. Under Article 4(1) of the Convention on Literary and Artistic works broadcast by satellite will be accorded the protection laid down in Article 2 of the Berne Convention. This protection is to be acquired contractually, and under Article 4(2) this protection extends to collective agreements concluded with broadcasting organisations even where unrepresented right holders are involved. This will only apply where the right holder can opt out of such an arrangement, and where the satellite transmission is a simulcast of a terrestrial broadcast. According to Article 6 of the Convention simultaneous broadcasts are not protected, and under Article 4(3) of the Convention the second paragraph of Article

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[43] Pascal Kamina, "British Film copyright and the incorrect implentation of the E.C. Copyright Directives", Ent.L.R. 1998, 9(3), p111.
[44] [1995] 2 A.C.18.

4(2) does not apply to cinematographic and analogous works. Potentially this could include most rightholders with interests in multimedia works depending on the treatment of video signals.

6.9 The Distance Selling Directive

In view of the increasing economic and social importance of distance selling the European Commission has taken the view that the regulation of distance selling will play an essential role in the functioning of the Internal Market. Accordingly Directive 97/7 on distance selling was approved by the European Parliament on 26 May 1993, enacted on 20 May 1997, and came into force on 31 October 2000. The Directive regulates all forms of distance selling including both products and services. It has serious implications for almost all businesses supplying goods or services to consumers by 'distance means' i.e. mail order, Internet and telesales. Under Article 1 of the Directive its stated aim is "to approximate the laws, regulations and administrative provisions of the Member States concerning distance contracts between consumers and suppliers". The Directive has five areas of substantive application, namely: (1) the provision of information about the contract and its terms (Articles 4 and 5); (2) the right of withdrawal from the contract (Article 6); (3) the time available to the supplier for performance of the contract (Article 7); (4) card payments (Article 8); and (5) inertia selling (Article 9). It does not expressly include Internet transactions, although it does implicitly include them.

Article 2 states that for "the purposes of this Directive a 'distance contract' is "any contract concerning goods or services concluded between supplier and consumer under an organised sales or service-provision scheme run by the supplier, who, for the purposes of the contact, makes exclusive use of one or more means of distance communication up to and including the moment at which the contract was concluded". However, certain types of contract are specifically excluded from this definition, these include contracts related to financial services, contracts concluded by automatic vending machines, or contracts concluded with telecommunications

operators via public payphones. As with the law of contract the sale of immovable property is treated as a special case and is also excluded, except where the contract concerns rental of immovable property. Furthermore, Recital 10 of the Directive makes it clear that Member States can treat transactions made up of a series of separate contracts differently to those involving a single contract[45]. However, financial services contracts are included where they relate specifically to the distance contract, under Article 6(4) these are to be cancelled without penalty where the consumer exercises his right of withdrawal[46]. According to Article 3 of the Directive certain products and services are excluded from its scope, most notably, financial services, foodstuffs, and contracts involving automatic vending machines and automated commercial premises. In terms of contract information suppliers are required to provide certain details prior to, or at the time of formation of contract. These include the suppliers' name and address, a description of the main characteristics of goods or services, the price (inclusive of tax) and delivery charges. Other information that must be provided includes the duration of contract, arrangements for payment, delivery and performance, and the period for which the price remains valid. It is notable, however, that the specification of languages to be used in distance contracts is left to the discretion of Member states[47].

Under Article 6 of the Directive the right to withdraw from a distance contract subsists for a period of at least seven working days. However, this period may extend for up to three months where the supplier fails to comply with the minimum information requirements set out in Articles 4 and 5. Any sums paid by the consumer must be returned within 30 days[48]. Some goods and services such as fresh foods and time sensitive services are not subject to a right of withdrawal, while withdrawal is to be without penalty, there is also no requirement for the consumer to give any reason. However, under Article 6(4) where the right of withdrawal is exercised, the Directive does not set out detailed arrangements for the cancellation of credit agreements[49].

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[45] Robert Bradgate, "The EU Directive On Distance Selling", Web J.C.L.I 1997, issue 4, p3.
[46] Ian Fletcher, "The Distance Selling Directive", [1998] J.B.L., November issue, p617.
[47] See Recital 8.
[48] See note 45 above, p5.
[49] See note 46 above, p616.

Under Article 7 of the Directive the vendor must perform the contract within 30 days starting from the day following the day when the consumers order was received. Where performance does not take place within this time the contract will lapse[50]. However, Article 7.3 of the Directive allows vendors to provide alternative goods "of equivalent quality and price". This is subject to the right to withdraw and return the goods at the expense of the vendor, the provision will only operate where the vendor has informed the customer of this possibility in a "clear and comprehensible manner". Where a distance contract is made using some sort of payment card Article 8 of the Directive ensures that there must be some means of cancelling payment in case of fraud. Equally the customer must be able to have his account re-credited; however, the Directive says nothing about the burden of proof in such cases. This leaves the consumer in weak position since the burden is likely to be placed on him by the terms of contract. These terms are regulated by voluntary codes of conduct, though if firms fail to supply consumers can proceed against them through representative actions taken by the Office of Fair Trading[51]. According to Article 12 of the Directive Member States are obliged to ensure that consumers cannot waive their rights, and that rights are not lost through a choice of law clause where the contact has a "close connection with the law of one or more Member States". Furthermore, Article 11(3) of the Directive gives Member States the option to ensure that the burden of proof on time limits, prior information requirements, as well as written confirmation and the consent requirement are placed with the supplier[52].

6.10 The Protection of Multimedia Products under International Law

Multimedia products present legal problems because they are composed of many different works belonging to many different right owners. It is commonly accepted that in an interconnected global electronic environment such as the Internet, it is not possible to protect multimedia products using solely national instruments. Even in the pre-digital era multilateral agreements such as the Berne Convention were forged to

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[50] See note 45 above, p7.
[51] Patricia Barratt, "The EC Distance Selling Directive", I.C.C.L.R. 1993, 4(8), p306.
[52] See note 46 above, p620.

protect the rights of copyright owners across international borders. The international protection of multimedia products in the international context is fundamentally the same, as with mono-media, however, care has to be taken to ensure that all the rights subsisting in multimedia products are protected. One of the key questions facing the drafters of laws concerning intellectual property in the digital age is how to ensure their consistent application and enforcement in multiple jurisdictions[53]. The main intellectual property instruments at international level are TRIPS, the Berne Convention and the Rome Convention. The latter two were last revised in 1971 and 1980 respectively[54].

These Conventions did not contemplate problems arising from the digitisation of copyright works and are very vague in relation to the enforcement of rights. At first WIPO attempted to solve these problems using a single Treaty, however, since it was apparent by 1991 that most countries would not accept the inclusion of phonograms in the Berne Protocol, WIPO set up a second committee of experts dealing with the protection of phonograms in 1993[55]. The WIPO Diplomatic Conference adopted the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT) on 20 December 1996. The WCT has since been ratified by the required 30 countries, and comes into force on 6 March 2002. Both Treaties protect compilations of data and strongly emphasise the national treatment obligation, and for their purposes "nationals" must be nationals of one of the states that are members of WIPO. Indeed Article 4 of the WPPT specifically makes exclusive rights and the right to equitable remuneration subject to this obligation.

Both Treaties attempt to remove administrative barriers by obliging states not to impose unnecessary formalities in relation to the acquisition of rights[56]. Both Treaties also grant authors an exclusive right of distribution. Under Article 6 of the WCT

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[53] Clive Davies, "WIPO Treaties – The new framework for the protection of digital works", Comms.Law. 1997, 2(2), p46.
[54] Jorg Reinbothe et al., "The New WIPO Treaties: A First Resume", [1997] 4 E.I.P.R. p176.
[55] Silke von Lewinski, "WIPO Diplomatic Conference Results in Two New Treaties", I.I.C. 1997, 28(2), p203.
[56] See note 54 above, p171.

authors of literary and artistic works "enjoy the exclusive right of authorising and making available to the public the original and copies of their works through sale and other transfer of ownership." Article 8 of the WPPT creates a similar right in relation to performances, and Article 12 of the WPPT grants this right to producers subject to the freedom to determine contractual conditions. The WCT posses no specific provision in relating to the right of reproduction, but under Article 1 of the WCT signatories are required to conform to Article 9 of the Berne Convention. Furthermore, Article 3 of the WCT obliges contracting parties to comply with Article 3 and Article 4 of the Berne Convention. However, the WCT has no provisions relating to transient reproduction. Although the Diplomatic Conference was of the view that this issue could be effectively dealt with by national legislatures[57], transient reproduction is clearly a serious issue under U.S. law but especially under E.U. legislation. This is due largely to the distributed and almost instantaneous nature of digital processing. According to the agreed statements concerning the WCT, the reproduction right is to apply fully in the digital environment, also the use of the term "copies" refers only to fixed copies. The exceptions to the exclusive rights granted by the WCT are the same as those set out in the Berne Convention. The agreed statements concerning the WPPT while recognising the need to adequately protect the interests of performers, and producers, specifically emphasise the maintenance of a balance of interests between performers, producers, and the broader public interest.

The WCT is a special agreement under Article 20 of the Berne Convention. Accordingly, the WCT grants authors more extensive rights than the Berne Convention, or alternatively it includes terms that are not contrary to the Berne Convention. According to Article 1(4) of the WCT signatory states must comply with Article 1 to 21 as well as the Appendix to the Berne Convention[58]. The WCT protects compilations of data in any material form by virtue of their selection and arrangement, and confirms the protected status of computer programs as literary works[59]. The WCT establishes six fundamental norms regarding the application of copyright law in

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[57] See note 53 above, p46.
[58] See note 55 above, p204.
[59] See note 53 above, p46.

the digital environment, namely: (1) the exclusive right of copyright owners to control the making of digital copies of their works; (2) the exclusive right of copyright owners to control the communication of their works to the public in digital form; (3) the continued right of states to apply their existing exceptions, and limitations to copyright in the digital environment;(4) limited liability for communications carriers in relation to infringement where they only provide communications facilities; (5) the general prohibition against tampering with copyright information where this facilitates infringement or hampers enforcement; and (6) where copyright owners protect their works from infringement using technological means countries should have "adequate legal protection and effective legal remedies against the circumvention of effective technological measures"[60]. In relation to technological protection measures the WCT creates two rights, which are entirely novel in private international law. First, Article 11 places contracting parties under an obligation to provide adequate legal protection and effective legal remedies in relation to encryption devices used to protect certain uses of works. Article 12 prohibits the removal, or alteration of rights management information. The WPPT creates exclusive rights, which run in parallel with the WCT, especially the rights of distribution, rental, and making available to the public. The broader communications right is not catered for since the other rights are subject only to a right of remuneration. These rights are subject to limitations and exceptions. Unlike the WCT the WPPT is not linked to other Treaties. It therefore creates a specific right of reproduction[61]. Significantly Article 7 of the WCT stresses that authors of all kinds of works "embodied in phonograms" must be granted rights in relation to the phonogram under the law of the contracting state. This is more concise than the equivalent Article 14(4) of TRIPs, which makes reference to "any other rightholder in phonograms"[62]. In terms of technological protection Article 18 of the WPPT obliges contracting parties to provide adequate legal protection and effective legal remedies. These are intended to prevent the circumvention of technological measures used by performers and producers of phonograms to protect their rights

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[60] Pamela Samuelson, "Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to be Revised", (1999) 14 B.T.L.J., p528.
[61] See note 55 above, p206.
[62] ibid, p205.

under the WPPT and that restricts unauthorised acts in relation to phonograms. Article 19 of the WPPT obliges contracting parties to provide adequate and effective legal remedies against those that knowingly (and without consent) remove or alter electronic rights information used in conjunction with phonograms. This provision also applies to those who knowingly "distribute, import for distribution, broadcast, communicate, or make available to the public", fixed copies of performances or phonograms. Audio-visual performances are not protected by the WPPT, however, following the Resolution of the WIPO Diplomatic Conference of December 1996 there was a Diplomatic Conference on the Protection of Audio-visual Performances (Geneva, December 7 to 20, 2000) to consider the adoption of a Draft Protocol to the WPPT. The meeting of 8 December 2000 was adjourned. Any results of the Protocol would come into force after 30 or possibly 5 Member States accede to the WPPT. This would give audio-visual performances the same protection as phonograms subject to any derogation from the WPPT contained in the Protocol.

6.11 The Digital Millennium Copyright Act

On 28 October 1998 the Digital Millennium Copyright Act ("DMCA) became law. The stated object of the Act is to update the Copyright Act 1976 so that it can deal with the challenges of the digital age. The introduction of the Act was partly driven by the need to implement certain provisions of the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT). More specifically Article 11 of the WCT and Article 18 of the WPPT that specifically prohibit circumvention of this technology. These provisions are implemented by Title I of the DMCA especially the notorious s.1201 that places a near complete ban on circumvention devices, even those which are not used for infringing purposes. The penalties are severe and include fines of up to a maximum of $1,000,000 and a prison term of ten years. In s.1201 technological measures are divided into two categories i.e. measures for the prevention of unauthorised access to copyrighted works, and measures designed to prevent the unauthorised copying of copyrighted works. This distinction preserves fair use since s.1201 does not prohibit the act of circumventing a measure that prevents

copying. Exceptions to the section permit the making of archives by non-profit institutions (s.1201(d)), reverse engineering of software to enable software interoperability (s.1201(f)), encryption research (s.1201(g)), protection of minors (s.1201(h), personal privacy (s.1201(i)) and computer system testing (s.1201(j)).

Title II of the DMCA is concerned with the extent of the liability of online service providers when engaging in certain activities prohibited by the Act. Section 512 of the DMCA covers four types of activity undertaken by online service providers, namely, transitory communications, system caching, storage of network information at the direction of users, and the operation of information location tools. The section also allows copyright owners to obtain a subpoena compelling the provider to disclose the names of alleged infringers. To qualify for the exemptions available under s.512 an entity must prove that it is in fact a "service provider". This is defined by s.512(k)(1)(A) as "an entity offering the transmission, routing, or providing of connections for digital online communications, between or among points specified by a user, of material of the user's choosing, without modification to the content of the material as sent or received." However, the issue is confused since s.512(k)(1)(B) defines a "service provider" more broadly as "a provider of online services or network access, or the operator of the facilities therefor."

Once an organisation has shown that it is a service provider to qualify for the s.512 safe harbour, it must satisfy two further conditions. Under s.512(i) service providers must show that they have adopted and reasonably implemented a policy of terminating the accounts of subscribers in appropriate circumstances where those subscribers are repeat infringers. Secondly, the service provider must accommodate and not interfere with standard technical measures. Standard technical measures are measures developed as a result of an open fair and voluntary consensus of service providers and copyright owners in a multi-industry process. This must be accessible to anyone on reasonable non-discriminatory terms that do not place any undue burden of costs on service providers.

6.12 Circumvention of Anti-copying Devices

With the arrival of digital technology and the hardware and software used to protect copyrighted information held in digital format, there arose the concern that technological protection alone was not sufficient. Anti-circumvention measures are designed to supplement technological protection by prohibiting unauthorised access to copyrighted works. Indeed s.296 of the CDPA prohibits the intentional importation, sale, or hire of devices designed or adapted to circumvent copy protection. This section further prohibits the publication of information intended to assist in the process of circumventing copy protection. Here copy protection refers to any device or means intended to prevent or impair copying. In the United States the NII White Paper recommended an anti-circumvention provision in the following terms: "No person shall import, manufacture, or distribute any device, product or component incorporated into a device or product, or offer to perform any service, the primary purpose or effect of which is to avoid, bypass, remove, deactivate, or otherwise circumvent, without authority of the copyright owner or the law, any process, treatment, mechanism, or system which prevents or inhibits the violation of the exclusive rights of the copyright owner under section 106."

Section 1201 of the Digital Millennium Copyright Act 1998 (DMCA), s.1201(a)(1)(A) prohibits the manufacture, import, offer to the public, or otherwise trafficking in or making technologies, products and services that can be used to circumvent a technological protection measure that effectively controls access to a copyrighted work. Alternatively s.1202 of the DMCA prohibits the removal or alteration of copyright management information provided in conjunction with a copyrighted work, or to falsify copyright information. In a zealous attempt by the U.S. government to set a high standard of technological protection, the DMCA goes far beyond the obligations of the U.S. under the WIPO Copyright Treaty, in fact the Act was mostly unneeded[63]. Manufacturers have no obligation to build their technologies to respond to technical protection systems, but must not actively seek to

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[63] See note 60 above, p521.

undermine them[64]. Rather than allowing the application of fair use the DMCA has a range of narrowly defined exceptions such as reverse engineering (s.1201(f)), encryption research(s.1201(g)), and computer security testing (s1201(j). However, fair use can be applied to s.1201(a)(1) and s.1201(c)(1) where a copy of the work has already been lawfully acquired[65].

It is notable that where a vendor activates a "drop-dead" device located in a piece of software there is no exception for the circumvention of such devices in the DMCA[66]. The criminal penalties for violating the DMCA are draconian, especially for second offences. The DMCA also has no general purpose "other legitimate purpose provision". This leaves the courts no option other than to interpret the narrowly defined exceptions of the Act, thereby leaving many legitimate uses outside the scope of the DMCA[67]. Under strict interpretations of s.1201(b)(1) the creation of a software tool even for purposes falling within one of the exemptions would be unlawful[68]. Samuelson concludes that the anti-circumvention provisions of the DMCA are "unpredictable, over broad, inconsistent, and complex"[69]. Further, it is significant that much of the value of digital products derives from liberal terms of access. Products with very limited terms of access will therefore be less useful to customers, and if the information they contain is valuable this can only give rise to competing products with a lower price[70].

6.13 Transitory Communications

Rather than using a traditional conception of 'fair use' the DMCA creates a number of so-called 'safe harbours'. These are carefully crafted exceptions much narrower in scope than the 'fair use' exceptions. Section 512(a) of the DMCA limits the liability of ISPs' in relation to the transmission or routing of digital information between one

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[64] ibid., p536.
[65] ibid., p540.
[66] ibid., p544.
[67] ibid., p546.
[68] ibid., p548.
[69] ibid., p562.

point and another where the ISP merely provides the connections. For an ISP to fall within the scope of this 'safe harbour' certain conditions must be satisfied, namely: (1) the transmission must be initiated by someone other than the ISP; (2) transmission, routing, provision of connections must be performed by an automated technical process without selection of material by the ISP; (3) copies of transitory material must not be kept longer than necessary and must be accessible only to the intended recipients; and (4) the transmission of the material must not involve the modification of its content.

6.14 System Caching

Caching has always been a risk to ISPs' in terms of liability for copyright infringement while at the same time being essential to their efficient operation. Caching essentially involves the intermediary storage of packets of data in a computers memory in order to avoid accessing the original data source each time the computer is instructed to go to the address of a particular site. Caching may occur at either system level or local level. Where ISPs' retain copies of information for merely transitory periods s.512(b) of the DMCA limits their liability for system caching provided that this is done at the subscribers direction. To fall within the scope of this 'safe harbour' the ISP must refresh data regularly in accordance with industry standards, must not interfere with software that counts user hit-rates and limit user access in accordance with conditions for access. Furthermore, where the ISP is made aware or becomes aware that infringing material has been posted, that material must be removed or blocked (or ordered to be blocked) at the originating site.

6.15 Storage of information on systems or networks

Where an ISP stores information on its systems at a users request s.512(c) limits their liability. To qualify for this 'safe harbour' the ISP must do the following: (1) show lack of knowledge as to infringing copyright material and the non-availability of

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[70] ibid., p565.

evidence from which it could reasonably draw this conclusion; (2) demonstrate the inability to control infringing activity or where it does have such control, it must not gain a pecuniary advantage from infringement; (3) that it acts expeditiously in the removal or blocking of infringing material on it's server once made aware of its presence; and (4) where appropriate make available the names and addresses of subscribers known to be involved in infringing activity.

6.16 Information location tools

Section 512(d) of the DMCA limits the liability of ISPs' in relation to information location tools; these will include hyperlinks, online directories, and search engines. The 'safe harbour' applies where the ISP has no knowledge of infringing material, or the right or ability to control infringing activity. As with the other 'safe harbours' the ISP must not derive financial benefit from infringing activity where it has some degree of control over it, and when the ISP becomes aware of infringing activity it must act expeditiously to remove or block it. According to the ruling in Playboy Enterprises, Inc v. Webworld, Inc[71] the key issues in determining vicarious copyright infringement are firstly, whether a party has direct financial involvement in the infringing activity, and secondly, has the capacity and the right to supervise such activity.

6.17 Maintenance or repair

Title III of the DMCA elaborates on the existing maintenance and repair exemption in s.117 of the Copyright Act 1976 (U.S.A.). This exemption is limited to reproductions or adaptations made automatically when a computer is switched on in order to maintain or repair it. Furthermore, the software so copied must be lawfully acquired. While Title III appears to create new rights it is in fact a reduction of s.117 of the Copyright Act 1976 since s.117(2) allows continued possession for the purposes of maintenance and repair, the rest of Title III just regurgitates s.117(1).

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[71] 991 F Supp. 543 (N.D. Tex. 1997).

6.18 Ephemeral recordings for broadcasters

Under s.112 of the Copyright Act 1976 the making of "ephemeral recordings" is exempted from the general right of performance. Such recordings are made in order facilitate transmission, for example, where radio stations re-record CD tracks in a particular arrangement and then broadcast the "ephemeral recording" rather than the original CD recordings. As originally enacted s.112 allowed broadcasters to retain ephemeral recordings for up to six months. The Digital Performance Right in Sound Recordings Act 1995 (DPRA) grants owners of sound recordings the right to authorise digital transmission of their works. The Act amended s.106 of the Copyright Act 1976 by giving the copyright owner of a sound recording copyright the exclusive right "to perform the copyrighted [sound recording] publicly by means of a digital audio transmission". Under s.402 this definition is widened so that it includes recordings made to facilitate transmission i.e. "ephemeral recordings" where transmission falls within the scope of the DPRA's exemption for digital broadcasts or statutory licence. As amended s.112 of the Copyright Act 1976 allows circumvention of access control technology for the purposes of making an ephemeral copy, where this is technically feasible and economically reasonable, and the copyright owner has failed on request to make that material available to the broadcaster.

6.19 Non-profit libraries and archives

Section 108 of the Copyright Act 1976 allows non-profit libraries to make single copies of a work for the purposes of reservation or interlibrary loan. The section is updated by s.404 of the DMCA to accommodate digital media. The amended section permits the making of three copies, all or some of which may be digital, for use only within library premises. Furthermore, the section allows libraries to convert documents in an old format into a new format where the old format becomes obsolete or the device needed to view the document ceases to be commercially available. Further, under special rules issued by the U.S. Copyright Office on October 27,

2000[72], under its triennial review procedure people may, in some circumstances break through technological barriers that protect lists of blocked websites. These lists are maintained by the producers of many types of filtering software such as "Cyberpatrol". The exemption only applies for the purposes of comment and reporting where access to the information sought is denied and that information is not available elsewhere. A second exemption made under this ruling permits circumvention of access control mechanisms that protect literary works, where authorised users cannot gain access to copyright material because of a malfunction in access control software. This exception applies only where the person trying to gain access has made reasonable attempts to gain access vis a vis the copyright owner, and the copyright owner has failed or is unable to grant them access without the attachment of unreasonable conditions.

6.20 The Information Society Directive

The European Parliament adopted Directive 2001/29 on copyright and related rights in the information society on February 14, 2001. This is intended to implement the provisions of the WIPO Copyright Treaty, and the WIPO Performances and Phonograms Treaty, thereby harmonising the laws of Member States and adjusting the balance of copyright law in favour of the interests of rightholders. This is at least in theory supposed to restructure copyright law for the digital age by establishing a 'level playing field' for copyright protection in the E.U. More specifically the Directive deals with the right of reproduction, the right of communication to the public, distribution rights, and the protection of anti-copying and rights management systems[73]. Recitals 5 and 6 of the Directive state that its main objective is to harmonise Member States' responses with regard to the legal safeguards for technological protection measures used by copyright owners as a means of safeguarding their rights in the context of the internal market.

Article 2 of the Directive constitutes an expansion of the right of reproduction and

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[72] CFR Part 201.

includes the holders of neighbouring rights as well as rightholders themselves. It requires member states to expand the exclusive right of reproduction so that it includes: '...direct or indirect, temporary or permanent reproduction by any means and in any form, in whole or in part'. Hence even temporary copies come within the scope of the right, as does any form of digital copying[74]. While Article 2 creates a broadly worded right of reproduction, Article 5 exempts temporary acts of reproduction, and for the purposes of private copying by individuals[75]. There are a number of fair dealing exemptions to the right of reproduction set out in Article 5.3. These include teaching and research for non-commercial purposes, uses benefiting disabled people, use of quotations for the purposes of reporting, reviewing and criticism, and public security. While the teaching and research exemption is subject to payment of fair compensation, the reporting, review and criticism exemption is not. Also these exemptions only apply in specific cases where they do not conflict with normal exploitation of the work by the rightholder and where the rightholder's legitimate interests are not unreasonably prejudiced[76].

One of the most radical changes to copyright law in the Directive is the new right of communication to the public defined in Article 3. This states: "Member States shall provide authors with the exclusive right to authorise or prohibit any communication to the public of originals and copies of their works, by wire or wireless means, including the making available to the public of their works in such a way that members of the public may access them from a place and at a time individually chosen by them." Similarly this same right is made available to the holders of neighbouring rights by Article 3.2. While the right of communication acts as a broadcasting right that is capable of dealing with the disparate nature of the Internet, it does not define the meaning of 'public'. What is 'public' is a matter for national law; however, this creates the potential for inconsistency, especially given the divided case law in this

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[73] "Consumer law Consumer protection: Distance Selling", Euro. L.M., 8(10), p10.
[74] Alexander Ross, 'The future of EU copyright law: the amended proposal for a directive on copyright and related rights in the information society", Comm.L. 1999, 4(4), p129.

[75] ibid., p130.

area[77]. Articles 6 and 7 of the Directive are very much the product of WIPO requirements for the protection of CMS and methods of digital watermarking. These articles are intended to prevent circumvention of CMS and the distribution of technologies that have this sole end. These acts must though be done knowingly before criminal liability is incurred[78]. The primary criticism levelled at these provisions is that they give rightholders too much control over their works at the expense of the consumer. This control includes not just copyright works and uses reserved to rightholders, but public domain materials, unregulated uses, and fair use. Indeed Article 5.3(a) of the Directive will have the effect of narrowing existing exceptions to copyright in many Member States by limiting library and private study exceptions to "non-commercial research".

The European Union's Copyright Directive borrows heavily from the DMCA; Article 6 prohibits the manufacture, import, distribution, sale, and rental, advertisement for sale or rental, or possession of certain devices (or the components thereof). Such devices must be used for the purpose of circumvention, have limited commercial purposes (other than circumvention), and must be primarily designed, produced, adapted or performed in order to enable or facilitate the circumvention of any effective technological measures. Article 5 of the Directive states: "Temporary acts of reproduction referred to in Article 2, which are transient or incidental [and] an integral and essential part of a technological process and whose sole purpose is to enable:

(a) a transmission in a network between third parties by an intermediary, or

(b) a lawful use of a work or other subject matter to be made, and which have no independent economic significance, shall be exempted from the reproduction right provided for in Article 2."

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[76] Michele Rennie, "Copyright Directive: May 1999 amendments to appease some industry sectors", C.T.L.R. 1999, 5(5) p124.
[77] See note 74, p131.
[78] See note 76 above, p126.

Lloyd criticizes the predecessor to this provision on the ground that some of the terms used such as "transient", "incidental", or "integral" have meanings, which are hard to determine. Lloyd further criticised the proposed Directive as a whole for being too technology specific, a criticism that still seems to hold for the final version of the Directive[79]. According to Recital 38 of Directive 2001/29 "Member States should take due account of technological and economic developments, in particular with respect to digital private copying schemes, when effective technological protection measures are available and these exceptions "should not inhibit the use of technological measures or their enforcement against circumvention". The adoption and enforcement of the Information Society Directive is timely since copying devices are becoming ever more sophisticated, especially those used to copy sound recordings. The potential problems regarding private copying under the Directive are huge. Despite its repeated assertion that legal certainty is one of its main objectives (i.e. Recitals 4, 6, 7 and 21) only one of the exemptions permitted under Article 5, i.e. Article5(1) are mandatory. In addition most of the limitations that existed under national laws have been retained[80]. Indeed according to Hugenholtz the validity of the entire Directive based on Articles 47(2), 55 and 95 of the Treaty of Rome is in question since it does not "harmonise national rules, does not facilitate the free movement of goods or the freedom of services, and does not remove distortions to competition"[81].

For the purposes of Article 6(3) of the Directive, the term 'technological measures' means "any technology, device or component that, in the normal course of its operation, is designed to prevent or restrict acts, in respect of works or other subject matter, which are not authorised by the rightholder of any copyright or any right related to copyright as provided for by law or the sui generis right provided for in Chapter III of Directive 96/9." In this context technological measures are deemed

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[79] Ian J. Lloyd, "Intellectual Property in the Information Age", E.I.P.R. 2001, 23(6), p292.
[80] P. Bernt Hugenholtz, "Why the Copyright Directive is Unimportant and Possibly Invalid", E.I.P.R. 2000, 22(11), p500.
[81] ibid., p502.

"effective" so long as they achieve the objective of ensuring access control or other protection process in relation to a copyrighted work. Such processes include encryption, scrambling or other transformation of the work (Article 6(3)). The Directive also protects rights management information, which Article 7(2) defines as "any information provided by the rightsholders which identifies the work or other subject-matter referred to in this Directive or covered by the sui generis right in Chapter III of Directive 96/9". However, the legal effect of voluntary agreements as stated in Article 6(4) is totally confused and will ultimately have to be clarified by the ECJ. Article 7(1) of the Directive prohibits (a) the unauthorised removal or alteration of rights management information; and (b) the unauthorised distribution, importation for distribution, broadcasting, communication or making available to the public works or other subject matter.

6.21 Moral Rights

Moral rights first evolved in continental Europe during the 19th century, they derive their jurisprudential basis from the Kantean notion that an author's work is an extension of the person of the author. It therefore follows that an assault on such work is the equivalent of a physical attack on the author. The fact that the author has divested himself of his economic rights in the work do not alter the status of his moral rights since they derive more from natural law than intellectual property law. Given the erosion of the authors economic rights in the digital age moral rights may be of increasing relevance in the future[82]. Indeed the European Commission makes this abundantly clear in the Green Paper on Copyright and Related Rights in the Information Society[83]. Here it states that "the time is coming when anyone will be able to change the colours in a film, or replace the faces of actors, and return the modified film to the network. This capacity to amend works in whatever way and to whatever extent one likes is regarded in some quarters as one of the great advantages of digitisation. The creators of works, however, are greatly concerned that this technical capacity will be used to mutilate their works, and are asking for moral rights to be

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[82] David Vaver, "Moral Rights Yesterday, Today and Tomorrow", I.J.L. & I.T. 1999, 7(3), p271.

strengthened."

Moral rights have no coherent definition because states either do not recognise them at all or they recognise different non-economic rights. For instance the heirs of the director and the screenwriter[84] successfully challenged the colouration of the Hollywood classic "The Asphalt Jungle" in the French courts in 1988. On the other hand in Charleston v. News Group Newspapers[85] a libel action arose from an article in which the faces of actors from an Australian T.V. series were superimposed on the bodies of a man and a woman in pornographic poses. Although the headlines were defamatory, the text of the article concerned the misuse of the actor's images in a pornographic video game, and made it clear that this was done without their consent. In the House of Lords the appeal was dismissed because the fact that some readers might misunderstand the article was deemed to be immaterial since the article was to be understood in its entirety. This has disturbing in relation to online media because of the economic impact of browsing behaviour.

Unlike most European countries, U.K. law adopts a minimalist approach in fulfilling its international obligations under the Berne Convention. This is contrary to the spirit if not the law embodied in the Treaty of Rome. Moral rights are inalienable; however, in the U.K. and the United States it is possible to obtain outright control over an authors work[86]. Moral rights are made up primarily of a right of identification and a right of integrity. Other rights include the right to withdraw a work from public circulation and the right to determine whether a work is released into the public domain[87]. Under s.77 of the Act there is a right of identification, except where this is asserted in writing. However, this right is not applied by s.79 of the Act in the case of computer programs, designs for type faces, computer generated works and works created during the course of employment. The right of integrity exists in a weakened

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[83] COM (95) 382, p65.
[84] Aaron Taebi, "Impact of the information superhighway on non-economic rights", C.L.S.R. 1995, 11(6), p327.
[85] [1995] 2 A.C. 65.
[86] Mike Holderness, "Moral Rights and 'Authors' Rights: The Keys to the Information Age", J.I.L.T. 1998, no.1, p2.

form under s.80 the Act as a right not to have ones work subject to derogatory treatment, although s.82 does not permit the application of this right where a work is created in the course of employment. Further ,s.7(2) of the Act allows the waiver of moral rights by written instrument[88].

6.22 Fair Use

Copyright is unlike other forms of property in two main ways. Firstly, a copyright work can be consumed without depriving its creator of the work itself. Secondly, in the absence of regulation it is difficult to make people pay for what they consume. On an economic analysis what copyright does is provide a legal framework for the exchange of content for value between creators and users[89]. Where this framework operates perfectly the user can form a bilateral contract with the creator at a reasonable price. However, in certain situations imperfections appear in this arrangement. Disproportionate bargaining power, excessively high transaction costs, or a refusal to deal may cause this. In situations of market failure fair use operates to address these imbalances, thereby making the copyright system economically efficient[90].

Fair use can be seen as a limitation on the rightholder's statutory monopoly that facilitates reasonable uses of their works in order to fulfil copyrights purpose to promote the arts and sciences. Fair use is derived from Article I, 8, cl.8 of the American Constitution that states its object "to promote the progress of science and the useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". This has always been read so as to emphasise the promotion of the useful arts rather than the enrichment of authors. However, economic arguments are still important, fair use often being seen as a way of ensuring that users at least obtain a copy of a work in situations of total market

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[87] ibid., p4.
[88] ibid., p8.
[89] Jonathan Dowell, "Bytes and Pieces: Fragmented Copies, Licensing, and Fair Use in a Digital World", (1998) 86 Cal. L.R., p853.
[90] ibid., p855.

failure. Some commentators have posited that in a digital marketplace many of the causes of market failure, such as high transaction costs, are eliminated, thereby making fair use unnecessary. Fair use has traditionally been applied to activities that are deemed to be socially useful such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship or research. Where fair use is applied to a particular activity it is considered to be a non-infringing use. In any situation where fair use is used as a defence to copyright infringement four factors must be considered in establishing it:

(1) The purpose and character of the use, including whether such use is of a commercial nature or is for non-profit educational purposes;
(2) the nature of the copyrighted work;
(3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
(4) The effect of the use upon the potential market for or value of the copyrighted work.

The most significant decision on fair use in recent years is the decision of the U.S. Supreme Court in Campbell v. Acuff Rose Music, Inc[91], a case that concerned a parody of the Roy Orbison song "Pretty Woman", the defendant sought permission to create a parody of "Pretty Woman", which was refused. The defendants then published the parody on a compilation of songs and after about a year the plaintiffs sued for copyright infringement. The defendants contended that they used no more of the original song than was needed to make a parody and that this was fair use. The district court granted summary judgment in favour of the defendants on the grounds that the commercial purpose of their song was not a bar to a finding of fair use and that the defendant's song was not likely to have an adverse impact on the market for the original. The Court of Appeals for the Sixth Circuit reversed and remanded holding that the blatantly commercial nature of the parody weighed against a finding of fair use under the first factor listed by s.107 of the Copyright Act 1976 (U.S.A.)

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[91] 510 U.S. 569 (1994).

and this (by virtue of the decision in Sony) gave rise to a presumption of harm for the purposes of fair use analysis. Subsequently the Supreme Court found in favour of the defendants, and in there consideration of the first factor found that the main consideration was as to whether the work was transformative or merely superseded the "objects" of the original. Furthermore, the Court of Appeals was wrong to confine itself to consideration merely of the first factor, and the Sony case in itself did not give rise to any hard evidentiary presumption of harm. The second factor (i.e. the nature of the work) gave more protection to those works that are nearer to the intended copyright protection; however, this rule was not of great assistance in the case of a parody since the work copied had to be a publicly known expressive work. Even though the essential core of the work was taken, this use was not excessive in the case of a parody since that was necessary to make the object of its critical wit recognisable, hence the normal effect of the third factor (militating against a finding of fair use) was negated. Finally, in considering the fourth factor the court had to consider not only the extent of market harm caused by the particular actions of the alleged infringer, but also "whether unrestricted and widespread conduct of the sort engaged in by the defendant would result in a substantial impact on the potential market for the original".

The subsequent case of American Geophysical Union v. Texaco Inc[92] a case brought before the second circuit Court of Appeals that concerned the copying of journal articles by scientists working in a for-profit organisation. The plaintiffs employed around 400 to 500 research scientists nationally and it was common practice for their research scientists to photocopy journal articles. The plaintiffs refused to pay for a separate licence with regard to this copying and in the ensuing class action the defendants pleaded fair use as one of their defences. Because of the scale of copying, the activities of one particular scientist were sampled and used in a trial that made a thorough analysis of the four fair use factors. Ultimately the claim of fair use was rejected; however, the minority opinion in the case is useful in terms of its analysis of collective licensing and new technological uses of copyright material.

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[92] 60 F.3d 913 (2d Cir. 1995).

For the purposes of photocopying fair use allows the copying of a limited amount of copyright material under certain circumstances. However, the district court overemphasised the plaintiff's for-profit status, thereby giving an excessively restrictive view of fair use. Although the district court thought that the infringing use was not transformative, the Supreme Court subsequently ruled that though a " transformative use is not absolutely necessary for finding fair use, ... the more transformative the new work, the less will be the significance of other factors, like commercialism, that may weigh against a finding of fair use"[93]. In assessing the nature of copyrighted work the district court was right to find that this factor favoured the defendants because of the factual nature of the work[94].

In its analysis of the fourth factor the majority in the Appeal Court considered that the presence of a viable system of copyright licensing i.e. the Copyright Clearance Centre significantly weakened the case for fair use. Here Newman J.[95] specifically states; "It is difficult to understand why Congress would recommend establishing such a mechanism if it did not believe that fees for photocopying should be legally recognised as part of the potential market for journal articles". However, in his dissenting judgment Jacobs J.[96] opines that the conclusion of the licence with the Copyright Clearance Centre has little to do with fair use because the scheme is neither traditional nor reasonable, and its development into an actual market being subject to significant impediments.

Traditionally the fair use doctrine has been applied mostly to for-profit organisations. In Princeton University Press v. Michigan Document Services, Inc[97] the court had decide whether the defendants, a copy shop which supplied course packs for students without first obtaining permissions from the publishers could avail themselves of the fair use defence. Although students used the course packs for educational purposes,

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[93] See Campbell, 114 S.Ct. at 1174.
[94] See 17 U.S.C., s.107(3).
[95] See note 93 above, p926.
[96] ibid., p932.
[97] U.S. App. LEXIS 7474 (6th Cir. 1996).

the court held that the use made by the defendants was for profit and therefore failed the first test[98]. Secondly, the course packs did not consist of straightforward copies, and the alterations to the original text were sufficient to make them derivative works. Thirdly, the portion of copyrighted work used in the packs was not so substantial as to supersede the original works. In relation to the fourth factor the court had to consider "whether unrestricted and widespread conduct of the sort engaged in by the defendant...would result in a substantially adverse impact on the potential market for the original." Here there would also have to be consideration of markets for derivative works[99]. The court decided that; "Given the undisputed fact that professors would not have assigned works in the absence of available course pack compilations of excerpts, it appears that there is no damage to the market for the original work."[100] On this basis the decision of the district court was reversed and summary judgment granted. More recently the issue of fair use has been considered by the Canadian courts, in CCH Canadian Ltd v. The Law Society of Upper Canada[100], where the Canadian Supreme Court was asked to consider whether law reports were "original" literary works and whether the reproduction of law reports by the appellant, a non-profit law library, constituted infringement. The case is significant because many of the authorities considered were English cases and because the Canadian Copyright Act is broadly similar to the CDPA, especially in terms of its exemptions. The respondents had asked for a declaration that certain works were owned by them and that the appellants had infringed their rights in those works by reproducing single copies of them. They also sought an injunction restraining the appellants from reproducing these works. The appellants counterclaimed seeking a declaration that copyright is not infringed when a single copy of a reported decision, case summary, statute, or a limited amount of text from a treatise is reproduced. On a cross-appeal the respondents submitted that the appellants had also infringed copyright in their publications both by faxing copies and selling copies of their works through their custom photocopy service.

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[98] See 17 U.S.C., s.107(1).
[99] See 17 U.S.C., s.107(4).
[100] The defendants were bound to show that their copyrights were devalued, not just that licence fees payable in the first instance were lost.
[100] 2004 SCC 13 (March 4, 2004).

In relation to the main appeal the issues were: (1) Are the publisher's works "original" works protected by copyright; (2) Did the appellant authorize copyright infringement by maintaining self-service photocopiers; (3) Were the appellants entitled to claim the fair dealing exemption for Libraries created by s.29 of the Copyright Act 1985 (Canada); and (4) Had the respondent consented to reproduction of it's works by the appellant. With regard to the cross-appeal the issues were as follows: (1) Did the appellant's fax transmissions constitute communications "to the public" within s.3(1)(f) of the Act; (2) Were the appellants fax transmissions infringements within the meaning of s.27(2) of the Act; (3) Did the appellants qualify for an exemption as a "library, archive or museum" under s.2 and s.30(2)(1) of the Act; and (4) Was the infringement of the respondents works that had occurred sufficient to justify the grant of a permanent injunction.

With regard to the main appeal the court in allowing the appeal held that the appellant did not infringe copyright when a single copy of a reported decision, case summary, statute, regulation or limited selection of text from a treatise is made in their library. In its reasoning the court was of the view that copyright subsisted in the respondent's case summaries, topical indices and compilations of reported judicial decisions. For the purposes of the Copyright Act an "original" work is one that originates from the author and has not been copied from another work. The work must be the product of the author's skill and judgment. Skill in this context means "the use of one's knowledge, developed aptitude or practised ability in producing the work." Judgement means "the use of one's capacity for discernment or ability to form an opinion or evaluation by comparing different possible options for producing the work". With regard to the second point the court took the view that the appellants did not authorize infringement by providing self service copiers for use by its patrons. While it was possible to authorize infringement through acts that amounted to less than direct infringement, the mere provision of equipment that could be used to infringe copyright was not sufficient to constitute authorization. In any event the appellant lacked the requisite degree of control over its patrons needed to establish

secondary infringement. On the third point as to whether the appellant's dealings were fair under s.29 of the Copyright Act they had to establish that (1) the dealing was for the purpose of research and private study and (2) the dealing was fair. In this context research was to be given a liberal interpretation. Fairness depends on the facts of each case. However, the following factors were to be considered (1) the purpose of the dealing; (2) the character of dealing; (3) the amount of dealing; (4) alternatives to dealing; (5) the nature of the work; and (6) the effect of the dealing on the work. The purpose of dealing refers to allowable purposes under the Canadian Copyright Act and the character of the work refers to how a work is dealt with. The amount of dealing relates to the substantiality of the portion of the work used and the alternatives to dealing refers to alternative works, i.e. works that are out of copyright, that could be used. The nature of the work can refer to its quality or classification, although in this case particular emphasis is placed upon whether the work is published or un-published. Here use of un-published works is likely to be regarded as unfair if there is any breach of confidentiality. The final factor is primarily concerned with situations where the making of copies is likely to affect the market for the original. On the fourth point in the main appeal the court held that the patron in question had in fact given consent to the making of the copies of works specified by them.

On the cross appeal the court in dismissing the cross appeal held that the appellants custom copy service did not infringe the respondents copyright by providing single copies of their works to its members on request. The court reasoned that the fax transmissions were not communications to the public because they "emanated from a single point and were each intended to be received at a single point". On the second point the court held that there was no secondary infringement because the appellants did not know or have reason to know that they were dealing in infringing copies of the publisher's works. On the third point the court found the appellants were entitled to claim the exemption under s.30(2)(1) of the Act. Even though the libraries patrons conducted business for profit, the libraries trustees acting in their capacity as trustees did not conduct business for profit or act as a body conducting a business for profit. On the final point the court held that it was unnecessary to consider this since it had

already found that the appellants had not infringed copyright. What this case demonstrates is that aside from developments created by the Information Society Directive it is possible to introduce an American conception of 'fair use' into a copyright system with no such tradition, however, Canada has not yet signed up to the WIPO Copyright treaties so it's courts have more freedom in terms of the interpretation of statutory exemptions than they would otherwise have. However, the case may still demonstrates that many of the negative effects of the Information Society Directive can be negated through judicial interpretation.

The above cases are as applicable to fair use as applied to the Internet as to hard-copy materials. In Washington Post v. Free Republic[101] the plaintiff newspapers alleged that the defendants engaged in the unauthorised posting and copying of their news articles on the Free Republic website, this they claimed constituted copyright infringement. The plaintiffs charge users to download news articles from their websites as well as selling advertising space. They claimed that the defendants were free-riding on their site, thereby reducing the revenue it generated. The defendants claimed fair use and therefore bore the burden of proof. Although the purpose of the site was to facilitate criticism this did not automatically weigh in the favour of the defendant[102], the wholesale nature of copying in fact precluded the fair use defence. The fact that the material involved consisted of news reports weighed in favour of the defendant because of its factual content[103]. Fourthly, the fact that the defendant's site allowed users to read the plaintiff's articles without paying lessened the value of their site. Putting all these factors together it was clear that they weighed against a finding of fair use.

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[101] Case No.98-7840 MMM (AJWx) (C.D.Cal, 9 Nov. 1999).
[102] Harper & Row Publishers, Inc. v. Nation Enter., 471 U.S. 539, 560 (1985).
[103] See Campbell Acuff-Rose Music, Inc., 510 U.S. 569, 579 (1995).

6.23 Conclusion

In analysing laws enacted in the U.S. and the E.U. it is easy to conclude that it is difficult to compromise a general-purpose anti-circumvention statute with the technical structure of the Internet i.e. linking and caching. While the European Commission generally encourages cross-border trade within the EEA, the rules regarding jurisdiction are confused and inconsistent. In the U.S the situation is no better since the default rules regarding jurisdiction will be dependent on the wording of state long-arm statutes. Although facts, public domain material and unregulated uses are not protected by copyright, this is exactly what the DMCA and the Information Society Directive does by indiscriminately protecting technological protection systems using severe civil and criminal penalties. Furthermore, in Europe the concept of exhaustion is not applied to rental rights thereby extending copyright even more. The Distance Selling Directive provides consumers of products distributed over the Internet with some useful rights such as basic information about products and services, as well as information about their providers. The Directive also gives consumers a right of withdrawal; however, the burden of proof in relation to most transactions is placed on the consumer. While Internet transactions involving satellite are not yet of great economic significance this situation is likely to change. When this happens this will create significant problems in relation to jurisdiction and enforcement. The Satellite Directive settles some problems concerning jurisdictional disputes, however, in relation to specific rights the Satellite Directive merely defers to the Berne Convention, thus leaving most issues unresolved. It is also clear that moral rights and fair use will be significant issues in the digital environment; however, both concepts are likely to be treated as barriers to rights clearance. Indeed the more rights clearance systems become an established means of negotiating over rights in multimedia works, the more difficult it will be to sustain any notion of fair use or moral rights.

While the Internet has global reach and facilitates easy distribution of copyright material, it also facilitates piracy. Technical protection devices can only operate effectively in a harmonised legal environment. However, in the United States and the European Union the relevant legislation fails to do this. This legislation is biased towards the content industry, it does not sufficiently protect consumers or harmonise laws, and some would argue that it in fact stifles creativity rather than promotes it. However, the Internet is an ideal medium for cross-border trade and forms an integral part of the European Commissions conception of the internal market. But before trade can flourish there needs to be greater certainty in relation to jurisdiction and applicable law on the Internet. The Commission aims to promote the free movement of goods and services on the Internet in terms of the removal of both direct and indirect restrictions. In the U.K. the approach to determining jurisdiction operates very much on a case by case basis. This requires an active step that goes beyond the mere provision of facilities. In E.U. courts the prevailing doctrine is that of "permanent establishment", unfortunately many websites do not fall within the definition of "permanent establishment". The Electronic Commerce Directive was enacted with the intention of improving the operation of the internal market by ensuring the free movement of "information society services" between Member States. The Directive defines these as "any service provided at a distance, by electronic means". This includes services provided at the individual request of the recipient not specifically exempted by the Directive or covered by the Brussels Convention. Under the Directive applicable law is that of the country in which the service provider engages in economic activity for an indefinite period. However, the Directive does not deal with consumer contract disputes. Significantly, the Directive exempts ISPs from liability in respect of content where they have no knowledge of it, and should they become aware they may escape liability if they are expeditious in the removal of such content. The concept of establishment used in the Directive is poorly adapted to the electronic environment, although its provisions concerning the minimum information to be provided to consumers will be useful. The main problem with the Directive is that it does not apply to non-contractual disputes and will only

apply to some types of multimedia works. The Directive itself will be subject to periodic review.

In the United States jurisdiction is subject to due process and the doctrine of minimum contacts referred to in case law as "traditional notions of fair play and substantial justice". This has been interpreted both broadly and narrowly. On a narrow interpretation this means physical presence in the jurisdiction. On the broader interpretation this means conducting certain activities in the jurisdiction. In relation to Internet jurisdiction a sliding scale has been developed with passive websites at the bottom and interactive websites at the top. A subsequent test is that of a "real and substantial connection" with the Forum state. In the most recent case jurisdiction was refused because of free speech considerations, the breadth of the injunction, and the practical effect of enforcement. On appeal, however, the Ninth Circuit Court of Appeals held that while the plaintiffs were entitled to act as they did, their actions in the U.S. were not sufficient to purposely avail themselves of the privileges of conducting activities in the forum.

At an international level the Hague Convention regulates contracts between consumers and vendors who knowingly contract to supply goods or services in the course of their trade or profession. This is subject to two exceptions i.e. when the consumer has arranged for completion of the contract in another state, and where the consumer is present in that state where the goods or services were being supplied. The Convention applies where there is no forum clause in the contract and contracts must take place in the State where the consumer is habitually resident. Under the Convention litigants in tort actions may sue in the state where the alleged act or omission occurred, or in the state where the injury arose. This scenario may be avoided where the defendant takes reasonable steps to direct activity away from a particular state(s). Also if the plaintiff is habitually resident in the state where injury arose jurisdiction will arise in that state alone.

Multimedia products distributed over the Internet will usually include software, software that may take the form of source code or object code. Since the Commission views intellectual property as playing a significant part in the Information Society it has sought to harmonise the protection of software. The Software Directive treats software programs as literary works. While it does not protect ideas as such, it protects computer programs that are the author's "own intellectual creation" and outlaws the circumvention of technical protection measures. Unfortunately the Directive does not define the term "computer program", and fails to deal with the concept of legal personality, which can vary substantially between civil and common law jurisdictions. The Directive provides for a minimum level of protection among Member States, however, the high degree of latitude given to Member States in the implementation of the Directive introduces a large degree of uncertainty with regard to its practical effect.

The protection of multimedia works on the Internet must necessarily entail the regulation of rental transactions since these are very prevalent in the entertainment industry. Hence the Rental Rights Directive was enacted with the object of securing a return on investment for multimedia developers, especially those involved in high-risk projects. The Directive grants copyright owners the exclusive right to authorise lending and an author's right to equitable remuneration in relation to public lending. These rights are subject to exhaustion within the EEA, if there is a first sale, and are tenable for a term of 20 years. They are also subject to very narrow exemptions regarding private use, teaching, and scientific research. The Copyright and Related Rights Regulations 1996 implement the Directive into U.K. law. These create a right to equitable remuneration only in respect of literary, dramatic and musical works, and films. They also provide copyright owners with the right to prohibit rental of films, which are classified as works of joint authorship. The authors of a film are thus the producer and the principal director.

Multimedia works are likely to be distributed on satellite networks in the near future, so their role may become significant. The challenges involved in regulating satellite

technology include jurisdiction and enforcement issues, maintaining access, and ensuring fair competition. These are significant in relation to the distribution of multimedia products because satellite communication systems will ultimately have multimedia capabilities. While the Satellite Directive has not yet entered into force, it will affect all forms of distance selling including products and services. The approach of the Directive is deregulated so market entrants are only subject to rules that are objective, transparent, and non-discriminatory. Perhaps the most significant provisions of the Directive are those relating to jurisdiction. Where there is an uninterrupted chain of communication under the control of a single broadcasting organisation this is taken to reside in the uplink State. The Directive protects recordings of audio-visual works rather than the works themselves. It grants authors the exclusive right to authorise communication to the public, and applies specifically to collective agreements, even when unrepresented rightholders are involved. Jurisdiction is still determined primarily by the Brussels convention and defendants are to be sued in their country of domicile. However, it does not solve the fundamental problem of applying the permanent establishment doctrine to the Internet.

According to the European Commission distance selling has an essential role in the functioning of the internal market. The Commission has therefore sought to approximate laws concerning distance contracts between consumers and suppliers. The Distance Selling Directive regulates five main aspects of distance contracting, namely: (1) provision of information about contracts; (2) the right of withdrawal from contracts; (3) the time of contractual performance; (4) credit card payments; and (5) inertia selling. Certain transactions are exempted from the Directive including those involving vending machines, financial services, foodstuffs, immovable property, and contracts with service providers made on pay phones. Significantly, the directive sets minimum standard of contractual information to be given to consumers, including the vendors name and address, a description of the goods or services, the price, the duration of contract, and arrangements for payment and delivery. Problems with the Directive include its failure to define cancellation arrangements and the placing on the consumer of the burden of proof in situations where a refund is required. Further, the

omission of financial services from the scope of the Directive is significant and will require a legislative solution. Directive 2002/65 concerning the marketing of consumer financial services was enacted in September 2002.

Until late 2001 the WIPO Copyright Treaties were not implemented into European law, and it was with this end in mind that the Commission introduced the Information Society Directive. This applies to direct or indirect, temporary or permanent reproduction by any means in any form, in whole or in part. Consequently, the Directive has very complex provisions regarding temporary and incidental reproduction. This must inevitably have some adverse impact on the functioning of the Internet since this goes to the root of Internet communications. The Directive introduces the right of communication to the public without defining the term "public". The exceptions created by the Directive are very narrow and fixed, only some of them are compulsory, creating a risk of inconsistent implementation. Further, the anti-circumvention provisions of the Directive are far too broad and will prohibit many devices that have legitimate uses, consequently rightholders will be able to exert a great deal of downstream control, including control over public domain materials. The Information Society Directive borrows heavily from the DMCA, it is too technology specific and leaves too many terms undefined. In the end result the Directive does not harmonise rules, does not facilitate free movement of goods and services, and does not remove competitive distortions.

While the European Commission sees moral rights as increasingly relevant in the Information Society the treatment of moral rights among Member States is very inconsistent. The U.K. has pursued a minimalist approach to moral rights, so in both the U.K. and the U.S.A. it is possible to obtain outright control of an author's work. In the rest of Europe authors retain moral rights even where their economic rights are divested. This represents a serious obstruction to the production of multimedia works since moral rights, especially the right of integrity and the right of withdrawal, can be asserted after the production process is complete. Fair use plays a vital role in the practical operation of copyright law; however, it seems unlikely that the Information

Society Directive will produce a consistent treatment of copyright exceptions. What is required is a broader conception of fair use like that applied in the United States. This is needed because fair use deals with situations of market failure and because the alternatives to fair use are either too inflexible or unconscionable. If copyright is to be seen to be fair, an expansion of fair use is the only practical way to counteract the effects of discrimination through technical devices and licence conditions.

The U.S. equivalent of the Information Society Directive is the DMCA, which was introduced in order to update the U.S. Copyright Act so that it can deal with the challenges of the digital age and to implement the provisions of the WIPO treaties. The DMCA implements a near complete ban on circumvention devices, and has a limited range of extremely narrowly defined exceptions, including exceptions for reverse engineering, encryption research, and security testing. The provisions of the DMCA go far beyond what is required by the WIPO Treaties and also provides a range of very severe civil and criminal penalties, which it is claimed have the effect of stifling creativity. The DMCA provides a specific exemption for service providers; however, to fall within this so-called "safe harbour" service providers must meet a number of very stringent tests. In sum the DMCA is over broad, unpredictable and complex.

If enforcement is to be effective multimedia products must be protected at international level, however, there is no true international copyright since copyrights must be enforced at national level. While international treaties can set global minima they cannot ensure consistent application and enforcement of copyright in multiple jurisdictions. The WIPO Treaties attempt to remove administrative barriers by obliging States not to impose formalities in relation to the acquisition of rights. While the WCT has no provisions regarding transient reproduction, the WPPT emphasises the need to maintain a balance between the interests of performers and producers, and the broader public interest. The WCT gives rightholders the right to control digital copies and the right to authorise communication to the public. It sets out a limited range of exceptions including limited liability for ISPs. Significantly, the WCT creates

an obligation to provide adequate legal protection for technological protection measures and rights management information as well as the provision of effective legal remedies in respect of this. The WPPT creates a specific right of reproduction for phonograms and has many provisions that mirror those of the WCT. However, it is notable that the WPPT does not protect audio-visual performances, which are to be the subject of a separate protocol. Chapter 7 of this thesis next considers the nature of the collective administration of copyright works, its origins, the role of collecting societies and publishers, and the ability of these organisations to handle multimedia rights clearance on the Internet.

CHAPTER 7

Collecting Societies, and the Collective Licensing of Copyright in Multimedia Works

7.0 Introduction

Even after the creation of systems of copyright authors were in a very weak position regarding the exploitation of their works and were subject to the whims of their publishers. Even worse both authors and publishers would not receive payment due to the lack of effective enforcement mechanisms. Collecting societies evolved as a response to this need and the broader social needs of their members. This chapter begins by defining the nature of authorship in Europe and the United States. It then sets out to provide an introduction to the development of collecting societies and to analyse the collective structures provided by collecting societies and their suitability as one-stop-shops to be used in the process of multimedia rights clearance. Further, this chapter looks at the methods of collective licensing, especially in relation to the development of multimedia products.

7.1 Authorship

The notion of authorship first developed in Greece around 700 B.C. and about a thousand years later in China. However, the modern conception of authorship is a more recent phenomenon, which developed in Western Europe and India during the middle ages. This arose primarily as a means of protecting the economic interests of book publishers rather than to protect the intellectual property rights of authors[1]. The Statute of Anne of 1710 was a marked departure from this trend in that it granted

[1] Britannica Online, "Remuneration of Artists and Protection of their Rights", 1999, p2.

standing to both the author and the publisher[2]. Modern copyright legislation in the Member States of the European Union and in the broader context of all industrialised states of a European Atlantic character grants the author of protected works a number of exploitation rights. These rights are in the field of music, literature, photography, film, etc., however, they are difficult to exercise without the help of collecting societies[3]. Authors and their heirs have an exclusive right under the Berne Convention for the Protection of Literary and Artistic works to authorise reproduction of their work. This right is also exercisable by publishers/licensee's, agents, and collecting societies. Monitoring of the reproduction of copyright works is a massive undertaking, which can only be performed effectively on a collective basis[4].

7.2 Legal Conceptions of Authorship in the United States

Authorship has been conceptualised in two main ways, firstly as something mystical that happens inside the authors mind, and secondly as the act of embodying ideas in some physical form. However, these are merely the high and low watermarks of an author's expression and they do not help us determine what lies in between them. In the U.S. the situation is eased by the more definite nature of the statutory language. Here Justice Marshall sitting in the Supreme Court stated[5] in dicta that "An author is the party who actually creates the work, which is the person who translates an idea into a fixed, tangible expression entitled to copyright protection." However, this approach appears rather simplistic, as was shown in the U.S. case of Andrien v. Southern Ocean County Chamber of Commerce[6]. Here the Court of Appeals for the Third Circuit reversed the decision of the court below, holding that the employee of a printing firm was the author of a map since this decision wrested authorship from the plaintiff who thought of the idea in the first place. The case is complicated by the fact

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[2] Mark Rose, *Authors and Owners: The Invention of Copyright,* Harvard University Press 1993, p49.
[3] R. Kreile et al, "Collecting Societies in the Information Society", 1997, p3 at http://www.gema.de/eng/public/jahr97/vidi1.html.
[4] Else Lie, "Collective Administration of Reprographic Rights: General Features of Collective Administration and an Overview of Solutions and Systems applied in Different Countries", p1 at http://www.kopinor.no/dokumentbank/foredrag/engel96-2.html.
[5] Community for Creative Non-Violence v. Reid, 490 U.S. 730, 737, 109 S.Ct. 2166, 2171, 104 L.Ed.2d 811 (1989).

that the work involved was a compilation of maps made into a composite by the printer who organised the scales of the maps, the lettering and the street names. The plaintiff oversaw this work on a fairly intense and regular basis. While the decision of the district court was reversed the case was remanded back to the court below for determination on the facts. Had these facts been only slightly different the defendant could be found to be at least a co-author? The decision rested on the definition of fixation in s.101 of the Copyright Act 1976 (U.S.A.), more a question of fact than law. A further consideration is that the work of an author must be original as the U.S. Supreme Court held in Feist Publications, Inc v. Rural Telephone Service Co[7], however, this judgment requires only that the facts involved in the making of a compilation are obtained independently and that the selection or arrangement of those facts should involve some minimal degree of creativity[8]. The third element in this equation is the so-called idea/expression dichotomy, which is based on the principle that ideas are not copyrightable. Unfortunately this leaves the judge to decide when ideas become sufficiently specific to be considered to be expression, as is demonstrated by some of the authorities that follow. At this point it is important to make a clear distinction between authorship and copyright since one does not follow automatically from the other. Indeed the Copyright Act 1976 (U.S.A) uses communication of original expression rather than authorship or related concepts as the basis of copyright. This naturally involves fixation either directly or indirectly[9].

7.3 Legal Conceptions of Authorship in Europe

In Europe the Commission is of the opinion that the new goods and services delivered over networks such as the Internet will change the nature of authorship, in that moral rights provide an essential link between the author and his creation and that this link is also necessary to ensure the authenticity of copyright works. Further, the Commission sees digitisation as a serious threat to moral rights because of users' ability to copy

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[6] 927 F.2d 132 (3d Cir. 1991).
[7] 499 U.S. 340 (1991).
[8] See Id. p345.
[9] Russ VerSteeg, "Defining "Author" for Purposes of Copyright", 45 Am. U. L. Rev. 1323, 1365 (1996).

and manipulate digital works. But the Commission is also of the view that strict application of moral rights would be counterproductive[10]. This is significant since the Commission sees authors of 'literary and artistic works' as defined in Article 2(1) of the Berne Convention as the primary players in the Information Society[11]. While the number of rightholders involved in the creation of multimedia works will be many, they can still be identified provided it is possible to ascertain who makes the choices or gives directions in the creative process, and who it is that makes the creative expression[12]. However, the fragmentation of authorship will not always fragment ownership. Under Article 2(3) of the Computer Programs Directive for example, the economic rights in a computer program created by an employee acting in the execution of his duties automatically pass to the employer subject to any contrary contract[13]. Similarly under Article 2(5) of the Rental Rights Directive the rental right of a performer is automatically assigned to a film producer unless there is a clause in their contract, which rebuts this presumption[14].

In Godfrey v. Lees[15] a dispute arose as to co-ownership rights in sound recordings produced by a pop group called "Barclay James Harvest". The plaintiff, a pianist and musical arranger was not a member of the band but claimed to be a co-owner of six musical works produced by the band, and sought injunctive relief and damages, or an account of profits. The co-ownership claim was based upon an alleged common understanding between the parties, and it was also claimed that the implied licence granted to the group to allow them to exploit the works had been revoked by letter in February 1985. However, between January 1971 when the plaintiff left the band, he made no attempt to assert the claims made in the first action until February 1985, and no attempt to assert the claims in the second action until June 1994. In the hearing before the Chancery Division of the High Court it was held that there was neither a

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[10] Commission of the European Communities, *Communication from the Commission: Follow-up to the Green Paper on Copyright and Related Rights in the Information Society, Brussels November 1996, COM (96) 586 Final ,p28.*
[11] ibid., p26.
[12] ibid., p27.
[13] Commission of the European Communities, *Green Paper: Copyright and Related Rights in the Information Society, Brussels November 1996, COM (95) 382 Final,* p74.
[14] ibid., p73.

common understanding nor an enforceable agreement. In order to establish joint authorship of a work the plaintiff had to establish that he had made "a significant and original contribution to the creation of a work and that he has done so pursuant to a common design" (Stuart v. Barrett applied[16]). The standard of originality being applied here is relatively low (Redwood Music Ltd. v. Chappel & Co. Ltd. applied[17]). In four out of the six songs the composing of orchestral arrangements was sufficient to meet this requirement, with regard to the other two songs, where the claims were borderline, piano and organ accompaniment was sufficient to meet the standard. However, the plaintiff had allowed 14 years to pass without attempting to assert his rights, in such a situation it would be unconscionable to permit him to deny what he had allowed the defendants to assume for so long, he was therefore estopped from revoking the implied licence.

In the U.K case of Robin Ray v. Classic FM Plc[18] the Chancery Division of the High Court came to decide a copyright infringement claim that hinged upon the co-ownership of a music database produced under a consultancy agreement, and the scope of any implied licence granted there under. The consultancy agreement expressly denied any employment relationship and was limited to the development of software for use within the U.K., but was silent as to the status of the parties' intellectual property rights. The plaintiff was instructed to construct the database because of his expert knowledge of classical music, as part of this he wrote five documents setting out how data was to be organised. These documents were then used to construct a database using special software and works were categorised on a star system according to popularity. The database soon proved its worth and the defendants licensed the software to radio stations outside of the U.K., whereupon the plaintiff sued them for copyright infringement. The plaintiff contended that the five documents and the database belonged only to him, and that in licensing the database software to foreign companies the defendant was acting outwith the scope of any

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[15] [1995] E.M.L.R. 307.
[16] [1994] E.M.L.R. 448.
[17] [1982] R.P.C. 109.
[18] [1998] F.S.R. 622.

consultancy agreement, thereby infringing his copyright in the database. The court held that a joint author for the purposes of s.10(1) of the CDPA is a person (1) who collaborates with another author in the production of a work; (2) who (as an author) provides a significant creative input; and (3) whose contribution is not distinct from that of the other author. He must contribute to the "production" of the work and create something protected by copyright which finds its way into the finished work."[19] While some of the information in the five documents was provided by the defendant and certain categories were standard ones the plaintiff had not acted as a scribe for the defendants and was sole author of the documents. Even though the database underwent various stages of writing the court found no authority to support the proposition that the copyrights in the five documents were subsumed by the database. Despite the express term in the consultancy agreement to the contrary a contract of employment subsisted between the parties, however, the terms of the contract indicated that it was a contract for services, thereby avoiding the operation of s.11(2) of the CDPA which would vest any copyright interest in the employer. While the defendant could make copies of the database as part of the conduct of its business within the U.K., it could not make copies of the database as part of the conduct of its business abroad. Such conduct therefore constituted infringement of both the database and the five documents.

In the subsequent case of Hadley v. Kemp[20] there was an ownership dispute between members of the pop group "Spandau Ballet". The three plaintiffs were instrumentalists, and the first defendant was a keyboard player, singer and composer. The first defendant had been given credit for all but one of the tracks recorded by the band and was then in receipt of all the publishing royalties from these songs. Formerly the company set up by the first defendant received all the publishing revenue, but made pro rata payments to the other members of the band despite not being legally obliged to do so. However, around 1980 or 1981 the first defendant had stopped these payments. Subsequently the plaintiffs claimed to be joint owners of the groups' copyrights or that one or more of them were joint owners of some or all of the

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[19] See Id. p636.

copyrights and accordingly claimed royalties proportionate to their contribution to the works in question. Furthermore, these claims were in respect of the music rather than the lyrics of the songs. Notably the songs were not reduced into a material form until the recordings were made, before this they only existed in the mind of the first defendant.

In dismissing the action the Chancery Division of the High Court held that on the balance of probabilities there was no oral agreement between the parties to share publishing income. To establish joint authorship the plaintiff must show that "he has made a significant and original contribution to the creation of the work and that he has done so pursuant to some common design"[21]. While the plaintiff did not need to show that he contributed in equal quantity, quality, or originality to his co-authors he did need to show a "significant and original contribution to the work". Significantly the musical works existed even before the recordings of them were made. Furthermore, a person claiming joint authorship must show that he contributed "the right kind of skill and labour"[22]. However, the judge was of the opinion that there was no common design and that the possibility of joint authorship had not crossed the minds of the plaintiffs in 1980 or 1981. In R. v. Voralberg Online[23] the plaintiffs operated a website that included pictures of weather patterns taken at an Austrian railway station using a webcam, the site generated revenue through advertising. The webcam was installed and positioned by the plaintiff at the behest of the railway company, but subsequently the railway company allowed the defendants who operated another website to include the photographs produced by the webcam in their site by inserting a link to the webcam in their website. The plaintiffs claim for copyright infringement and unfair competition was dismissed. On appeal to the Austrian Court of Appeals the plaintiffs claim was upheld, and a further appeal to the Supreme Court the defendant's appeal was dismissed, the defendant being ordered to cease and desist in the use of the plaintiff's photographs without consent. The

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[20] [1999] E.M.L.R. 589.
[21] See Id. p643.
[22] See Id. P644.
[23] Case 4 Ob. 15/00 K.

Supreme Court held that the processing performed by the webcam amounted to a photographic process under s.73 of the Austrian Copyright Act and that under s.74 of the Act the pictures produced by the webcam were subject to copyright protection since they were "subject to the creativity of human hands". This was so even though the photographs were produced with the aid of a computer, where others were involved in the production of the photograph the existing rules concerning rights of co-ownership were to be applied. Furthermore, exclusive rights of authorship would subsist where either the photographer or those acting under his instructions make all the necessary adjustments to the camera.

In Re Copyright in Cartoon Character[24] the German Supreme Court was asked to determine the true author of a cartoon character, the "Pink Elephant", used as part of an advertising campaign. The plaintiff in this case was a graphic designer employed by the defendants through an advertising agency, which instructed the plaintiff to produce drawings of the "Pink Elephant" in different postures. Following a dispute over payment for the campaign, the defendants counterclaimed and requested a declaration to the effect that the plaintiff had no claim in relation to the drawings based on contract or copyright. The district court dismissed the counterclaim, and after an unsuccessful appeal the defendant appealed to the Supreme Court, which held, allowing the appeal, that the drawings were capable of protection under s.2(1)(iv) of the German Copyright Act. While the idea of the "Pink Elephant" did not come from the plaintiff, a person is the author or co-author of a work if he has created or co-created the work as a "personal intellectual creation". For this purpose mere ideas that are only partially evolved are not enough. It was not clear whether the defendants instructions to the plaintiff were always put in concrete terms, accordingly the case was remitted to the Court of Appeals for rehearing in order that this point could be argued more fully.

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[24] Case I ZR 156/92 of October 1994.

7.4 What are Collecting Societies?

Collecting societies or Reproduction Rights Organisations (RROs) as they have come to be known were formed in order to facilitate wide-scale photocopy access to the world's scientific and cultural works where it was not possible for rights-holders to act individually. In this way it was possible for RROs to service the economic needs of their members and grant access to their work for a fee. The authority to do this may be derived from statute or from contracts with rights-holders. Licences usually grant the licensee authority to copy a limited number of copies of a portion of a publication for internal institutional use. Some RROs also license the distribution of copyright works across electronic networks, and some will authorise cable transmission, although it is becoming increasingly difficult to see the difference between these forms of distribution[25].

7.5 Early History

The first collecting societies administered rights in musical works, which were first recognised in the English court case of Bach v. Longman[26]. Collecting societies were first formed in the turbulent environment of mid nineteenth century France. This was only possible because of the efforts of Caron de Beaumarchais, a watchmaker turned author who suffered greatly at the hands of the French aristocracy, which suppressed his work, most notably the Marriage of Figaro. As a result of his work just before the 1789 revolution and subsequent years, the French government passed Decree-Laws in 1791 and 1793, investing performance and reproduction rights in the author, thus enabling them to claim royalties in respect of their work[27]. In 1847 the French composer Bourget initiated infringement proceedings in respect of unauthorised performances of his work. This led to the formation of the music collecting society

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[25] IFRRO, "Introduction, Operation & History", p1. Available from: http://www.ifrro.org/intro.html.
[26] (1777) Cowp. 623.
[27] Jean-Loup Tournier, "The Information Society: Copyright and multimedia", LAB 1995, p1. Available from: http://ww2.echo.lu/legal/en950426/tournier.html.

SACEM, which gave the impetus to a movement, which eventually became worldwide[28]. Subsequently the Genossenschaft Deutscher Tonsetzer ("GDT") was established in Germany in 1903 under the chairmanship of Richard Strauss. This gave rise to the formation to a rival society, which later became GEMA (Genossenchaft zur Verwertung musikalischer Auffurungsrechte) in 1915. In the U.K. the enactment of the Copyright Act 1911 gave fuller protection to musical works after extensive lobbying by the Music Publishers Association ("MPA"). This resulted in the formation of the Performing Rights Society ("PRS")[29].

7.6 Definition

On a very narrow definition collecting societies are just money collecting machines. Herman Cohen Jehoram for example defines a collecting society as "an institution mostly founded by a certain category of copyright owners, which will assert collectively the rights of its members to grant copyright authorisation for certain uses of their works and which will collect and allocate the corresponding royalties."[30] On the whole collecting societies in the USA do correspond to this definition, however, in Europe the historical evolution of collecting societies has resulted in organisations that reflect the interests of the professions they represent. Consequently European collecting societies play an important social role, and deduct sums from royalties in order to fund these activities[31].

7.7 Collective administration of Reproduction Rights

The use of individual exclusive licensing of copyright reproduction has proved an adequate means of administering copyright regimes so long as the means of that reproduction remained in few hands. However, the arrival of the photocopier, and

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[28] Gavin McFarlane, *A Practical Introduction to Copyright*, McGraw-Hill 1982 p116.
[29] Martin Kretschmer, "The Failure of Property Rules in Collective Administration: Rethinking Copyright Societies as Regulatory Instruments", E.I.P.R. 2002, 24(3), p129.
[30] Herman Cohen Jehoram, "Intellectual property: The future of copyright collecting societies", E.I.P.R. 2001, 23(3), p135.
[31] ibid., p137.

then the computer has given access to the reproductive technologies to the masses, making individual exclusive licensing unworkable. The only viable alternative to this is collective administration, which has been carried on within collecting societies for many years in relation to non-dramatic musical performance rights. In some countries such administration is carried out on a voluntary basis whereas in other countries royalties are collected under statutory licences. Once the monies are collected they must be distributed amongst the members of the RRO, and the method of distribution may also vary from country to country[32]. According to IFRRO "collective licensing enables copyright owners to exercise rights in a fair, efficient and accessible manner for the benefit of corporate and individual users of copyright material." Following this theory RROs can balance owners' rights with users' needs by designing appropriate licensing, reporting and payment mechanisms. Most RROs are established under the provisions of national legislation in order to administer specific rights, or their operation is permitted by virtue of an exception to state anti-trust laws. In some RROs that operate under the contractual model schemes may be compulsory, but in most cases there is a significant voluntary element to such schemes. A variation on the contractual model is a contractual model with exclusions. In other words licences may authorise the copying of the works of participating rightsholders but at the same time give rightsholders the option of excluding their repertoire from such copying[33].

Authors of musical works have long understood the benefits of the collective administration of rights; however, multimedia includes other types of works. This means that the owners of rights in lyrics, pictures and films, etc. as well the owners of performing rights must be sure that they are willing to participate in these joint arrangements for simplifying the administration of rights. They must also be certain as to whether they wish to maintain the right to administer their rights separately, or in parallel with these collective arrangements[34]. The success of reproduction rights organisations (RROs) in collecting royalties depends on four key factors, namely; (1)

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[32] John-Willy Rudolph, "The Role, Importance and Possibilities of Collecting Societies in a Digital Age", Kopinor 1996 p1. Available from: http://www.kopinor.no/dokumentbank/foredrag/engjwr96-1.html.
[33] ibid., p2.
[34] ibid, p1.

the state copyright legislation; (2) the attitude of government institutions to copyright and the collective administration of rights; (3) user friendliness of licensing and collection regimes; and (4) the attitude and involvement of rightsholders in the running of RROs[35]. Also given the improved reproductive capabilities of multimedia technologies, including the possibility of enhancing the quality of digital images, the restraints placed on a copyright management system (CMS) becomes particularly important in perpetuating the success of an RRO in collecting royalties. Where a CMS is cumbersome either in terms of licensing or payment it is unlikely to succeed commercially[36]. Indeed in relation to the threat posed by digital technology Charles Clark of the Copyright Licensing Association has asserted that "The Answer to the Machine Lies in the Machine"[37].

The Berne Convention for the Protection of Literary and Artistic works gives authors an exclusive right to authorise the reproduction of their work, a right exercisable by the author or his heirs, by a publisher, through an agency or a collecting society. According to KOPINOR in their publication "Collective administration of copyright and neighbouring rights" the collective administration of rights involves the authorised administration of rights by collective administration organisations sanctioned by rights owners[38]. This administration being based upon voluntary licensing where possible, and entails the monitoring of the use of works, negotiating agreements with user groups and granting licences, as well as the collection of remuneration and the distribution of remuneration to rightsholders.

In order to carry out their function RROs must assess the effectiveness of systems for the distribution of royalties, usually by means of surveys designed to reveal the extent of copying, the sources and types of material copied, and the countries of origin of the rightsholders involved. The collection of remuneration is usually facilitated via

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[35] ibid., p3.
[36] ibid., p8.
[37] ibid., p9.
[38] Else Lie, "Collective Administration of Reprographic Rights: General Features of Collective Administration and an Overview of Solutions and Systems applied in Different Countries", Kopinor 1996, p1. Available from: http://www.kopinor.no /dokumentbank/foredrag/engel96-2.html.

licensing arrangements. These may be blanket arrangements or may be on a per copy basis where different tariffs are set for different kinds of use. Distribution of remuneration may be directly to rightsholders, or may involve complex sampling techniques, which determine the titles and authors of the material copied as well as the number of copies made[39]. The collective administration of rights is advantageous to authors in terms of the collective enforcement of rights, improved public awareness of copyright issues, improved access to the authors work as well as the advisory functions of RROs and the obvious financial advantages to the rightsholder[40].

7.8 Preconditions for the Collective Administration of Copyrights

Because of the intangible nature of intellectual property the possibility of effective administration of rights is by no means concluded. Very few users apply for authorisations as required by the law, and there is little understanding amongst the public of the reasons why they should pay for the use of intellectual property, even where this understanding does exist the level of charges is often disputed. This makes the business of collective administration of author's rights a costly and technically complex affair[41]. Technical solutions offer some hope, but a comprehensive user education programme must inevitably play an important role in improving the environment for establishing any form of collective administration of author's rights. In this connection it is necessary to have clear rules on what is, or is not allowed. To this end some argue that broad exceptions to copyright are undesirable since they are only likely to cause confusion. However, in the digital environment some broad or at least flexible exceptions to copyright are essential because otherwise the normal manipulation of data may become legally impossible i.e. linking, caching etc.

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[39] ibid., p5.
[40] ibid., p6.
[41] Jean-Loup Tournier, "The Information Society: copyright and multimedia", LAB 1995, p4. Available from: http://ww2.echo.lu/legal/en950426/tournier.html.

7.9 Advantages and Disadvantages of Collective Administration

Collective licensing has a number of benefits for both rightholders and users, the main advantages are increased compliance, reduced transaction costs, and simplified licensing procedures. Lowering the costs of licensing and making licensing procedures simpler reduces the cost of compliance. This in turn encourages users to licence rather than risk conviction for unauthorised copying. Furthermore, by reducing the costs of enforcement collective licensing improves the cost effectiveness of enforcement. The main disadvantage of collective exploitation of works is that it may cause market distortions because it brings together would-be competitors and brings about the joint determination of prices (i.e. price fixing)[42]. In the words of a collecting society's solicitor: "It is not surprising that collecting societies have potential to interfere with competition policy. Collecting societies by virtue of their importance to copyright owners, and the volume of rights they control, will almost certainly dominate their respective markets. For example they are usually the only relevant body from which users can obtain rights from different copyright owners." However, there is some question as to whether collective administration of rights will continue to be a potent force in view of technological changes brought about by rights management technology. If this is effective it may eliminate the need for collective administration of rights by allowing individual rightholders to control their rights, thus removing the need for an intermediary. Another school of thought suggests that collective licensing regimes may become a victim of their own success i.e. by lowering transaction and enforcement costs and constructing the necessary infrastructure to a point where automated CMS become a more attractive (and cheaper) method of rights management for rights owners[43]. This is not unlike the way in which telecommunications companies can become the victim of their own success, especially where they attract the attention of regulators. Generally speaking RROs are relatively new organisations most having come into being in the last 25 years. RROs are established in at least 19 countries and many of them are established by national

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[42] Jeremy Thorpe, "Regulating the Collective Exploitation of Copyright", Promethius, Vol. 16, No.3, 1998, p319.
[43] ibid., p327.

legislation or regulations. With the arrival of the global market place the main challenge facing RROs is how to effectively coordinate their activities on an international scale. This is achieved primarily through bilateral agreements established on the principle of "national treatment "as set out in the Berne Convention. Under this principle rightsholders belonging to one country are to be treated no less favourably than those belonging to another[44].

7.10 Collective Administration versus Central Administration

The kind of collective administration currently employed by collecting societies is as Stamatoudi observes conducted en mass and on a 'take-it-or leave-it' basis using standard form contracts[45]. This she sees as inflexible and inconsiderate in relation to the needs of individual authors. Thus she concludes that while collecting societies have bargaining power, they are put at a competitive disadvantage in relation to competitors because of the inflexible nature of their licence contracts. In the alternative Stamatoudi views 'central administration' as facilitating more individualised contracts formed on the basis of supply and demand. Indeed automated licensing operations on the Internet can operate on a 24-hour basis collecting money and providing a full range of licences thereby eliminating any need for blanket licensing or collecting societies[46]. This reflects the view of the Commission which has stated: "Rather than having to think in terms of a generalised right to remuneration, therefore, we may, if systems of this kind become a reality, be moving to a more and more finely tuned and individualised form of rights management."[47] Stamatoudi is of the view that best solution will be a compromise between both models[48]. However, the creation of a centralised system of rights administration is most likely to be driven by its potential to reduce transaction costs, and ease of use considerations. Such a

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[44] Joseph S. Alen, "Collective Licensing as a Practical Solution", The Bookmark, Winter 1992, p119.
[45] Irini A. Stamatoudi, *Copyright and Multimedia Works: A Comparative Analysis*, Cambridge University Press 2002, p161.
[46] See note 29 above, p137.
[47] See note 13 above, *p75.*
[48] See note 45 above, p264.

system could potentially eliminate collecting societies and their social functions, favouring the highest earners over less successful authors.

7.11 The general character of collective administration

The administration of the exploitation of rights requires not only the requisite administrative structures, but also an organisation with the autonomy and locus standi to be able to act on behalf of its members. In such a set up individuals lose their autonomy to the internal relationship amongst the members of the society[49].

Like any commercial organisation collecting societies are subject to antitrust barriers and according to the European Court of Justice are subject to Article 85 and Article 86 of the EC Treaty. In effect the court must tread the narrow line between "the prohibition of national collecting copyright monopolies on the one hand and unlimited authorisation based on entitlement to copyright administration on the other"[50]. One of the primary purposes of collecting societies is to collect royalties in respect of the licences it grants, and then to distribute these monies between its members. In order that this distribution may be conducted equitably there must be a distribution plan that sets out formulae for calculating the share of royalties, which each member will receive as well as the allocation for any costs and disbursements. This distribution plan must reflect the overall cultural aims of the society. A second key object for a collecting society is the provision of benefits for copyright owners i.e. retirement funds, social funds etc.[51]. Finally, there is a need to address the needs of foreign copyright owners. This is done on the basis of reciprocal agreements with foreign collecting societies, whereby the second collecting society collects monies on behalf of the second named society in return for a standard ten percent premium[52].

In the U.K. the main society involved in performing rights administration is the

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[49] Peter Lerche, 'Legal issues associated with the accomplishment of cultural and social tasks in collectively administering authors' rights, especially with regard to the so-called 10% GEMA deduction", 1998, p1. Available from: http://www.gema.de/eng/public/jahr98/feature/index.html.
[50] ibid., p3.
[51] ibid., p6.
[52] ibid., p8.

The Performing Rights Society (PRS). This was founded in 1914 in order to secure a fair return for publishers, and composers of music in the U.K., however, there was internal disagreement within the PRS as to the way in which revenue should be divided between publishers and composers. Prior to the 1950's the structure of the PRS was essentially paternalistic, depending on the hard work of its senior management and the docility of its membership[53]. The PRS is a company limited by guarantee with a legal personality separate from that of individual members. Apart from the fact that companies limited by guarantee are subject to special arrangements in the event of their insolvency the rules governing them are dictated by the Companies Acts in the same way as companies limited by shares. In order to become a member of PRS applicants must be a composer or lyricist and must be able to provide evidence of the commercial exploitation of three works within two years, alternatively applicants must have given 12 public performances within the last two years. Membership is also subject to payment of a registration fee. Provisional membership may be terminated without giving notice or a reason for termination[54].

7.12 Pricing

The price of a copyright work can only determined where adequate accounting mechanisms are in place, where this is so the price of the material used must be calculated on the basis of some predefined measure of usage. This will typically be based upon the volume of protected material copied, and the source and type of material copied[55]. The pricing of copyright material will also depend heavily upon the extent of legal protection offered to rightholders in a particular country.

In relation to the digital use of copyright works, there are two main contractually mandated approaches to collective licensing. The first method allows rightsholders to set fees individually and perhaps place upper limits on the amount of material that may be copied. Under this form of contract the RRO may set default prices where the

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[53] Monopolies and Mergers Commission, "Collective Licensing: A report on certain practices in the Collective Licensing of Public Performance and Broadcasting Rights in Sound Recordings", HMSO, December 1988, Cm 530, p42.

[54] ibid., p43.

[55] See note 38 above, p4.

rightsholder fails to fully utilise its options. In the second method, known as 'blanket licensing' the rightsholder gives the RRO full authority to set terms and prices, normally according to guidelines which are particularised in the mandate. While 'blanket licensing' is likely to produce the lowest unit cost for users wanting a large volume of material, individual contracting is more likely to yield an expensive, but tailor-made solution[56].

7.13 The social role of Collecting Societies

One fact that is often overlooked by governments is the valuable social role fulfilled by collecting societies, which are after all mutual benefit societies, and indeed under U.K. law they are classified as friendly societies. This is their second role after providing public access to the members' repertoires, and collecting royalties. Authors have no guaranteed remuneration, and may be ineligible for unemployment benefit unlike those in salaried employment. Furthermore, they have to make their own provision for retirement. Collecting societies attempt to bridge this gap by organising social security systems for their members[57]. These services are facilitated by an equalisation fund, which provides for old age and a social benefit fund that holds part of the monies allocated through the society's distribution plan[58].

7.14 Collecting Societies and the Information Society

The protection of intellectual property is central to the Information Society since this forms the currency on which the new information economy will be based. The major problem involved in securing this protection is that the systems for metering usage and facilitating payment for informational goods are either non-existent or simply not fully in place. Collective administration of author's rights offers one means of instituting such systems, which will complement rather than replace existing methods

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[56] IFRRO, "Collective Management of Digital Rights", 1996, p3. Available from: http://www.ifro.org/papers/pp-digi.html.
[57] See note 27 above, p1.
[58] See note 56 above, p6.

for the reproduction/dissemination of information. Collecting societies are already working with standards bodies in the computing and telecommunications industries, for instance in the formulation of the MPEG and JPEG standards, in order to obtain identification/security measures, which will facilitate CMS and enable collecting societies to link their distribution, security, and payment infrastructures[59].

7.15 One-stop-shops

Convergence in the media industry has introduced powerful oligopoly forces into the market place, allowing the media industry to impose buy-out contracts on rightholders. In order to counter such activity rights owners have sought to create one-stop-shops, giving them an even stronger monopoly than the media industries attempting to take control of their work. However, if the model provided by the Ivy League from Canada is followed, i.e. a merger between a collecting society and an agent, it will be hard to differentiate between the delivery of rights and content[60]. Member States are free to permit administration by collecting societies, which may be done on either a compulsory or voluntary basis[61]. While the Commission is aware of the risk that one-stop-shops will distort competition in the Internal market it is more concerned that the internal market is not fragmented and that the principles of transparency and non-discrimination are maintained in order to facilitate the acquisition of rights in the multimedia context[62]. According to the Commission one-stop-shops will facilitate the creation of multimedia works by enabling identification of the origin, price, and conditions of use of a diverse range of works. This would be achieved by aggregating the repertoires and resources of a number of collecting societies, so making both existing works and new works available from a single point of access. To achieve these collecting societies would need to merge, develop

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[59] See note 27 above, p3.
[60] Report on the Conference of CIAGP, Berlin, 4-6 June 1997. Available from: http://www.rexpix.demon.co.uk/cepic/collect.htm.
[61] See note 13 above, p74.
[62] ibid., p78.

common identification standards, and share information to a greater extent than they do at present, for example through the development of common databases[63].

The European Commission is currently firmly of the opinion that collecting societies and similar organisations should be encouraged to form alliances with a view to simplifying the administration of rights. In less abstract terms what they envisage is the formation by individual rights-holders of so-called "central agencies" or "clearing houses" capable of identifying the authorship of a wide variety of works using the databases of the collecting societies and the major rights owners[64]. Although the Directorates General may superficially appear to side with the authors, the threat of compulsory measures is implicit should a voluntary solution not be found.

This assumes a substantial degree of homogeneity amongst European collecting societies and the pre-existence of appropriate collecting societies in all the member states in respect of a whole array of different types of artistic work[65]. Multimedia products are in themselves a severe threat to the moral rights of authors, and the institutional convergence of multimedia conglomerates only exacerbates such problems. A compulsory solution would take away the authors right to say "no", and this taken in tandem with the increased strength of global media corporations would strike a grave blow to the notion of moral rights. Add to this the expanded role of competition law in the EU under Article 128 of the Treaty of Maastricht to cover cultural matters, then it is clear that the "one-stop-shop" is a Pandora's Box as well as an administrative convenience[66].

In its Green Paper[67] the Commission acknowledges the need for one-stop-shops, but also dismisses any non-voluntary solution to multimedia rights administration. However, compulsory licensing provisions already exist in the European patent

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[63] ibid., p75.
[64] R. Kreile et al, "Collecting Societies in the Information Society", 1997, p3. Available from: http://www.gema.de/eng/public/jahr97/vidi1.html.
[65] ibid., p2.
[66] ibid., p7.
[67] See note 13 above, p76.

system, and under the collective rights management regime imposed under the Satellite and Cable Directive. While there is a considerable conceptual gap in terms of the kind of compulsory licensing that occurs in the patent system and full non-voluntary collective licensing, it remains a fact that the present system of exclusive licensing will not facilitate the fast efficient clearance of a diverse array of rights. Although it may not be possible to take non-voluntary licensing to its logical extremity, a reasonable compromise needs to be reached in the interests of efficiency. One of the main problems with voluntary regimes is the so called "outsider problem", however, under the extended collective licensing mechanism applied mainly to library photocopying in Nordic countries the problem is negated by preventing authors not represented by a collective licensing organisation from exercising their rights. Under the British system of library privileges rights owners are encouraged to develop licensing schemes, which include conditions of use and predefined tariffs. Non-participants are made subject to compulsory licensing, making it in their interests to agree to a voluntary scheme[68].

The most significant recent report produced by the E.U. concerning collecting societies is entitled "Report on a Community framework for collecting societies for authors' rights"[69] and was adopted by the Committee on Legal Affairs and the Internal Market on 2 December 2003. The report was drawn up partly because of the impending enlargement of the European Union and the increasing value of copyright and neighbouring rights to the European Union's gross domestic product, a figure of 5.7% is quoted. While the committee does not see collecting societies posing a risk of unfair competition because of their status as de facto monopolies, it perceives the real problem as being one of increased vertical concentration in the media industry where this inhibits access to and dissemination of works or services protected by copyright or neighbouring rights. This is of particular importance where the exercise or

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[68] LAB, "Acquisition and management of rights", 1997, p1. Available from: http://www.echo.lu/search97cgi/s97_cgi?reply%2Facquire.html&QueryZip=COLLECTING.
[69] (2002/2274 (INI)).

exploitation of rights is impeded[70]. The report even states that collecting societies will help to prevent vertical concentration[71].

Another significant development is the reports introduction of the concept of arbitration as a means of resolving disputes between collecting societies, between authors and collecting societies, and users and collecting societies. This also includes a call for an appropriate mechanism for the resolution of cross-border disputes between member states in respect of conflicting decisions. This call is drafted in very vague terms, but nonetheless it recognises the need for a pan-European body capable of resolving collective licensing disputes[72]. The report emphasises that authors should have the freedom to administer their rights individually[73], however, the Commission proposes regulation of tariffs, cost structure, conditions of membership and democratic organisation of collecting societies. Finally, the report could indicate that the Commission has drawn back slightly from its original desire to use "one-stop-shops" as the favoured option for digital rights management. It states that the one-stop-shop system should be introduced where "there are high transaction costs resulting from fragmentation in the area of rights"[74].

7.16 Collecting Societies and the Digital Revolution

An inevitable consequence of digitisation has been an increase in the amount of information distributed across a single platform, a phenomena more commonly referred to as 'multimedia'. The development of multimedia products has led to a greatly increased demand for copyright works; this has meant that collecting societies have had to respond to far more requests for licences in respect of copyright works. This in turn has created a need to identify the uses to which this property will be put, in order for royalties to be calculated, collected, and distributed to rightholders[75].

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[70] ibid., p7.
[71] ibid., p15.
[72] ibid., p11.
[73] ibid., p10.
[74] ibid., p21.
[75] See note 27 above, p1.

Digitisation has also increased the prevalence of "pay-per-copy" systems, which have been made possible by the development of CMS. In terms of collective management of rights the above factors have created an ever more pressing need to manage resources effectively through training, better management control, and the use of information technology. This better management also involves providing more and better information to regulatory bodies which need to know how rights are collected and distributed. Further, there is an increased need to know the relationship between management costs and the rights collected both for the purposes of internal control and external regulation[76].

By establishing reproduction rights organisations (RROs) authors give themselves a collective voice with which to secure important rights and at the same time establish a mechanism for the recovery of lost revenues. In addition to this RROs also have a role diffusing knowledge about the principles of copyright to the wider community[77]. Currently the European Commission is suggesting that Collecting Societies and similar institutions should promote the collective administration of rights through "one-stop-shops" or clearing houses in order to simplify the administration of rights[78].

7.17 Problems with Collective Administration

Modern copyright regimes do not treat the different forms of creative activity in a uniform way and a diverse range of intellectual property rights has evolved to protect different groups of rightsholders. While a writer's income is proportional to the current economic value of their works, the income of visual artists is dependent on the value of their works once they have been sold. Performing artists are guaranteed no remuneration from their actual performances but only from the physical expression of those performances in the form of recordings, scripts, and choreography[79]. Such rights as do exist in performing arts are usually vested in the producer rather than the

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[76] ibid., p3.
[77] See note 38 above, p1.
[78] ibid., p2.
[79] ibid., p3.

artist. Another salient feature of current copyright regimes is that they do not promote quality by affording greater protection to better quality art, or to more socially beneficial products for example[80]. According to Edward Barrow[81] one of the key problems with the clearance of multimedia copyrights is the fact that the various national RROs that exist tend to clear some types of copyrights and not others i.e. the CLA clears literary works but not musical works. There are also subtle differences in the language of rights management across sectors. Even more emphatic, however, is his assertion that multimedia rights clearance should not involve non-exclusive rights. This he believes will only compound incompatibility problems that exist in relation to technical standards by adding contractual compatibility problems to the equation. In relation to competition law concerns over collecting societies Barrow states: "The community is not opposed to one-stop-shops, but it is opposed to one-shop-towns." Thus he concludes that both users and rightsholders would be served best by a number of competing yet compatible rights clearance organisations.

7.18 Collecting Societies and Moral Rights

In the U.K. and the U.S. moral rights are very limited, in the U.S. "statutory" moral rights are limited to sculptural works, and under the CDPA most of the moral rights that exist can be waived by contract. Under continental European droit d'auteur systems rights cover the right of paternity i.e. to be identified as creator, the right of disclosure i.e. to decide when or whether a work is made public, and the right of integrity. The right of integrity concerns the author's right to prevent distortion, mutilation, or other alteration of a work. Clearly these rights have serious implications for both the production of multimedia works and their collective administration. The problem with these moral rights is that they cannot be assigned to employers, publishing companies, collecting societies or anyone else. Thus even where a work is administered collectively licensed and the author assigns all his rights to the collecting society prospective multimedia producers will still have to go back to the author of

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[80] ibid., p4.
[81] Letter of 23 February 1998 from Edward Barrow of the Copyright Licensing Agency Ltd.

the work in order to ensure that he is not going to assert his moral rights. While it is possible for an author to appoint someone to administer these rights, in practice this seldom happens.

7.19 Competition Law

Collecting societies are by their very nature natural monopolies, and tend to attract the attentions of the authorities for suspected violations of competition law. The introduction of "one-stop-shops" will only exacerbate this situation, but given massive vertical and horizontal convergence of organisations in the media and telecommunications sectors there are few other ways of tackling the imbalance in market power between authors and information providers. Convergence is also likely to create problems of information access for consumers and competition law is likely to play a key role in facilitating this access. However, if the objects of the Information Society are to be properly served collecting societies must also be in a position to obtain proper remuneration for their members. In terms of market harmonisation this is a difficult balance to strike, especially given the way in which multimedia technology has upset the existing balance between players in the information market. Collecting societies may abuse their dominant position both vertically and horizontally, the relationship between the society, and its members, and users of copyright material being a vertical one. Furthermore, competitive abuses may occur between one collecting society and another where any abuse of dominant position would take effect horizontally[82].

While one of the basic assumptions of competition law is that intellectual property owners are not de jure in a position of market power; they may under certain circumstances be in a de facto position of market power in relation to their economic arrangements for the exploitation of specific copyright works. This will depend on the nature of these arrangements and of the work itself[83]. Examples of abuse of dominant position for copyright works under E.U. law, apart from refusal to licence or licensing on unfavourable conditions, might include the protection of data by the database right, manipulation of standards, and deliberate frustration of inter-operability between

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[82] Thomas Kaufmann, "Competition issues relevant to copyright and the information society", LAB 1995, p1. Available from:
http://www.echo.lu/search97.cgi/97_cgi?426%2Fkaufmann.html&QueryZip=COLLECTING.
[83] ibid., p9.

digital products[84]. Under U.K. law abuse of dominant position will occur where a copyright owner uses exclusive rights granted by copyright in order to expand into markets outwith the primary market for a particular copyright work[85]. Under the CDPA licensees can object to terms in licensing schemes by reference to the Copyright Tribunal, which has the power to arbitrate where these terms are considered to be discriminatory or unfair. However, the tribunal does not have jurisdiction to operate outside of the U.K.[86]. Furthermore, there is no equivalent of the copyright tribunal operating at a pan-European level[87], although cases can be referred to the Commission under Article 85(3) of the EC Treaty EU competition policy is a blunt instrument at best.

In its Green Paper on copyright the Commission takes the view that harmonisation should allow Member States to obtain the optimum benefit from new technologies without undue constraint, stating that: "Copyright and related rights give the holder sole power to authorise or prohibit the use; reproduction and the like of works and other protected matter; and unless the rules governing them are aligned from one country to another, there will inevitably be obstacles in the way of the free movement of the goods and services involved. The rights conferred by domestic law are restricted in their territorial scope, and that limitation can be reduced if the laws of member states are harmonised."[88] Article 85 of the EC Treaty sets out the general principles of Community law relating to cartels and concerted practices. Whereas Article 86 sets out the principles relating to the control of monopolies, Article 90 applies to public bodies and creates certain exceptions to Article 85 and Article 86 where their application would interfere with the functions of public bodies. In the GEMA case[89], a society formed by composers, authors, and publishers in order to protect the rights granted to them under German law was involved in a dispute over its rules of membership. In order to belong to the society prospective members were

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[84] ibid., p12.
[85] ibid., p8.
[86] Hamish Porter, "European Union Competition Policy: Should the Role of Collecting Societies be Legitimised", E.I.P.R. 1996, 18(2), p 675.
[87] ibid., p674.
[88] See note 13 above, p69.

obliged to sign a contract assigning all their existing and future rights for a minimum period of six years, thus giving GEMA the right to exploit their work by licensing it in return for royalties etc. When these practices were contested before the Commission, it was held that GEMA was an undertaking within the meaning of Article 86 because it was engaged in the supply of services to its members. Since GEMA was a de facto monopoly in Germany, it therefore held a dominant position within Germany.

In the subsequent case of BRT/SABAM II[90] two authors in respect of contracts signed by them between 1963 and 1967 sued the Belgian music collecting society SABAM. With regard to the validity of these contracts the European court was asked to decide whether SABAM was abusing its dominant position by demanding global assignment of copyrights without regard to the different classes of such rights. Furthermore, the court was asked to determine whether stipulations in the contracts as to the assignment by authors of present and future rights without giving any account, and continuing to exercise such rights five years after the withdrawal of a member constituted abuse of dominant position[91]. In relation to the exploitation of copyrights the court held that SABAM held a dominant position within the meaning of Article 86. Further, abuse of dominant position would occur where the obligations that it imposes upon its members are unnecessary for obtaining its object thereby encroaching upon their free exercise of rights under copyright. It was for the national courts to determine the extent to which such abuse affected the author's interests in relation to the validity and effect of the contracts[92].

In terms of abuse of dominant position in horizontal structures the Tournier case[93] which concerned unfair practices by a collecting society in fixing the royalty rates payable by French discotheques demonstrates some of the difficulties in establishing abuse of dominant position in such cases. This is a particular problem when comparing practices in different states. Here the plaintiff contended that the royalty

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[89] GEMA I (O.J. L 134/15 of 20 June,1971).
[90] BRT/SABAM II, [1974] E.C.R. 313.
[91] See Id. p316.
[92] See Id. p319.
[93] Tournier [1989] E.C.R. 2521.

rate charged by SACEM to French discotheques was artificially high compared to other EC states. That the method of calculation of rates was unfair, and that the refusal of foreign collecting societies to license works without referral back to SACEM amounted to an abuse of dominant position. The ECJ found that SACEM clearly held a dominant position within a significant part of the common market[94], and that the high royalty rate was due to the high level of remuneration granted to authors under French law[95]. The comparison of royalty rates was held to be wholly relevant so long as the comparison was performed using some objective standard. Abuse occurred where such a comparison showed substantial difference between the rates of one country and another having regard to the economic importance of the music[96]. The reciprocal agreement between SACEM and collecting societies in other states were not an abuse of dominant position since the arrangement was there for reasons of economic efficiency rather than being an anti-competitive practice[97]. This judgment is particularly significant in relation to "one-stop-shops" because the kind of centralised licensing mechanisms which they put into effect can place the various collecting societies from which licences are obtained in competition with each other, and therefore potentially in breach of Article 85.

Probably the most significant case relating to the anti-competitive activity of a media conglomerate is the Magill case (RTE v. Commission (Magill)[98], this concerned the refusal of several TV broadcasters to license their programme listings over which they held a weak copyright, the complainant wanted to publish comprehensive weekly guides. However, RTE, BBC, and ITP sold separate listings in three separate magazines and refused to grant the complainant a licence for this purpose, so they obtained an injunction against the complainant in the Irish High Court on the grounds that this constituted an unlicensed reproduction of their copyright works. Subsequently a complaint was referred to the European Commission alleging violation of Article 86 of the EC Treaty. The Commission held that the television companies

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[94] See Id. p2528.
[95] See Id. p2530.
[96] See Id. p2531.
[97] See Id. p2533.
[98] [1995] E.C.R. I-743.

were abusing their dominant position since they were the only source of listings. Their refusal to license the listings to the complainant therefore prevented the introduction of a new product for which there was significant demand from consumers. Although the television companies argued that they were simply defending their copyrights, the Commission rejected this argument since they were using their copyrights "as an instrument of abuse in a manner that falls outside the scope of the specific subject matter of that intellectual property right". Even more significantly, the Commission ordered that allowing third parties to publish the listings on request and on a non-discriminatory basis should end this abuse by the broadcasters.

7.20 Compulsory Licensing of Copyrights

Copyright law exists in order to stimulate production, working on the market failure paradigm; compulsory licences are imposed where copyright owners fail to exploit their works. Compulsory licensing gives third parties access to copyright works "for the purposes of productive or transformative (creative) use without the consent of the owner and upon payment of a stipulated fee". The object here is to minimise the costs of access and to maximise the benefits derived from increased access[99]. Furthermore, a compulsory licensing regime is beneficial to collective management of multimedia works since it increases certainty for multimedia producers in that they can obtain the rights they require at a fixed cost. Equally copyright producers see compulsory licensing as an abuse of their moral rights and as a limit on their ability to obtain maximum economic benefits from their work. However, in other contexts such as patent law for instance compulsory licensing is only used in situations where the patent owner fails to exploit his invention. Thus a compulsory licence generates revenue from the invention where it otherwise would not. Thus any infringement of the owner's rights is only marginal and financially benefits both the licensor as well as the licensee. Besides which the public benefits from exploitation of the invention, which might otherwise never be exploited. Compulsory licensing arrangements

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[99] T. Gallagher, "Copyright Compulsory Licensing and Incentives", Oxford Intellectual Property Research Centre Working Paper Series No.2, May 2001, p4. Available from: http://www.oiprc.ox.ac.uk/EJWP0201.html.

already exist in U.K. copyright law, under s.149 of the CDPA compulsory licensing for broadcast programme listing information was introduced in s.175 and s176 of the Broadcasting Act 1990. Further, under s.144 of the CDPA compulsory licensing can be ordered on the recommendation of the Monopolies and Mergers Commission (now the Competition Commission)[100]. Even where content is subject to compulsory licensing, the licence will not allow for the reproduction of music in combination with motion pictures or images[101].

7.21 The Copyright Tribunal

There are three main approaches to the regulation of copyright, the first is laissez faire i.e. leaving the parties to fix terms and make deals, however, where the bargaining power of the parties is unequal this can create market distortions. The second kind of regulation involves setting royalty rates by statute; however, this approach is interventionist and tends to be inflexible. The third approach is to subject the parties to the overriding regulation of an impartial tribunal, and is the approach adopted in the U.K. The predecessor the Copyright Tribunal was the Performing Right Tribunal created by s.23 of the Copyright Act 1956. In 1987 the DTI stated: "...[blanket licensing] is convenient both for the copyright owners and those who want licences to use their works. However, [collecting] societies may control all the works in their particular field and may thus in effect have a monopoly."[102] The Performing Right Tribunal created under the Copyright Act of 1956 was set up to control possible abuse of such monopolies in the performing rights field. Further, s.25(5) of the Copyright Act 1956 states: "...the tribunal...shall consider the matter in dispute, and, after, giving the parties to [a] reference an opportunity of presenting their cases respectively, shall make such order, either confirming or varying the scheme, in so far as it relates to cases of the class to which the reference relates, as the tribunal shall determine to be reasonable in the circumstances." The Copyright Tribunal is a

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[100] ibid., p5 fn.13.
[101] John C. Yates, "Negotiating Multimedia Agreements: Issues Associated with Multiple Rights from Multiple Parties", PLI/Pat, January, 2002, p701.
[102] DTI, "Layman's Guide to Copyright, Designs and Patents", October 1987, para 13.

statutory body set up under the Copyright Designs and Patents Act 1988, Chapter VII (ss116 – 152).

While the former dealt primarily with rights in performances the latter can deal with a much wider range of licensing activities[103]. The Copyright Tribunal has a chairman, two deputy chairmen, and eight ordinary members. As originally created the tribunal has the power to regulate licensing schemes and licensing bodies in the U.K. It also has the power to regulate broadcast transmissions under the Broadcasting Act 1990, and miscellaneous functions. The Copyright tribunal has power to regulate at least some U.K. collecting societies since s.116(a) defines a "Licensing body" as:

"A society or other organisation which has as its main object, or one of its main objects, the negotiation or granting, either as owner or prospective owner of copyright or as agent for him, of copyright licences, and whose objects include the granting of licences covering works of more than one author."

Since the creation of the Copyright Tribunal its jurisdiction has been amended on a number of occasions, as part of the implementation of the Duration Directive (93/98), the Rental and Lending Directive (92/100), and the Satellite Broadcasting Directive (93/83). Consequently the new s.149 of the CDPA allows the levying of royalties on retransmissions and a general right to equitable right of remuneration, also the Broadcasting Act 1990 now gives the tribunal jurisdiction in relation to the broadcast of sound recordings over air or by cable. Further, the tribunal has jurisdiction to settle royalty rates for certain lending transactions.

After its inception in 1989 the Copyright Tribunal has issued around 30 decisions to date; however, some of these decisions affect entire industries[104]. Having said this, referrals to the tribunal are not open to ordinary licensees. Thus far the proceedings of the tribunal have involved large companies or representative organisations submitting

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[103] Andrew White, The UK Copyright Tribunal: its powers and a summary of decisions", C.W. 1993, 35, p42.
[104] See note 103, p42.

large amounts of evidence and employing teams of counsel. Furthermore, decisions of foreign tribunals have carried little evidential weight other than for preventing the levying of excessive licensing fees in particular industries[105]. The tribunal has the power to confirm or vary a licensing scheme in such a way as it thinks is reasonable, orders can last indefinitely and may be back dated[106]. Under Rule 48(1) of the Copyright Tribunal Rules 1989 costs can be awarded against either party if they are guilty of undue prolixity in giving evidence at hearing.

One of the earlier decisions of the Copyright Tribunal concerning royalty rates is British Phonographic Industry Ltd. v. Mechanical Copyright Protection Society (No.2)[107] a case primarily caused by a dispute over royalty rates. As a consequence of their inability to agree a rate BPI referred the licensing scheme to the tribunal under s.118 of the CDPA. The tribunal held that in all the circumstances it had to decide what was reasonable. The MCPS was a monopoly and where the parties could not agree on a royalty rate then the court was obliged to fix a rate in a way that was reasonable, also "comparable" rates were relevant under s.129 of the CDPA.

Probably the most significant Copyright Tribunal decision to date with application to Internet distribution of copyright works is News Group Newspapers Ltd. v. Independent Television Publications Ltd[108] a case factually similar to and consistent with the Magill decision in the E.C.J.. The broadcasting organisations involved in this case were obliged under s.176 of the Broadcasting Act 1990 to make available information on the titles and times of programmes included in their programme services at any date. Accordingly the broadcasters licensed this information to NGN and others, however, a dispute arose. NGN argued that they were only obliged to pay the cost of information available, whereas the broadcasters were charging according to the value of their copyrights on a sliding scale where the licensing fell inversely according to the circulation of the newspaper. Thus NGN and some 250 newspapers

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[105] ibid., p46.
[106] ibid., p44.
[107] [1993] E.M.L.R. 86.
[108] [1993] R.P.C. 173.

referred the licensing scheme to the Copyright Tribunal under ss17-21 of the CDPA. The tribunal held that Schedule 17 of the CDPA only obliged the broadcasters to provide information concerning the date, time and title of television programmes although this was not the only consideration to be taken account of under schedule 17. There should further be no financial disincentive to publishers that wished to publish weekly rather than daily listings, there being no valid distinction between them for the purposes of s.176(6) of the Broadcasting Act 1990. The tribunal ultimately took the view that the formula used by the broadcasters for calculating licence fees was unfair and arbitrary, substituting its own formula for that of the broadcasters. This considered the degree to which the information would be actually used by the publishers and the number of days for which the listings were published. In doing so the tribunal did not have to balance the commercial interests of the parties or protect the financial interests of the broadcasters.

More recently, the Copyright Tribunal has focused on the absolute price of copyright licences as is demonstrated by the following selection of cases. The first of these cases BskyB v. PRS[109] concerns the cost of a music licence negotiated by a satellite broadcaster. The crux of this case was that the applicant thought it was paying too much for royalties derived from a licence negotiated with a collecting society which based royalties on a percentage of total revenues. This rate was further based on the number of hours of music broadcast. However, the satellite broadcaster had a low percentage of the overall market, but a much higher number of broadcast hours of music than conventional broadcasters. Thus the amount paid in royalties by this method was much higher than for conventional broadcasters. The PRS contended that the tribunal had no jurisdiction under Article 3(1) of the Satellite Directive and that the tribunal should approve the licence unless it constituted an abuse. When the matter was referred to the tribunal, the tribunal held that its task was to set such terms as were reasonable in the circumstances. Secondly, the court held that the Directive did not involve the harmonisation of royalty rates as the PRS suggested, and the parties should take account of all aspects of broadcasts. Hence the tribunal did have

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[109] [1998] E.M.L.R. 193.

jurisdiction to hear the case. Thirdly, the court held that the PRS did not participate in the risks taken by the applicant in its ventures, thus it was not entitled to a percentage of total revenues. Finally, the court was entitled to regulate the monopolistic aspects of the PRS licence by setting a reasonable royalty.

The second of these cases is British Air ways plc v. The Performing Right Society Ltd[110] a case concerning the price of a licence for in-flight entertainment (IFE). The applicant was dissatisfied with the overall cost of the licence from the PRS, and when the licence came to be re-negotiated they sought discounts based upon the passenger's take-up of IFE, the period when IFE was switched off for take-off and landing, the actual usage of IFE, and for works not included in the PRS repertoire. Ultimately the negotiations were abortive and the tribunal was asked to resolve the issue, much of the applicant's argument centred on the lower cost of IFE in the U.S. as compared to the U.K. The tribunal held that its primary role was to assess what a reasonable royalty rate should be for the applicant and other U.K. registered airlines in the same position, any question as to method of calculation being a subsidiary issue. It was not the job of the tribunal to make sure the airline got a good deal relative to foreign airlines. Rather this was to ensure that tariffs were arrived at in the same or similar circumstances when compared with those airlines. While a reduction in the tariff was justified this was based upon the need to level out rates between different countries not on any differential between U.S. and U.K. royalty rates.

The third case Universities U.K. Ltd v. Copyright Licensing Agency Ltd[111] concerned the level of royalty's payable on an educational licensing scheme relative to the scope of the licence. The scheme in question involved a blanket licence for the photocopying of educational books and journals by universities, including the production of course-packs. Everything that fell out of the scope of the blanket licence was handled by the CLARCs scheme, which the universities claimed was complex, inefficient and administratively burdensome. The dispute arose primarily because the CLA narrowed the scope of the licence so that it did not cover the photocopying of artistic works in

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[110] [1998] E.M.L.R. 556.

books and journals. It was unclear which artistic works were included and which were not. All works falling outside the blanket licence had to be cleared using the CARCS scheme. On referral of the dispute the tribunal was asked to decide whether the CLARCs scheme was a licensing scheme within the meaning of s.116(1) of the CDPA as it was alleged that the tribunal had no jurisdiction to hear the dispute. The tribunal was also asked to decide whether the restriction on the reproduction of artistic works was reasonable in all the circumstances, it being alleged that the scheme related only to non-course-pack copying. Further, it was alleged that the CDPA did not give the tribunal the power to force rights owners to confer rights on the licensing body. The court in making an order for an amended scheme held that while the CLARCS scheme was not a licensing scheme under the CDPA, the current scheme was, accordingly the tribunal was not deprived of jurisdiction to hear the case with regard to course-packs. The administrative arrangements for clearing rights in course packs outside the blanket licensing scheme were "complex, costly, inefficient and burdensome", hence the separate treatment of course packs was not reasonable in all the circumstances. Artistic works were already dealt with under the current licence, therefore what was added by bringing separate artistic works within the scope of any new licence was in the nature of a luxury. In relation to the third argument the tribunal held that given the licence was properly referred to the tribunal, it had jurisdiction to decide whether the copying restriction was reasonable in all the circumstances, and had the power to vary the restriction should it decide that it was reasonable to do so. This was so regardless of whether the respondent had been mandated to do this by its members.

From these cases it can be seen that while referral to the copyright tribunal is expensive, the tribunal mechanism is an appropriate means of regulating licences issued by collecting societies. It also seems that the abhorrence of copyright owners and their representative bodies towards compulsory licensing does not seem to prevent the tribunal from imposing solutions, which are practically if not legally very similar to compulsory licensing. While the copyright tribunal is not a competition

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[111] [2002] E.M.L.R. 35.

regulator, as such, it can regulate the fairness of procedures used to determine licensing tariffs.

7.22 Collective Licensing

Collective licensing takes place where a number of copyright owners assign their rights to a collecting society or give it authority to act on their behalf to grant licences to prospective users and enforce their rights against infringers. This is of mutual benefit to both copyright users, and copyright owners in that the former do not have to negotiate for licences from among a vast array of copyright owners, and may deal with one or a few collecting societies instead. Copyright owners are better able to enforce their rights and police the infringing activities of users. Furthermore, the bargaining position of the copyright owner is enhanced, placing them in a better position to negotiate the terms of licences. Many collecting societies now operate from the U.K., the most notable of these being the Copyright Licensing Association, the Design and Artists Copyright Society Limited, The Performing Rights Society Ltd, The Educational Recording Agency Ltd, and Open University Enterprises Ltd[112].

There are a number of statutory provisions concerning the regulation of collective licensing which are intended to encourage the development of collective licensing schemes, and to maximise their coverage. For example under s.143(1) of the CDPA, the Secretary of State may certify licensing schemes for educational broadcasts, making abstracts for scientific or technical articles, public copies of certain works, broadcasts, or cable programmes for the deaf or hard of hearing, and copying by educational establishments. However, before such certification is given the collecting society must make provision for the clear identification of licensee's, and must clearly set out its charges and the terms under which licences are granted[113].

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[112] James A. Ward, Halsbury's Laws of England, 4th ed. Butterworths1998 vol. 9(2), p183.

7.23 Individual Verses Collective Licensing

Under Anglo-American law authors in most areas of the arts and science have the right to administer their rights through individual licences, in this way they can construct tailor-made solutions. Unfortunately such authors give themselves and a prospective purchaser of rights a lot of work, and also a very week bargaining position in relation to large corporations. The main alternative to this approach is the collective administration of rights through an RRO or similar organisation. Apart from the factors above problems regarding individual licensing are compounded in relation to multimedia works because of the number and variety of works involved and the difficulty involved in tracing their owners. Equally it is also easier for multimedia producers to trace works through a centralised body[114]. Furthermore, as Irini Stamatoudi has pointed out[115] there has been a move away from individually negotiated contracts to standard contracts which permit the trading of secondary rights i.e. transmission and public performance of sound recordings. This was necessitated by difficulties in enforcing licences and in turn blanket licensing has evolved as a way of reducing the costs of enforcement. Unfortunately one of the main features of copyright is that it allows copyright owners to forbid the use of their works without any reasonable excuse. This applies to rights administered individually or through an agent, when the owner's rights are assigned to a collecting society, this right and certain related moral rights are lost. While this situation does not create a compulsory licence it comes very close[116].

In the digital environment the same considerations exist, however, while works are more easily traced, the difference between primary and secondary exploitation of works is blurred[117]. It is also possible to control individual uses of works, yet it is not always possible to distinguish public domain materials from those in the private

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[113] ibid., p184.
[114] See note 4 above, p257.
[115] ibid., p258.
[116] Herman Cohen Jehoram, "Intellectual property: The future of copyright collecting societies", E.I.P.R. 2001, 23(3), p136.
[117] See note 4 above, p260.

domain, or what is data from what is software. Stamatoudi comes to the conclusion that the advantages of Internet technology combined with the very real problems involved in the administration of multimedia copyrights makes collective licensing on the Internet a necessity[118]. However, European collecting societies are ill suited to collective administration of rights involved in the creation of multimedia works because they administrate licensing of different types of works[119], and because they also have social functions funded through deductions from royalty payments. The idea of a one-stop-shop would be better realised by a clearing-house operation analogous to the Copyright Clearance Centre in the USA. As the Commission noted in its Green Paper on copyright this was already beginning to happen in 1995[120].

7.24 The Nature of Collective Licensing

In their 1987 paper on collective administration of library works Charles Clark and Colin Hadley[121] set out seven principles for collective administration, these are as follows: (1) RROs should be involved in the collective exercise of the right of reproduction and not with rights exercised by authors individually or through their agents; (2) The repertoire offered to users under licence should be comprehensive; (3) Those who receive income from the licences they administrate, either regarding copyright and/or neighbouring rights should govern RROs; (4) The terms and conditions under which RROs hold rights should be negotiated voluntarily and backed up by statute; (5) The distribution of income from RROs licensing activities ought to be seen to benefit the rights and interests of those who administrate RROs;
(6) RROs need to be publicly accountable in order to preserve the public interest; and
(7) RROs must be able to adapt to and have strategies that consider new collective licensing techniques and new uses of works that may emerge in the foreseeable future.

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[118] ibid.
[119] See note 116 above, p135.
[120] See note 13 above, p77.
[121] Charles Clark and Colin Hadley, "Collective Administration of Literary Works: Principles and Practice: The British Experience", Library Management, 1988, vol. 9, part 3, pp6-8.

At an international level collecting societies have to apply a number of guiding principles; the four most significant are the principles of reciprocity, national treatment, solidarity, and country of destination. The first principle concerns the equal treatment of foreign nationals so that they are accorded the same rights as nationals. This also means that collecting societies will not collect royalties in the territory of another collecting society with which it has a reciprocal agreement. The second principle concerns the maintenance of international minima for the protection of intellectual property and the removal of unnecessary formality[122]. The principle of solidarity concerns the equal treatment of copyright owners by collecting societies; this will necessarily oblige collecting societies to manage the rights of their members, and to accept membership applications where the criteria for membership are satisfied. The country of destination principle relates to royalty calculations for phonograms. This obliges producers to maintain an up to date published price for dealers (PPD)[123], and is used in Europe since in the United States record prices are fixed by statute. As a rule of thumb royalty rates in the phonographic industry are set at about 10 percent of PPD[124].

7.25 Collecting Societies and Copyright Levies

Copyright levies are fixed charges placed on equipment/media in order to provide compensation for rightholders. These were first introduced in relation to blank cassette tapes in Germany in 1965. At this time digital media had not yet emerged, there was no technical means of controlling private home copying[125], which was administered exclusively by a collecting society. Given that collecting societies distribute most of the royalties they collect to only about 10 percent of their members, this may not be a very equitable means of distribution[126]. However, since then the U.K. Monopolies and Mergers Commission has recommended that the administration

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[122] Josephine Liholm, "GEMA and IFPI", E.I.P.R. 2002, 24(3), p114.
[123] ibid., p116.
[124] ibid., p113.
[125] Michael Hart, "The Copyright in the Information Society Directive: An Overview", E.I.P.R. 2002, 24(2), p60.
[126] See note 29 above, p135.

of copyright should move towards a system of exclusive transferable rights[127]. To some extent this recommendation seems to have been acknowledged by the Commission. Indeed Article 2 of the Information Society Directive sets out various considerations to be taken into account in determining the level of equitable remuneration in relation to the reproduction right. These include the existence of levy schemes, the use of technological measures, and the existence of situations where no obligation is owed to right holders (i.e. where an exception exists)[128]. Nonetheless, the approach to copyright levies in Europe is chaotic, and in recent years attempts have been made in a number of Member States to extend levies to PC's[129]. Apart from the fact that computers were never intended to be purely copying devices, this would act as a tax on culture and change collecting societies into instruments of the state. The community is clearly not confident that digital rights management systems will be completely effective[130] and stresses that "the institution of reasonable levies as compensation for free reproduction for personal use constitutes the only means of ensuring equitable remuneration for creators and easy access by users to intellectual property works"[131]. Again this fails to observe the basic principle that the primary purpose of copyright is to promote the creation of useful works. The compensation of author's is only of secondary importance.

7.26 Collective Licensing and Multimedia Products

Multimedia products are made up of a whole range of products supported on a single platform. In the past the rights subsisting in these products were administered separately, this forced the creator of the multimedia work to track down the right-owners, obtain permission to use their work, and pay a suitable remuneration. Even in theory this is complex, and in practice may prove to be impossible. Given the increased volume and speed of dissemination of such works in the Information

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[127] Monopolies and Mergers Commission, "Performing Rights", (1996) H.S.M.O. Cm 3147.
[128] See note 125 above, p60.
[129] ibid., p64.
[130] Committee on Legal Affairs and the Internal Market, "Community framework for collecting societies for authors' rights", (2002/2274 (INI)), p9.
[131] ibid., p21.

Society collective administration is likely to be an essential precondition for the compilation of multimedia works rather than a convenience[132]. Photocopying as such is disappearing as digital copiers that can be integrated into networks supersede photocopying machines. These copiers do not degrade quality, and can in fact enhance the quality of images. Collective licensing of authors rights is tempting in that it saves costs and is far less complex than administering rights separately, however, it is often compulsory and tariff's can easily be set too low for political reasons. Apart from this such activity is likely to bring collecting societies in breach of dominant position[133]. Indeed, it is not hard to see how a collecting society might fall foul of Articles 85 and 86 of the Treaty of Rome, and such a society would have to have substantial resources to avoid this[134].

Managing the intellectual property aspects of multimedia product development is complex because of the number of right owners and works involved, and the diverse nature of rights that have to be managed. However, licences must achieve three main objectives, they must specify the content to be developed, identify pre-existing content to be included in the multimedia product, and include all the rights required for each work used[135]. Beyond this the licence must determine payment for all rights acquired as well as ownership of content included in the final product[136]. The number and extent of the rights required for exploitation of a multimedia product will depend on the intended use and distribution of the work. One of the key problems with using collecting societies for this purpose is that they simply do not have the authority to grant all the rights needed to develop multimedia products. Very often they do not have authority to authorise Internet distribution or even digitisation of the works they administer. In such instances developers will have to negotiate with the actual owners of the works in question. Furthermore, copyright owners while appearing to be the owners of a whole work may only own the rights to some of it. For example book

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[132] Ariane Claverie, "The Information Society: copyright and multimedia", LAB 1995 p4. Available from: http://www.echo.lu/search97cgi/s97_cgi?...50426%2Fmin2.html&QueryZip=Claverie%2C2.
[133] ibid., p1.
[134] ibid., p3.
[135] See note 101 above, p727.
[136] ibid., p697.

publishers may only own the text of a book and merely be a licensee with regard to other content, thus the pictures and illustrations in that book may have separate copyrights owned by third parties[137]. In collective works the publisher may only have rights to the edition as a whole, but not to the individual articles from which it is composed[138].

Where multimedia developers use visual images in combination with music then they will need to obtain a synchronisation licence, and similarly where a work is viewed in public then the developer will have to obtain a licence that includes public performance rights[139]. Where a multimedia producer uses film clips he will have to acquire the right to use the clip as a whole, normally from the producer of the footage. Licences for this kind of material are usually priced according to the number of seconds or minutes the clip lasts, the term of the licence and the territory for which it is authorised. There will also have to be negotiations with actors appearing in clips over performance rights[140]. In the process of negotiating a licence a multimedia producer specifically needs to acquire the rights to use content in a digital format, or modify or alter the content in any way. Furthermore, it is vital to make sure that there are no pre-existing licences preventing the intended use of the content, and the developer will usually need some kind of warranty in this regard from the content owner[141]. It is also possible that the work or part of it is in the public domain, in which case the developer will not need a licence to use it[142]. Once a licence has been obtained for the use of content it is important not to exceed the scope of the licence. For example in International Café, Inc v. Hard Rock Café International Inc[143] the U.S. district court granted an injunction restraining the distribution of merchandise outside of the territories specified in the licence. The defendants had linked their website to that of a music retailer in exchange for sales commissions. The court held that this

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[137] ibid., p699
[138] Tasini v. The New York Times Co. 972 F. Supp. 804 (S.D.N.Y. 1997), rev'd 206 F. 3d. 161. (2nd Cir. 2000).
[139] See note 101 above, p702.
[140] ibid., p704.
[141] ibid., p707.
[142] ibid., p710.
[143] Case no.97 Civ.9483 (RPP), 1999 U.S. Dist. LEXIS 8340 (June 1, 1999).

allowed advertisements and offers to sell the merchandise outside of the proscribed territory[144].

7.27 Collective Licensing and the Internet

While a number of commentators argue that copyright and the Internet are incompatible, the essential goal of copyright is to encourage the creation and dissemination of works of authorship, and regardless of the current technology this will not change[145]. Similarly the Internet is basically an infrastructure and does not fundamentally change the nature of licensing; however, there is no culture of licensing on the Internet and the economic models used on the Internet do not necessarily work in the same way as real-world economic models. Besides which, there is not much point using Internet distribution of copyright works if the only object of this is to satisfy existing markets more quickly[146]. The real problem regarding the Internet is enforcement, especially given that file sharing programs like Gnutella and Freenet have been designed to mask the identities of users and have decentralised file servers, making it difficult to block access. However, so long as legal products are more attractive to consumers than counterfeit products then copyrights will retain most of their value[147]. The keys to maintaining this balance in relation to licensing are volume of material available, ease of use, online payment, added value, and pricing[148]. Current licensing practices tend to be based on inflexible structures i.e. blanket licensing favouring large institutions using a lot of copyright material and do not consider the way in which the Internet is used by most businesses.

In describing collective licensing as it currently exists it is best to do this from the perspective of music licensing. There are two reasons for this, firstly music collecting societies are the oldest and most developed collecting societies, secondly, because the

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[144] See note 101 above, p715.
[145] Shira Perlmutter, "Convergence and the Future of Copyright", E.I.P.R. 2001, 23(2), p113.
[146] Gavin Robertson, "Music, The Internet and the Role of Collecting Societies", Ent.L.Rev. 1997, 8(7), p243.
[147] See note 145 above, p115.
[148] ibid., p117.

most advanced licensing conducted over the Internet, and the most widespread, is that performed in relation to sound recordings. Traditionally copyright licensing transactions, even where they take place between collecting societies have been conducted through the exchange of paper documents, a process, which can be both slow and expensive. However, with the arrival of the Internet it has become possible to conduct licensing transactions more quickly and cheaply than by conventional means. Security on the Internet remains a problem although the extent of this problem will depend upon the size of the transaction. Digital tagging of works, which enables tracking, monitoring and metering of use, facilitates online licensing. Furthermore, the Internet lends itself not only to blanket and collective licensing, but also to transactional licensing, which can be more readily tailored to actual rather than predicted levels of usage for individual works[149].

7.28 The Nature of Collective Licensing on the Internet

In relation to collective licensing there may not be any possibility of negotiating individual contracts since the various RROs and specific media have agreements with each other and use common terms and conditions in the form of a standardised licensing agreement. For example with regard to phonograms there is a Central European Licence ("CEL") for mechanical right payments. These agreements are non-negotiable and the royalty rate is fixed. While this simplifies rights clearance it is also likely to make licences more expensive and inflexible[150]. With regard to online distribution of works the market is not yet mature so the approach of the collecting societies is more tentative. In Germany for example the collecting societies rely on the content providers to monitor the exploitation of works. Once they have this data then the same royalty rates used for physical works are applied[151]. Indeed the price of such licences tends to be based on the security of the environment in relation to the category of copyright work and any financial transactions conducted in that

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[149] Alan R. Kabat, "Proposal for a Worldwide Internet Collecting Society: Mark Twain and Samuel Johnson Licenses", 45 JCPS, Spring 1998, p330.
[150] See note 122 above, p116.
[151] ibid., p118.

environment, along with the ability of that environment to monitor and report the usage of rights. In consequence of this many digital licences are more concerned with reporting mechanisms rather than obtaining permissions or rights clearance, thus illustrating the tendency of collecting societies to construct digital licences on the basis of real-world economic models[152]. By signing a typical publishing contract the author will give the publisher authorisation to reproduce his work and to exploit it by selling copies to members of the public. The contract may also contain provisions granting the author the right of performance and broadcasting. Without the involvement of publishers collective management is ineffective. Copyright Societies in both Europe and North America have addressed this situation by incorporating publishers, which as members or clients assign these rights to them[153].

The PRS, for example, issues blanket licences to music users on terms dependant on 40 or so public performance tariffs. These licences give the licensee access to the entire PRS repertoire; however, the PRS has live popular (LP) and live classical (LC) tariffs, which are based on box office receipts per event. These licences can be negotiated collectively with representative bodies or individually. The main objective of the PRS is to collect revenue from the users of its repertoire and to distribute that revenue to members of the PRS and affiliated societies after deducting administration costs. The three main revenues of the PRS are public performance revenues, revenue from unlogged performances, and broadcasting revenue[154]. The licence revenue received by PRS is initially analysed by tariff group. These groups are then divided into sections (i.e. background music, aircraft, discotheques, jukeboxes, cinemas, public reception, miscellaneous recorded, and miscellaneous live) whereupon usage information is applied to the data to facilitate distribution of revenue to PRS members and overseas societies. Revenues are divided between live and mechanical methods of performance, and between specific means of mechanical performance and miscellaneous means of mechanical performance[155]. The revenue pools are divided

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[152] See note 146 above, p245.
[153] See note 29 above, p127.
[154] See note 53 above, p92.
[155] ibid., p93.

into different sections, for UK general revenue there were 14 different sections in 1995. This breakdown is carried out using programme information or the information that most closely reflects the repertoire used. Performance revenues are then distributed according to the statistical data provided by users[156]. Broadcasting revenues distributed according to returns from broadcasters and the level of royalties paid by the broadcaster determines these. Once specific works are identified then weightings and multipliers can be applied according to type, use, and duration of the work[157]. For unlogged performances a special allocation scheme is used by the PRS since these are not included for normal revenue sharing purposes. This scheme makes payments to members based on the type and grade of their membership[158].

7.29 E.U. Multimedia Pilot Projects

While the European Commission has encouraged the development of so-called one-stop-shops for the clearance of rights in different types of media by centralised clearing-houses, it has also provided financial support for projects that enable this objective, most notably under the INFO 2000 programme. This supports 10 special pilot projects with the overall aim of developing a single system of multimedia rights clearance that will meet the needs and challenges faced by the Information Society[159]. The problem that these projects are designed to tackle is caused by the disparate nature of European collecting societies, which manage different categories of copyright works and different categories of author. This is significant because the commercial exploitation of multimedia works requires their developers to have the requisite permission to use all the works they use for all their different uses. The absence of a single permission to use a work for a particular use could effectively prevent exploitation of the multimedia product or at least greatly increase the cost of producing it. Furthermore, this situation is exacerbated by the fact that the contracts between some authors and their collecting societies do not permit re-use of their

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[156] ibid., p95.
[157] ibid., p96.
[158] ibid., p97.
[159] Martin Schippan, "Purchase and Licensing of Digital Rights: The Verdi Project and the Clearing of Multimedia Rights in Europe, E.I.P.R. 2000, 22(1), p24.

works in digital format[160]. Central clearing-houses have already been established in a number of Member States, for example SESAM in France, CMMV in Germany, and KOPIOSTO in Finland. In 1997 the Commission established the Multimedia Rights Clearance System (MMRCS) a strategic analysis program created under the auspices of the INFO 2000 programme in order to ascertain the conditions and needs that would give rise to successful pilot projects[161]. These projects fall into three main groupings, namely those involved with rights clearance; those providing information and catalogue data; and those dealing with interoperability issues, however, there is considerable overlap between these schemes.

7.30 Rights Clearance Projects

Before Copyright (b©) is a trusted environment designed for rights trading and the production of multimedia works. It is essentially a one-stop-shop for the electronic publishing and audio-visual industries in Europe promoting the development of collaborative work i.e. multimedia products. The system consists of network software designed for exchanging rights information and a number of collaborative content development and editorial tools. The principal aim of the system is to facilitate clearance of copyright prior to publication[162]. Broker Based Network Architecture for Fail-safe IPR Clearance of Digital Content (BONA FIDE) was developed as a multimedia rights clearance mechanism that handles the processes and procedures for locating multimedia storage and delivery mechanisms and legal contracts, using and clearing model legal contracts plus searching for appropriate content. This broker architecture allows users to perform secure searches for content and associated licensing agreements according to defined search profiles on a database containing text, audio files, and moving images[163]. TV Files is a broadcast/narrowcast right clearance system used for the research and evaluation of European Television

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[160] ibid., p25.
[161] ibid., p26.
[162] Info2000, "Strategic Studies: MMRCS: b© Before Copyright", 2000. Available from: http://www.cordis.lu/econtent/mmrcs/bc.htm.
[163] Info2000, "Strategic Studies: MMRCS: BONA FIDE", 2000. Available from: http://www.cordis.lu/econtent/mmrcs/bonafide.htm.

programming and multimedia production. The system was developed by the European Broadcasting Union (EBU) and provides abstracts of programming material including details of IPRs. Eighty major European television networks currently subscribe to TV Files, which they can receive using special decoders or directly through the TV Files website[164].

7.31 Information/Catalogue based projects

Copyright Management and Multimedia rights Clearance Best Practices for Educational Multimedia (COMPAS) is a multi-lingual website providing information to training organisations, multimedia service companies, production agencies, publishers and rightsholders. The site is designed to promote common approaches to copyright problems associated with the management and exchange of educational and training multimedia products. The project has a database of FAQs and provides advice to users on copyright problems commonly encountered by developers of multimedia products[165]. The Extended Frankfurt Rights Information System (EFRIS) is an all-year round online interactive version of the Frankfurt Book Fair Rights Catalogue, holding 21,000 titles from 60 countries in some 70 languages. The catalogue covers rights for text, illustrations, and images in books and journals. It also includes videos, maps, games and multimedia software. The website holds a database of titles with a powerful search engine that can be searched on multiple fields and functions as a rights broking centre for the book trade[166]. The Open Rights System (ORS) is an Internet portal designed to reduce the cost and increase the speed of acquisition of copyrights involved in the creation of multimedia products. The system allows users either to clear rights online or contact relevant rightholders or collecting societies. Furthermore, the website's search engine allows searches on a wide range of criteria. The database holds rights data on a million CDs and 20,000 music videos, as well as

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[164] Info2000, "Strategic Studies: MMRCS: TV Files", 2000. Available from: http://www.cordis.lu/econtent/mmrcs/tvfiles.htm.
[165] Info2000, "Strategic Studies: MMRCS: COMPAS", 2000. Available from: http://www.cordis.lu/econtent/mmrcs/compas.htm.
[166] Info2000, "Strategic Studies: MMRCS: EFRIS", 2000. Available from: http://www.cordis.lu/econtent/mmrcs/efris.htm.

details of rightholders for audio-visual works in 18 European countries[167]. Producer Rights Information System for Audio-visual and Multimedia (PRISAM) is a one-stop-shop created to simplify and speed up negotiations between multimedia producers and right holders in Europe. The PRISAM website holds a database containing rights details for some six thousand feature films and has a search engine that allows users to search on a variety of criteria such as the International Standard Audio-visual Number (ISAN), genre, producer, and composer. The system allows users to request information on titles of interest and includes works administered by the European Federation of Joint Management Societies of Producer for Private Audio-visual Copying (EUROCOPYA) in Spain, Sweden, Austria, and Poland and beyond[168].

7.32 Projects Promoting Interoperability

The Interoperability of Data in Ecommerce Systems (INDECS) is intended to promote comprehensive and interoperable rights clearance in Europe. It is designed as a common format for metadata integrating different identification systems used for different media such as DCMS used by the music industry, FRBR used by the library community, CIDOC used by museums and archives, and CIS used by collecting societies. The system provides a metadata dictionary, a registry of namespaces, and an abstract metadata model of intellectual property rights[169]. Perhaps the most significant project set up under MMRCS is the Very Extensive Rights Data Information project (VERDI), this is important because its aim is not to create new rights management systems, but to link together already existing clearing centres and collecting societies[170]. The VERDI project is intended to offer multimedia producers clearance of an almost unlimited number and variety of rights by creating a common interface for the clearance of different categories of works regardless of cultural or linguistic restraints. The project consists of a rights information network, a licensing study, and

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[167] Info2000, "Strategic Studies: MMRCS: ORS", 2000. Available from: http://www.cordis.lu/econtent/mmrcs/ors.htm.
[168] Info2000, "Strategic Studies: MMRCS: PRISAM", 2000. Available from: http://www.cordis.lu/econtent/mmrcs/prisam.htm.
[169] Info2000, "Strategic Studies: MMRCS: INDECS", 2000. Available from: http://www.cordis.lu/econtent/mmrcs/indecs.htm.

a content delivery study[171]. The fourth element of the project consists of analysis and studies designed to take stock of the project and to ensure the compatibility of its various elements[172].

7.33 Enforcement

The collective enforcement of copyright is the most significant thing that collecting societies do, without it there can be no distribution of royalties; however, the level of collecting society's administration costs is also a major issue. Ironically the more effective a collecting society is in relation to enforcement the more ineffective it is at keeping administration costs low. While this relationship is not a direct one it is a definite one. Unlike their American counterparts European collecting societies are very good at collecting revenue, but not so good at keeping their administration costs down. For example in 1996 the American collecting society ASCAP had administration costs amounting to about 20.5% of receipts whereas in the same year the European collecting societies GEMA and SACEM had administration costs amounting to 23.31% and 25.68% of their respective receipts. However, because of this extra investment in the enforcement of rights the royalty income of European collecting societies can be nearly double that of American collecting societies[173].

The development of digital content on the Internet is to a large extent held back by copyright owner's attempts to protect their goods in the digital environment. Furthermore, if the courts give credence to this type of behaviour then content and the technologies supporting it may never be developed. An argument often cited to support this view is that video and VCR technology would never have developed had the U.S. Supreme court held in favour of Universal Studios in 1984[174]. In terms of content licensing a useful analogy for content licensing on the Internet can be drawn

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[170] See note 159 above, p27.
[171] ibid., p28.
[172] ibid., p29.
[173] Mike Hennessey, Collection and Distribution of Royalties in Continental Europe and the United States: An Analysis", C.W. 1998, 81, p21.

with the licensing of cable retransmission in the U.S.. This is partly because it is under some circumstances free, and because while cable broadcasters were once seen as passive conduits, this is becoming less and less the case as new services evolve[175]. The services now on offer can include time shifting, space shifting, personalisation, multimedia, morphing, and repackaging[176]. On a fair use analysis it is arguable that some services should be exempted from licensing entirely on four main grounds, namely; use is transformative only a small portion of the work is used; use performs some socially useful purpose such as education; and use does not harm the market for value or actually enhances it[177]. In other cases licensing can be facilitated by the accurate measurement of audiences, this not as difficult as it sounds since measurement software that takes fairly exact measurements can reside on the broadcaster's server[178]. However, those forms of rebroadcast that undermine the economic model of the broadcaster can be entirely prohibited[179].

7.34 Conclusion

The notion of authorship first developed in Greece around 700 B.C.; however, the modern conception of authorship developed during the middle Ages following the invention of the printing press. In the United States authorship has been conceptualised both as something mystical that happens inside an authors head and as the act of embodying ideas in a physical form. However, the predominant view is that the author of a work is the person who independently translates it into a fixed tangible expression. This expression must be original and without a minimum level of originality a work will not be afforded even thin protection. Furthermore, this conception of authorship is tempered by the idea/expression dichotomy, which does not allow mere ideas or discoveries to be copyrighted. In Europe the creation of the Information Society has led to a more diverse conception of authorship in which the

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[174] Michael A. Einhorn, "Internet Television and Copyright Licensing: Balancing the Cents and Sensibility", 20 CDZAELJ, 2002, p321.
[175] ibid., p326.
[176] ibid., p321.
[177] ibid., p323.
[178] ibid., p333.

number of authors of a particular work is immaterial so long as it is possible to ascertain who makes the choices in the creative process. In both Europe and the United States works created under a contract of employment normally belong to the employer. The producer and the director are usually the joint owners of films and sound recordings, including the rental right. In determining authorship of collaborative works under U.K. law there must be an enforceable agreement and/or a common understanding. The work involved should not be distinct from the work of the other authors. Further, there should be a substantial original contribution made pursuant to a common design and this should entail the right kind of skill and labour.

The early history of collective administration of rights in Europe begins with Caron de Beaumarchais, an 18th century author who suffered greatly at the hands of the French aristocracy and whose efforts led to the creation of the first laws protecting performers' rights. Subsequently, the first collecting society, SACEM was formed in France in the 1860's through the petitioning of the musician, Bourget, in order to collectively enforce the rights of performers. Collecting societies may be purely voluntary or may operate on a statutory footing, and membership can be compulsory or non-compulsory. The effectiveness of collecting societies depends on four key factors, namely: (1) the state of copyright legislation; (2) the attitude of government institutions; (3) the user friendliness of licensing and collection regimes; and (4) the attitude of rightsholders in relation the running of collecting societies. The kinds of licensing performed by collecting societies falls into two main categories i.e. blanket licensing and per copy licensing. Blanket licensing is convenient where large amounts of copying is going on and involves the taking of some kind of usage survey. Per copy licensing involves the direct measurement of usage. This is more suitable for smaller volumes of copying and has recently been revolutionised by the introduction of sophisticated copyright management systems. In either case user education is important in ensuring compliance. While it has been argued that the incorporation of fair use into licensing regimes will confuse the public, it is also true that the absence of fair use in licensing will create a perception of unfairness amongst the public.

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[179] ibid., p326.

Collecting societies exist because they are a more efficient way of collecting royalties for their members. Other advantages include increased compliance, reduced transaction costs, and simplified licensing procedures. However, with the arrival of rights management technology it is questionable whether these advantages will remain such a potent force in the future. The main disadvantage of collective administration is that it creates a risk of anti-competitive behaviour both vertically and horizontally, and as collecting societies grow so does this risk. Much of the concern regarding anti-competitive behaviour among collecting societies is focused on the pricing of licences and how this is determined. These prices may be set individually or across a range of similar uses, it is this second method that gives rise to serious disputes. Multimedia production as it exists currently depends mostly on individual licences; however, this must change if copyright licences are to be issued through one-stop-shops. As well as being entities that collect and distribute royalties collecting societies have a clear social role in providing benefits for their members. These befits are facilitated by a fund paid for by deductions from royalties.

Since the early 1980's the European Commission has been concerned with the approximation of copyright laws, and since the mid 1990's has developed the concept of the Information Society, a vision of Europe's future based upon the economics, and commercial exploitation of information. Collecting societies provide the administrative structures for such exploitation, and the Internet provides the physical infrastructure. The Commission has therefore sought to promote the administrative convergence of collecting societies in the form of "one-stop-shop" initiatives while at the same time checking the antitrust implications of administrative convergence among collecting societies. During this time the process of digitisation and the expansion of the Internet have increased exponentially to a point where existing copyright regulation has become inadequate. The need to harmonise national laws and to manage information collectively has therefore become ever more pressing, and what was once encouragement from the Commission has turned into bullying.

This was evident following the amendment of the German Copyright Act in January 2002, which improved the contractual situation of authors and performers. Previously the European Commission had failed to give serious consideration to contract rules relating to copyright, however, on September 1, 2001 the Commission organised a study concerning "The conditions applicable to contracts relating to intellectual property in Member States"[180]. Another arena in which this bullying is obvious is that of jurisdiction and applicable law. The Commission in its E-Commerce Directive was keen to ensure that "information society services" should be subject to the general principle of free movement of services. The rule set out in Article 3 of the Directive provides that service providers should comply with the country of origin principle, however, in relation to intellectual property the Commission adopts a laissez faire approach, specifically exempting intellectual property transactions, consumer transactions, and the emission of electronic money[181]. Further, this approach is very evident in the Information Society Directive, which gives over broad protection to technological protection devices and reduces exceptions to a minimum. It must be noted, however, that this trend is global and is not just a European obsession. Collecting societies are natural monopolies by their very nature, under U.K. law an abuse of dominant position will occur where a copyright owner uses exclusive rights granted by copyright to expand into markets outwith the primary market for a particular copyright work. Apart from failure to grant licences on reasonable terms abuse of dominant position in relation to copyright may take a number of forms including manipulation of standards, frustrating access to works, and preventing interoperability of software. Further, collecting societies are undertakings within the meaning of Article 86 of the EC Treaty. Under ECJ case law unfair competition has been found where collecting societies impose obligations on their members that exceed the objectives of the society. Violations of competition law have also been found where royalty rates, measured on an objective standard, have inexplicable variations between one country and another. In one case breaches of Article 86 were found where TV companies failed to license TV listings to competitors on reasonable

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[180] See note 159 above, p172.
[181] Lokke Moerel, "The Country-of-origin Principle in the E-Commerce Directive: The Expected "One-stop-shop", C.T.L.R. 2001, 7(7) p186.

terms. This was significant because access to the material was enforced and the case concerned listings and not just primary material. This further raises the point that compulsory licensing may be necessary in relation to collectively administered material in order to prevent situations of market failure and to improve certainty for multimedia producers. More recently the Copyright Tribunal has made decisions based on the absolute price of copyright licences. It also seems that the abhorrence of copyright owners and their representative bodies towards compulsory licensing does not seem to prevent the tribunal from imposing solutions, which are practically if not legally very similar to compulsory licensing. Collective administration is based on a number of key principles i.e. the right to exercise rights individually, the need for collecting societies to offer a comprehensive repertoire, and the need of those receiving income from collecting societies to have a role in running them. At an international level these principles include reciprocity, national treatment and the maintenance of international minima. As well as implementation through international agreements these principles are brought into effect through bilateral agreements between the various national collecting societies. Collective administration is usually enforced through licensing regimes; however, it can also be enforced through a system of levies. Copyright levies were first introduced in Germany in 1965. They are charges on equipment or media made as a means of controlling private home copying. When levies were first introduced there was no other effective means of remunerating right holders for this kind of use and digital media had not yet emerged. Used in combination with rights management technology levies can constitute a form of double taxation. This has been recognised to some extent in the provisions of the Information Society Directive. However, the European Union's approach to levies remains chaotic.

In relation to the commercial development of multimedia products collective licensing is essential because of the shear number of rights involved. Licences must specify the content to be developed; the pre-existing rights involved and indeed must specify all the rights involved in the creation and distribution of a multimedia product. Unfortunately all the authorisations involved may not be available from one collecting

society, and even where they are the society may not have authority to grant those rights. Where this is the case those permissions must be obtained from the rightholder. The absence of authorisation in respect of just one right in one piece of copyright material can potentially prevent exploitation of a multimedia work, or at the very least greatly increase its cost. Further, special permission must be sought to digitise a copyright work unless it is a pre-existing work with very broad terms of licence or assignment. This is an especially important consideration where a multimedia work is to be distributed using the Internet. Moral rights are also a problem because in many European countries they cannot be assigned, so even where a collecting society has full authority to handle owner's rights moral rights may require a separate warranty from the author of the work.

Ultimately enforcement is the most significant thing that collecting societies do, without this they cannot undertake any of their other functions. However, the more effective a collecting society is at enforcing members rights the higher its administration costs, these being subtracted from royalties. European collecting societies are far more efficient in terms of enforcement than their American counterparts. Consequently, a row has arisen over administration costs in relation to the administration of foreign rights. This puts European collecting societies under pressure to reduce administration costs and the efficiency of enforcement. This is combined with pressure from the U.S. concerning their ten percent levy used to pay for social provisions. If European collecting societies bow to this pressure they will become more like mere money collecting machines. With regard to enforcement on the Internet the most significant factor holding this back is the reluctance of right holders to allow material to be digitised in the first place. This occurs mostly because the market for material distributed via the Internet is in its infancy and because security on the Internet is still a problem. Thus right owners do not know what their copyrights are worth or whether they will be secure from infringement[172].

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[172] Comments of Helen Arnolt of Scottish Media Group on 6 August 2002.

The current licensing structures used by collecting societies tend to be based on inflexible structures geared to large institutions i.e. blanket licensing. These fail to consider the way in which copyright material is used by most businesses. This is particularly significant in relation to copyright usage on the Internet. Here the most important considerations in licensing are the volume of material used, ease of use, the economic model used, and methods of payment. In turn, these will affect the way value is added and pricing. Unfortunately there is often a mismatch between the economic models used on the Internet and those upon which conventional licences are based. Because the market for products distributed via the Internet is not yet mature the approach of collecting societies is tentative. That is assuming they have permission to authorise digital uses. Despite these problems the European Commission considers Internet distribution of multimedia products to be an important element of the Information Society. It has financed 10 pilot projects under the auspices of the INFO 2000 programme in order to promote rights clearance on the Internet. These projects tend to fall within three main categories, namely, rights clearance, the provision of information and catalogue data, and promotion of interoperability of rights clearance and related software. Finally, chapter 8 examines some alternatives to copyright and proposes a solution to the problem posed by this thesis. Thereafter the conclusions of the thesis are reiterated and summarised.

CHAPTER 8

Conclusions

8.0 Introduction

This chapter proposes a solution to the problem addressed by this thesis, and gives an overview of the previous chapters. To begin with this chapter outlines the nature of the problem this thesis is attempting to solve and then analyses the relative merits of solutions to this problem that have been put forward in the past. Thereafter follows a summary of the conclusions from the previous chapters. The argument put forward in this chapter is essentially that the wholesale replacement of copyright and rights clearance regimes would endanger future development of these mechanisms. That we should patch them up until we have a clearer idea of the nature of emergent technological and social structures that will replace copyright. Further, it is argued that while rights management has a role to play there are difficulties that must be overcome before it can achieve its full potential.

8.1 The Problem

Copyright law as it currently exists is designed around physical property and value allocated according to the scarcity of such property. However, property in the digital realm is not scarce so the courts and lawmakers have sought to impose an artificial scarcity on digital property in order to give it value. This man made bottleneck has prevented the dissemination of knowledge and culture, unjustifiably depriving those without the money to pay for it[1]. For Lessig "intellectual property is both an input and output of the creative process", thus he reasons that increasing the "costs" of

[1] Douglas J. Masson, "Fixation on Fixation: Why Imposing Old Copyright Law on New Technology Will Not Work", I.L.J. 1997, v.71, no.4, p9 available from: http://www.law.indiana.edu/ilj/v71/no4/masson.html.

intellectual property can simultaneously increase the costs of production and the incentives to produce. This theory works well on a conventional economic analysis, but ignores the fact that the economics of the Internet are not about scarcity, but about abundance. However, Lessig also argues that increasing the power of copyright owners will not necessarily create the right balance of competing interests[2]. This is certainly born out by legislative developments in both Europe and America in relation to the database right, copyright term, and access control.

8.2 Cyberlaw Right or Wrong?

When contemplating the issues involved in the adaptation of the law in relation to technological change it is as well to remember the famous quotation by Thomas Jefferson that states[3]:

"I am not an advocate for frequent changes in laws and institutions. But laws and institutions must go hand and hand with the progress of the human mind. As that becomes more developed, more enlightened, as new discoveries are made, new truths discovered and manners and opinions change, with this change of circumstances, institutions must advance also to keep pace with the times. We might as well require a man to wear still the coat which fitted him when a boy."

A body of law has been created, mostly in the United States, which supposedly regulates cyberspace. The justification for this is that copyright works have dematerialised as result of digitisation. These works are, or so the argument runs, unsuitable for the traditional copyright regime with its idea/expression dichotomy[4]. Further, it is often argued that the pace of technology is so rapid that legislation is

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[2] Lawrence Lessig, The *Future of Ideas: the fate of the commons in a connected world*, Random House, 2001, p2003.

[3] George P. Landow, "Hypertext and Multivocality: The Convergence of Contemporary Critical Theory and Technology", 1992 (quoting the inscription at the Thomas Jefferson Memorial in Washington.

[4] Henning Wiese, "The justification of the copyright-system in the digital age", Comms.L. 2002, 7(2), p39.

often out of date by the time it is implemented. In answer to the dematerialisation argument Henning Weise contends that the fundamental principles of copyright remain the same regardless of the method of storage[5]. While this may be incontrovertible, it misses the point, the problem with dematerialisation is that it upsets the balance of copyright by subverting existing economic models; digital content is hard to measure, and harder to control. Furthermore, the basic premises of copyright are being distorted especially with regard to digital content. It is so often stated that the purpose of copyright is to reward authors. This is just not the case. The purpose of copyright is to stimulate the creation of useful works to the benefit of the public i.e. 'public' in the sense of ordinary consumers rather than giant corporations.

The tendency of lawyers to present copyright as a formalistic, integrated and coherent body of law is according to Brad Sherman motivated by three main factors. These are firstly, the desire to describe law more precisely, secondly, to justify and legitimise the copyright system, and thirdly, because copyright as a body of law is conceptually closed[6]. Cyberlaw like the Internet first developed in the United States; however, "cyberlaw" is a dangerous misnomer. The reasons for this conclusion are observed by Joseph Somner who notes in his article "Against Cyberlaw" that cyberlaw does not really exist, and that it is dangerous to assume it does. Cyberlaw is partly an attempt to define the future, which of course is impossible. Somner also notes that the lags between the implementation of laws prevent the immediate generation of new practices[7], and that a highly technological focus may lead to predictions about the future that will never happen. Additionally, the law should not be technologically lead; rather it should be driven by the evolution of social practice[8]. As Somner puts it: "A new information technology is likely to affect many social practices and hence many bodies of law. However, it is not likely to generate a field of law all its own."[9] For him the law is evolutionary rather than revolutionary, unlike technology, which is more

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[5] ibid., p41.
[6] Brad Sherman, "Appropriating the Postmodern: Copyright and the Challenge of the New", (1995) 4 Social and Legal Studies, p31.
[7] Joseph H. Somner, "Against Cyberlaw", B.T.L.J., Fall 2000, p1148.
[8] ibid., p1155.
[9] ibid., p1156.

revolutionary. Cyberlaw has already led to problems such as the legal analogy of real space with cyberspace, although this analogy is a tempting one it is fundamentally floored. While cyberspace might have some analogy with the Wild West it cannot be explored and divided up in quite the same way. People cannot live in cyberspace; it is not like land. However, a number of recent U.S. cases have attempted to introduce the law of trespass to the Internet, with potentially disastrous consequences for free speech and access to information. Somner uses the example of electronic agents[10]; here he asserts that electronic agents cannot be agents except by analogy, and certainly not in any legal sense of the word. He then goes on to deconstruct the analogy insofar as electronic agents are in fact slaves that are without discretion. Furthermore, such a slave has no legal personality and cannot bind its master[11].

Lawrence Lessig is greatly concerned with the idea of code as law, he states: "How a system is designed will affect the freedoms and control the system enables. And how the Internet was designed intimately affected the freedoms and controls it has enabled. The code of cyberspace - its architecture and the software and hardware that implement that architecture - regulates life in cyberspace generally. Its code is law."[12] He further argues that cyberspace "is as man designs it"[13]. This analysis has a number of problems. First, people can't live in cyberspace. What happens in cyberspace is a reflection of what happens in real space. Secondly, code is not law, yes, it does have rules, but that will not make it into law either de facto or de jure. The Internet was designed to circumvent barriers, and this it does very well most of the time. Thirdly, while man can design in many of the features of a network such as the Internet, the Internet is limited by physical limitations such as bandwidth, but more significantly the Internet is a social phenomenon that ultimately reflects societal changes. This is not to completely deny Lessig's essential idea that code has a very important but indirect input into the making of law in cyberspace, though the argument is perhaps rather overstated.

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[10] ibid., p1178.
[11] ibid., p1181.
[12] ibid., p35.
[13] Lawrence Lessig, *Code and other Laws of Cyberspace*, Basic Books, New York 1999, p221.

8.3 Contract versus Copyright

If copyright fails to provide adequate protection for digital works questions arise as to what will replace it? As Goldstein observes contracts and encryption exist independently of copyright, however, these forms of protection do not allow culture to advance "on the shoulders of its antecedents, each contract or encrypted work can exist in a vacuum"[14]. Thus uses that were previously unregulated or classified as "fair use", will have to be paid for[15]. Laws that prevent circumvention of technological measures compound the problem. Article 11 of the WIPO Copyright Treaty attempts to attach statutory anti-circumvention provisions to copyright norms by requiring "adequate legal protection and effective legal remedies against the circumvention of effective technological measures". However, this linkage is not being achieved because states such as the United States have gone far beyond this. Even in the U.K. where the legislation is far less draconian, statutory interpretation has extended the ambit of legislation to cover devices that were never intended to circumvent technological measures. Notably encryption technology "has no moral history or norms at all"[16], as was stated by the U.S. Supreme Court in the Sony case "From its beginning, the law of copyright has developed in response to significant changes in technology. Indeed, it was the invention of a new form of copying equipment--the printing press--that gave rise to the original need for copyright protection. Repeatedly, as new developments have occurred in this country, it has been the Congress that has fashioned the new rules that new technology made necessary."[17] However, even if new technology is created for purposes that are consistent with the maintenance of the balance of copyright, it is also likely to challenge this status quo. So although established industries may want the benefits brought by this technology, i.e. improved image and sound quality, they will want to eliminate other consequences of the new technology such as increased speed of dissemination and improved quality

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[14] Paul Goldstein, "Copyright and its Substitutes: The Kastenmeier Lecture", 1997 Wis.L.Rev. p865.
[15] ibid., p866.
[16] ibid., p871.
[17] U.S. 417 (1984), p430-31.

of copies[18]. Recent decisions in relation to anti-circumvention devices run contrary to the decision of the U.S. Supreme Court in Sony Corp. v. Universal Studios[19] where it was held that the import, manufacture, and distribution of a device could be allowed even where it's primary purpose or effect was to infringe copyright. The critical issue being whether the device had a substantial non-infringing use, so long as the device had such uses then its use, sale distribution etc. would not amount to contributory infringement.

While it has been argued that the Internet is beyond regulation Lawrence Lessig argues that this view is misguided. Lessig says that the Internet is a network of networks and that someone, mostly private parties, controls these networks. Yet despite this private control of Internet hosts the Internet is "the most important innovation commons that we have ever known"[20]. He goes on to state that "those inside the Internet culture "the wired" understand the potential of cyberspace and are making that potential real."[21] This commons is a commons of code, knowledge, and innovation. A commons at first dominated by open code, however, the open standards used on the Internet have increasingly become proprietary, as companies have sought to assert control over their products[22]. Lessig states: "The shift is away from the open resources that defined the early Internet to a world where a smaller number get to control how resources in this space are deployed." Further, he cites the iCrave case as illustrative of the use of technology to fence off cyberspace into local areas[23] and the application of real property concepts (i.e. trespass to chattels) as an example of the use of a real property concept on the Internet[24]. For Lessig there is a state of inertia in relation to Internet regulation, in "Code and other Laws of Cyberspace" he states: "Courts are disabled, legislatures apathetic, and code untouchable"[25]. If the Constitution permits Congress to grant authors an exclusive right "for limited times",

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[18] See note 1 above, p8.
[19] 464 U.S. 417 (1984).
[20] See note 2 above, p26.
[21] See note 2 above, p49.
[22] See note 2 above, p52.
[23] See note 2 above, p192.
[24] See note 2 above, p170.
[25] See note 13 above.

then the framers of that power clearly intended that that exclusive right should come to an end. Permitting Congress the power to perpetually extend copyrights would defeat the purpose of the express limitation[26]. In his book "The Future of Ideas" Lessig argues that free resources are essential for innovation and creativity, and that creativity is paralysed without them. Thus in the digital age the question is not so much whether the government or the markets should have control over a resource, but rather one of whether there is any justification for controlling a resource at all[27].

8.4 Sui Generis Protection

Irini Stamatoudi has developed a three-fold structure for the protection of multimedia products in which she favours sui generis protection for multimedia works mixed with copyright protection along the lines of films[28]. Her second alternative is the introduction of a concept of fair use or fair dealing analogous to that embodied in s.107 of the U.S. copyright Act[29]. Thirdly, she proposes a continental style copyright regime, which permits partial waiver of moral rights in certain circumstances[30]. However, in this thesis the author contends that this analysis is only partially right. Firstly, sui generis protection is an unsuitable form of protection for multimedia products because sui generis protection may be too broad, (i.e. when it adopts a structure like that of the Database Directive). Secondly, it would be difficult to accommodate fair use within those elements of a multimedia product protected by the sui generis right. While it might be possible to build fair use into products protected by the sui generis right the generalised nature of the right would militate against the practical development of such a solution. Thirdly, there is not sufficient evidence to suggest that the introduction of a sui generis right will promote the generation of multimedia products more than the existing copyright regime. In addition the shortening life cycle of multimedia products means that this kind of protection will be

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[26] See note 2 above, p197.
[27] See note 2 above, p14.
[28] Irini Stamatoudi, *Copyright and Multimedia Products: A Comparative Analysis*, Cambridge University Press 2002, p271.
[29] ibid., p235.
[30] ibid., p236.

ineffective in any event. Instead the author proposes that the system of categories within the existing regime be modernised using a system of flexible and technologically neutral definitions, and secondly that the system of fixed exceptions within the Copyright Directive be adjusted through the flexible interpretation of existing legislation in a way that is consistent with the principles of fair use as set out in s.107 of the U.S. Copyright Act. At present the WIPO Copyright Treaties and their legislative progeny make this improbable, however, those Treaties are fundamentally unfair insofar as they favour more developed countries and force poorer countries to open up their markets. This balance simply must change in the interests of economic and social justice. The advantages of such a system would be firstly, that it avoids the needs for massive amounts of codifying legislation and the risks, which such sweeping changes would entail. Secondly, this system would help to reduce the risk of legislation becoming out of date before it is enacted. Thirdly, it would protect the public domain and solve many of the problems relating to access to works. While such a development would not provide a panacea, owing partly to the unclear nature of the fair use doctrine, it would at least give copyright some of the added flexibility, which it needs to cope with digital uses and technological protection measures. Clearly this does not deal directly with the issue of rights management systems; however, it is propounded that the anti-circumvention provisions of the Copyright Directive are too draconian, and contravene existing E.U. laws such as those relating to data protection, and computer misuse.

8.5 The New Patronage

In his essay entitled "The Economy of Ideas" published in 1994 John Perry Barlow suggests that conventional copyright regimes protect storage media rather than the thought conveyed[31]; however, in the digital age this thought can subsist without the carrier. Barlow states that the relationship between the carrier and the thought conveyed first began to breakdown with the advent of commercial radio. The revenue models used in radio tend to taint the product. Indeed according to Barlow the

royalties paid to songwriters in broadcast media through collecting societies like ASCAP and BMI are calculated in a very approximate way that bears little relation to revenue streams. This he tells us is a model "we should not seek to emulate"[32], this situation is one exacerbated by problems of jurisdiction since the Internet has erased the physical borders that used to be a defining feature of intellectual property rights. The effect of all of this is that the idea/expression dichotomy is breaking down, and ideas are themselves being claimed as intellectual property[33]. For Barlow the nature of enterprise in cyberspace is as yet undefined, and the creation of laws and precedents is premature until the nature of this social compact becomes clear[34]. This alludes to his conception of economic models used on the Internet as being based on relationships rather than physical possession[35]. This value relationship includes interactivity, timeliness of delivery, and the provision of complementary services[36]. This owes much to the inverted economics of the Internet, which is based on abundance as opposed to scarcity. What this means is that information goods and services increase in value the more widely distributed they become, the more this occurs the more the good or service is likely to become a de facto standard. To see the value of this one only need look to the example of Windows software, which can be found in almost any business organisation in the world.

The economic models suggested by Barlow are first patronage, only with an enlarged body of patrons (i.e. the public). Secondly, he suggests a model based on performance i.e. rather like ticket sales for concerts, and thirdly payment for information with information, a model that already operates on the Internet[37]. In a more recent paper entitled "The Next Economy of Ideas" John Perry Barlow enlarges on his earlier paper and finds that not only is the genie out of the bottle, but there is no bottle[38].

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[31] John Perry Barlow, "The Economy of Ideas", March 1994, p2 available from: http://www.wired.com/wired/archive/2.03/economy.ideas_pr.htm.
[32] ibid., p3.
[33] ibid., p4.
[34] ibid., p5.
[35] ibid., p8.
[36] ibid., p9.
[37] ibid., p10.
[38] John Perry Barlow, "The Next Economy Of Ideas", October 2000, p1 available from: http://www.wired.com/wired/archive/8.10/download_pr.htm.

Further, he finds that the commercial value of electronically distributed information is increased by free access to it rather than through its proliferation[39]. Interestingly Barlow is of the view that piracy actually increases the value of software because this brings it nearer to becoming a de facto standard[40]. While Barlow believes that copyright as we know it will die, he also believes that it will be replaced by a new age system of patronage based on relationship, convenience, interactivity, service, and ethics. While the author thinks that Barlow's views are rather far fetched he to a large part agrees with his economic analysis. Although it is unlikely that copyright will die, it is likely the economic structures that underpin it will change in such a way that the economic models that succeed will not draw revenue directly from the consumer. Barlow is also right to place a high value on trust between the consumer and the content owner[41].

8.6 Patents as an Alternative to Copyrights

The Patent system offers much stronger protection than the copyright system; however, inventions must be "new", "novel", and involve an "inventive step". Thus the standard of originality is much higher than for copyrights and even the accelerated procedure for obtaining patents is complex protracted and expensive. Furthermore, there is no world-wide system of patent protection so patent coverage is nearly always going to be patchy, hard to put in place, and difficult to enforce. However, the development of multimedia products can involve patent as well as copyright issues, for example even the open MPEG standard involves patents owned by nine different companies in three different countries. It is also likely that interactive software will involve patented software. Whether there is sufficient cooperation between the various right owners to organise the licensing of such software at a reasonable royalty rate is questionable.

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[39] ibid., p2.
[40] ibid., p3.
[41] ibid., p4.

8.7 Trade Secrecy versus Copyright

While the law does not recognise property in information, as such, it allows parties to contractually regulate their affairs by way of contract. Trade secrets are a form of intellectual property with similarities to both the patents and the law of unfair competition. Yet because they are mostly enforced by means of a contract they are highly dependent on the rules of judicial interpretation, and cannot be enforced against third parties unless they know the information is confidential. While trade secrets are mainly enforced through written contracts, a breach of confidence action may be brought in respect of trade secrets and confidences that are not written down. This obviously may be more difficult to prove in court. One of the most often cited tests for defining a trade secret is the objective test of Greene MR in Saltman Engineering v. Campbell & Co[42] where a trade secret is defined as something that is not public property and knowledge. While this definition is an illusive one the subjective test of Sir Robert Megarry VC in Marshall v. Guinle[43] might be considered too restrictive. This test requires: (1) that the release of the information will be injurious to its owner or advantageous to one of his competitors; (2) the owner must believe that the information is secret; (3) that belief being a reasonable one; and (4) the information is to be judged in the light of usage and practice within the particular industry concerned. This definition if applied strictly would limit trade secrecy to trade or industry, and is dependent on proof of injury/advantage and the belief of the owner of the information. As yet the law of trade secrecy has not been harmonised at international level. However, Article 39(2) of the TRIPS Agreement states that trade secrets must not be public knowledge, must have commercial value because they are secret, and must be subject to reasonable steps to keep them secret by someone who is in lawful control of them. Trade secrets and confidentiality are a useful supplement to other forms of intellectual property protection, although they do not provide a real alternative to copyright because they depend for their enforcement, if not their existence, on the law of contract with all its inherent weaknesses. Furthermore the

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[42] (1948) 65 R.P.C. 203.

harmonisation of international law in this regard is a long way behind that of copyright and patent law.

8.8 Rights Clearance

With regard to the clearance of copyrights in multimedia products the basic rule is that title is reserved to the author unless the right is expressly granted in the licence contract. This makes the rights clearance process particularly difficult in relation to works that already exist. There then arises the issue of whether the rights clearance process should be handled by collecting societies or dedicated clearinghouses. In the U.S. there is no clearinghouse capable of identifying who can authorise the right to use copyrighted content in a multimedia product. In Europe the Commission has adopted a more co-ordinated approach; however, while some elements of such a clearinghouse exist in Europe, no viable one-stop-shop has yet emerged. While collecting societies have set up joint databases, and have developed interoperable standards their attempts have been piece meal and do not represent anything like a one-stop-shop. One reason for this is that the current licensing arrangements used by collecting societies are not designed to facilitate multimedia rights clearance. Multimedia products are often non-sequential in nature and existing fee schedules are not designed to facilitate non-sequential access to copyrighted works[44].

What is needed is a one-stop-shop specifically capable of dealing with digital uses of a wide range of copyrighted works. Clearance centres dealing with specific types of copyright material such as the Harry Fox Agency and the Copyright Clearance Centre in the U.S.A. already exist, however, they do not deal primarily in digitised content. A clearance centre requires two main elements to carry out its functions, first it must have a consolidated database, and secondly, it requires a set of common standards that provide homogenised set of descriptors for copyright works that take into

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[43] [1978] 3 W.L.R. 116.

[44] Fred Greguras et al., "Multimedia Content and the Superhighway: Rapid Acceleration or Foot on the Brake?", 1994, C.L.W. 1994, 12(9), p14.

consideration the needs of content owners and users. On one theory material could be added to the consolidated database incrementally[45]; however, the danger with this strategy is that clearinghouses would fail commercially unless the databases had reached a critical mass. Very often database software only works effectively when there are a certain number of entries on the database, a prime example of this is the BAILII project in the U.K..

8.9 Fair Use

Those seeking to exploit digital content have frequently asserted the proposition that 'fair use' cannot exist in the digital environment. This thesis argues that copyright in digital works must include some notion of 'fair use' if it is to be sustainable over the long term. Prior to 1911 something very similar to fair use existed in the U.K. and some would argue that it still does[46]. However, the attitude of the judiciary since this time has interpreted statutes narrowly so that the taking of even very small portions of a work could constitute infringement. Having said this, the Whitford Committee Report of 1977 recommended that the United Kingdom adopt a general defence of fair use. Likewise a 1984 report of the Canadian Department of Communications recommended the adoption of a fair use defence along the lines of that used in the United States[47]. Fair use is important in the digital context for three key reasons: (1) it gives the courts a flexible tool for balancing private interests against those of the public; (2) as a means of preventing the usurpation of the public domain by technical devices; and (3) as a means of facilitating access to the public Internet where strict enforcement of rights might otherwise prevent this.

In terms of international law it has been argued that the fair use defence is as such incompatible with the TRIPS agreement. In particular Article 13 of the Agreement states: "Members shall confine limitations or exceptions to exclusive rights to certain special cases which do not conflict with a normal exploitation of the work and do not

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[45] ibid., p19.
[46] Robert Burrell, "Reining in Copyright Law: Is Fair Use the Answer", I.P.Q. 2001, 4, p370.
[47] ibid., p363.

unreasonably prejudice the legitimate interests of the rightholder." However, this particular Article can be seen as an attempt by the United States to impose more severe standards upon the rest of the world than it does on itself. In Europe the Information Society Directive replaces more general exceptions with a fixed and narrowly defined body of exceptions. Arguably the Directive fails to harmonise national rules and inhibits the free movement of goods and services. While it is unlikely the ECJ will even partially abrogate the Directive[48], it is possible to interpret the exceptions in the Directive so loosely that something very similar to fair use will be achieved. The most important factor in the introduction of a concept of fair use into U.K. law is the attitude of British judges in interpreting any would-be legislation, and in the past they have singularly failed to interpret copyright legislation in favour of the consumer[49].

8.10 Copyright and Unfair Competition Principles

Copyright is of limited scope and covers mode of expression rather than actual information. It is often suggested that unfair competition principles provide a useful alternative to copyright law. However, unfair competition principles apply only in very precise circumstances, and are inappropriate for most claims by individuals. Although complex the basic principles of copyright are agreed at an international level, unlike unfair competition principles. Furthermore, while it is true that copyright only covers the mode of expression, it can in some circumstances cover information content. Furthermore, the doctrines of copyright and unfair competition principles are beginning to merge. This is particularly evident in relation to the application of the fair use doctrine in the United States. In relation to the governance of the Internet ,i.e. standard setting, the principles of unfair competition are only likely to have a very limited impact since harm will be defined in narrow consumer welfare terms[50].

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[48] ibid., p386.
[49] ibid., p388.
[50] See note 7 above, p1199.

8.11 General Comments

Multimedia products and services do not present fundamentally different problems to mono-media; however, digital technology makes the lacunae in the law that have always existed more obvious. It has become almost trite to say that traditional notions of copyright like many other regulatory structures are unable to deal with digital technology because they were designed to regulate single media hosted on separate platforms, and that multimedia communications do not fit the bill. It is equally bland to suggest that the Internet is a wild uncontrollable beast, which will consume all in its path. What has changed since these kinds of arguments were in vogue is the introduction of the powerful forces of commercial gain. So has the irresistible force finally met the immovable object? What is clear is that the balance of power in the information markets is changing fast, and that whoever wins the battle to control the emerging digital markets will be very difficult to dislodge[51]. Some authors argue that digital is fundamentally different to what has gone before, however, this thesis contends that although the technology has changed the issues at stake are the same. What has changed is not so much the technology but the way in which it is used. Networks change the ways in which computers are connected together, and the ways in which people communicate. The Internet is therefore more of a social than a technological phenomena. The kind of battles now being waged over who controls the new media are not unlike those fought at the turn of the eighteenth century over rights to printed works. New technologies make the defects of copyright law plain for all to see, but neither do they offer a complete solution. The main problem with multimedia is simply that there are more rights involved. Technical protection offers solutions for some companies, however, technical protection costs money and can make it harder for consumers to obtain and pay for information goods and services. There is no centralised system of rights clearance on the Internet, and collective solutions offered by collecting societies are not automatically more efficient than the system of separate clearance of individual rights that exists at present. What is clear is that it will not be

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[51] See chapter 1 above.

possible to have the full panoply of exclusive rights that now exists if a centralised and streamlined system of rights clearance is to be implemented. The best way to implement such a system would be through centralised clearing houses. However, this would require greater convergence of copyright and licensing law as well as greater use of compulsory licensing. Electronic commerce is dependent upon consumer confidence, and the kind of rigid enforcement of rights offered by ECMS will drive the development of circumvention technologies unless the law imposes some kind of equity upon them. Equally rampant profit taking by publishers and collecting societies facilitated by over-strengthened copyright regimes will only worsen the current levels of copyright violation. Copyright management systems are being developed with global markets in mind, it is therefore vital that fair use provisions be incorporated into international copyright law if it is to retain the kind of balancing function which it has performed in the past.

8.12 What is Multimedia?

The term "multimedia" has no single accepted definition, but essentially concerns the storage of different media on a single platform, de-specialisation of transmission and the integration of media and telecommunications services. Another feature of multimedia products, although not a fundamental one, is interactivity. However, it is important to note that in the last few years the difference between multimedia products and digital products has narrowed. In effect advances in telecommunications technology, digital compression etc. have made all file formats available in digital form, and capable of distribution via the Internet. Initially the growth of the Internet was inhibited by a shortage of bandwidth, and transmission delays. Subsequently development of the Internet's infrastructure and compression technology reduced the bandwidth problem making electronic commerce more possible. Nonetheless, many technical, economic, and regulatory challenges remain. Ecommerce involves two main cycles, a purchasing cycle and a payment cycle. Clearly the payment cycle is the most problematic and has given rise to the development of trusted third parties, and the use

of encryption technology to provide added security. A further development came with the introduction of Electronic Copyright Management Systems (ECMS) designed to control access, manage rights and facilitate payment. While ECMS are a useful development they also cause problems of access to copyright works and distort the balance of copyright. What is needed is a flexible approach that balances the interests of the parties without being too technology specific. This approach requires consistent and transparent regulation, the need to expand society's knowledge base, the maintenance of access to information services, and technical integration on both an internal and an international level. Standardisation must inevitably play a vital role in this process in making information products/services easy to use and interoperable; however, these advantages come with the risk of anti-competitive behaviour.

8.13 Copyright and the Internet

Copyright has always allowed a certain amount of developing and borrowing of ideas, however, with the demise of the old economic alliances that underpinned copyright and the creation of the Information Society, the technology specific approach to copyright applied in the past is no longer appropriate. Under Anglo-American law copyright is first and foremost a property right. Copyright works must be original, fixed in a permanent form and under U.K. law are split into predefined classes. Copyright grants owners certain exclusive rights; however, copyright does not apply in relation to public domain works or unregulated uses. Furthermore, there are also exceptions to copyright permitting the use of copyright works in special circumstances, in the United States fair use is a kind of general exception that can be applied if certain criteria are met i.e. non-commercial use. Historically copyright arose following the invention of the printing press and arose from a system of patronage that ended when the monopoly of the Stationers Company was withdrawn in the seventeenth century. Subsequently piracy became rife and the Statute of Anne became law in 1710 following much lobbying by the Stationers Company. To begin with this right applied only to original literary works for a period of 21 years (for existing works) and after Act became law for a period of 14 years renewable for a further 14

years; however, the scope and duration of copyright have expanded enormously since then.

Further, the notion of the common good has been seriously eroded by the increased emphasis by the courts and the legislature on private enrichment. Copyright to begin with left most uses unregulated and most works were returned to the public domain after a fixed period. The protection of databases has brought the public domain into the private domain, moral rights are not attractive to Anglo-American copyright systems, and publishers' rights are becoming ever more contractual in nature. In addition copyright was to begin with very territorial in nature, but is becoming increasingly international in scope. Digitisation of works and improved telecommunications have accelerated the pace of globalisation and increased the control that rightholders may exercise over their works. This has put in question the very existence of fair use and fair dealing. At the same time piracy has become rampant and technological protection and enforcement has improved. This has provoked a move towards legal protection of technological measures.

The originality of copyright works has always proved to be a thorny issue, especially in relation to more factual works. The Feist case in the United States held that the white page listings of telephone directory were insufficiently original to attract copyright. This was based on the assertion that the production of the listing involved only "sweat of the brow" rather than intellectual effort. Consequently, the producers of factual works became concerned about the protection of their works, the upshot of this being the introduction of the Database Directive in Europe. Where copyright works are infringed one of the most important issues is that of whether a substantial portion of the work has been taken. Under U.K. law the test for this is more qualitative than quantitative, the test being first and foremost a qualitative test. This looks at the work as a whole and brings the issue of the quantity taken into consideration of the part taken, relative to the size of the original work. Further, the material taken must be original. This idea/expression dichotomy is better developed in the United States, especially in relation to computer software. In relation to non-literal

copying of computer software the assessment of whether a substantial portion of a computer program is taken can be very complex, even in the United States the case law concerning this is very unsatisfactory.

Technical solutions are one way of avoiding copyright infringement and in both Europe and the United States legislation has been enacted in order to outlaw devices designed to circumvent technological solutions. In Europe this takes the form of the Information Society Directive, a measure designed to harmonise national laws in Member States vis a vis the treatment of digital copyright, but especially to harmonise the treatment of anti-circumvention devices. However, the Directive singularly fails to achieve this. Firstly, it does this by granting over broad protection to technological protection measures. Secondly, the Directive fails to deal with a number of important issues including jurisdiction, moral rights, and the nature of private copying. Thirdly, the list of exceptions in the Directive is exhaustive, only some are compulsory, and they are likely to make many functions involved in the normal operation of the Internet illegal.

Many of the information products distributed over the Internet are compilations or databases. Compilations are classified as literary works under Anglo-American law, they have thin protection that is based on their selection and arrangement, but must have some originality in terms of selection and arrangement. The Feist case in the United States asserts that sweat of the brow is not sufficient to establish originality, although the authority of this case is not automatically relevant to U.K. law. Furthermore, investment in an information product is not relevant for the purposes of copyright, and only the originality of the facts themselves is to be considered in assessing originality. A significant related issue is that of publishers' rights. The only really effective way for publishers to acquire rights is full assignment, however, in some circumstances, rights may be implied i.e. the right of revision and implied licences to make alterations to works once acquired. Mostly these rights are derived from contract, however, a party's silence cannot be construed as consent and the language of the contract will be construed so as to give effect to the intent of the

parties. Where a genuinely 'new' work is created the courts will interpret contracts more in favour of the producers of the new work.

As a response to the lack of protection afforded to databases, most notably in the United States, the European Commission instigated the creation of the Database Directive. This gives effect to a sui generis right lasting for 15 years that does not depend upon originality or copyright. This right prevents the extraction/reutilisation of database contents, thus the right protects the content of a database where a substantial part of that content is taken. Before a database provider can claim copyright in their database they have to prove that their database involves intellectual creation, a substantial investment, plus the independence and individual accessibility of entries. Intellectual creation needs to be shown where right owners claim copyright, however, if they just claim the database right this is not necessary. The rights created include the exclusive rights to copy, distribute, and communicate the contents of the database. The right is renewable making it a perpetual right, also some commentators believe that the Directive does not stimulate innovation, and in fact inhibits creation of the most useful databases.

This chapter deals next with the issues of moral rights and derivative works. Moral rights include the right of disclosure, respect, authorship, integrity, and paternity. These rights are included in the CDPA, but most of them are revocable by agreement. The most troublesome of these rights are the rights of integrity and disclosure, which can effectively prevent multimedia creation. In any effective system of collective licensing of copyright works these rights should not be enforced rigorously, or made subject to the provision of warranties preventing their use. The derivative works doctrine is an American conception that does not really exist in U.K. law, and as a result the U.K. is ill equipped to deal with multimedia production. However, in recent cases the derivative works doctrine is gradually creeping into more recent U.K. cases in terms of assessment of the idea/expression dichotomy, and what constitutes infringement.

Finally, this chapter deals with the nature of international copyright, and exhaustion of rights. International copyright does not really exist in terms of a universal right; it exists as a bundle of rights subject to international minima that must be enforced at national level. The main instrument of international copyright is still the Berne Convention; this has many problems including inconsistent implementation, but most of all lack of enforcement powers. This lack of enforcement has to some extent been resolved by the TRIPS Agreement; however, this discriminates against poorer countries, and has proved ineffective in relation to the United States. The doctrine of exhaustion of rights concerns the termination of rights after a first sale. There are two main theories of exhaustion, one says that rights are exhausted in a state after a first sale, the other says that rights are exhausted everywhere after a first sale. However, in the digital environment exhaustion may not occur, or may only occur to a limited extent. Another problem is the system of exhaustion adopted in the European Union where a sale in one state will exhaust rights in all the other Member States. This runs entirely contrary to an international theory of exhaustion and has led to accusations of protectionism by countries outside of the E.U.

8.14 The Nature of Multimedia Works

What is clear from the above discussion is that multimedia works are hard to define and that the system of categories used by copyright are unsuitable for classifying multimedia works[52]. Furthermore, the concept of "a copy" is outmoded and is not suited for dealing with digital works transmitted over networks. However, new laws are not the answer, both because they tend to favour the interests of the media industry rather than the consumer, and because they are frequently out of date even before they are enacted. Sui generis protection tends to either over-protect works, or under-protect them because of its broad sweeping nature. What is needed is a liberal conception of fair use based on access to works rather than the creation of copies. In the new Internet environment copyright owners are becoming more concerned about image and levels of traffic than actual content. Obviously this does not include

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[52] See chapter 3 above.

websites that make money directly from content; however, relatively few sites use this model. From the authors own experience as a copyright clearance librarian it has become plain that the cost of clearing links has become far greater than the economic value of traded content, amounting to thousands of pounds per hundred links. In essence what is advocated here is the modification of existing laws, and the flexible interpretation of statutes to deal with new technologies. In relation to the distribution of works via the Internet what is clear is that ISPs and hardware manufacturers are the only bodies that can really control user behaviour, however, the implementation of draconian sanctions against ISPs is not good business and ultimately will not succeed. A more sensible strategy is to promote Internet business models using simplified dispute resolution procedures including the issue of compulsory licences where this is necessary to promote competition. In terms of securing multimedia content the primary options are to turn the Internet into a closed secure network, which has considerable privacy implications, or to keep the network open and to find alternative means of making money from it i.e. advertising sponsorship etc.

Multimedia involves the integration of a huge array of products including, sound, graphics, and film in interactive computer systems. While the legal problems created by multimedia products are not new they aggregate a lot of existing issues on a single platform. This situation is further complicated by the fact that multimedia products usually involve the splitting of copyright works into their component elements and then jumping between the various elements using hypertext links. As a consequence the administration of the rights involved in multimedia creation can be slow and expensive. Although multimedia was developed originally for stand-alone computer systems the state of network technology is such that multimedia works have become synonymous with digital works. The technology of delivery is varied and is still evolving. However, technological barriers are falling much more quickly than administrative barriers, and problems such as "new uses", the assertion of moral rights, and the slowness of the rights clearance process are preventing the use of copyright works in multimedia products. Further, the decreasing life cycle of multimedia products has made this problem even worse.

In the U.K. copyright works have been placed in rigid classifications i.e. "literary works, musical works etc., however, multimedia works do not fit neatly in any one of these categories. Usually multimedia works are classified as "literary works" or "cinematographic works", and sometimes "collective works". The problem with this is that each category has a different strength of protection, and sometimes a multimedia product may fall outside of these categories altogether. The result is a culture of under-protection for multimedia works. The same problem has created a movement towards sui generis protection, but this has problems of its own. Another difficulty with multimedia works is that each component element of a multimedia work may possess it's own copyright. A question then arises as to how small is the smallest protected element. Obviously before an element of a work is protected it must be original, and the smaller it is the less likely it is to be original. Under English law for an element of a work to be original it must "be an original expression of an idea". The difficulty of identifying an individual element of a multimedia work is complicated by the fact that such works may be stored on any form of digital memory and can be interactive or non-interactive.

Multimedia is particularly used in the creation of entertainment products and business applications in which interactivity is a considerable advantage. Multimedia can produce more integrated solutions and may also reduce costs. In terms of disadvantages multimedia products can have high development costs and distribution of such products over the Internet is to a large extent dependent on the adoption of consistent communication standards. It is also difficult to distinguish between authors work and information, and it can be hard to differentiate between different uses of a work. This makes licensing difficult and can frustrate the application of fair use. Equally in multimedia works the boundaries between different media break down thus stretching conventional notions of copyright to breaking point.

In the U.K. copyright law is codified mostly by the CDPA, this protects the creation of copies, and therefore provides inappropriate protection for multimedia works.

Provision of multimedia works on the Internet is dependent primarily on access to copies rather than the creation of copies. This access will often involve databanks of original works. Further, the CDPA prevents infringement of transient or incidental copies, unfortunately the Internet cannot operate without creating such copies. Accessing a database in any case would be better classified as rental or public performance. To complicate matters further several databases may be accessed simultaneously. The development of multimedia technology is also being slowed by technical factors such as lack of bandwidth on the Internet and the incompatibility of applications software; however, these problems are steadily being resolved.

Advanced multimedia products are interactive, while this brings a rich communication of the emotions it leaves little time to reflect. One result of this is that works created interactively tend to be less original than those created by conventional means; another is that the user of software rather than the programmer can be the first person to cause a digital work to be "fixed". Since cinematographic works involve an aggregate of visual images being displayed as a moving picture it may be difficult to establish that a substantial part of an interactive multimedia product is so produced, thus bringing it outside of the category. Ironically the more innovative a multimedia work is the harder it is to protect using copyright. A similar problem with interactive works is that they are often non-sequential in structure so that they do not form an aggregate that can be displayed as a motion picture. Thus the more opportunity is given to the user to create a derivative work; the less substantive is the contribution of the producer/creator of the work. A specific problem relating to the application of the CDPA to interactive multimedia is that appropriation of multimedia content on a multi-point system falls outside its definition of copying, substantiality, and broadcasting. Multimedia works use a lot of pre-existing copyright material often held in databases. These databases were created using contracts that do not contemplate digital uses so in practical terms this material may be unusable in any digital work. Another significant problem for interactive works is that they create derivative works, and U.K. law contains no substantive derivative works doctrine.

8.15 The Public Domain

The public domain is important in terms of multimedia because multimedia creation would be impossible without it. However, the public domain is steadily being eroded by the steady expansion of copyright. It is being privatised in the name of the author, yet giant corporations rather than individuals usually own the rights involved. The public domain has few disputants unlike private companies, which can afford teams of lawyers. One very significant way in which the public domain is being eroded is through the steady lengthening of the term of copyright. This situation is worsened by the increasing life expectancy of authors. Both the Duration Directive in Europe and the CTEA in the United States significantly lengthen the term of copyright. This is not just a sudden change but is part of the steady expansion of copyright since its inception. Duration of copyright differs according to the type of work involved and even if this were not so there were significant differences in the term of copyright in Europe between one Member State and another. Consequently the Commission sought to harmonise the term of protection throughout the Member States. This included the event triggering the running of the term, and the date from which the term was to be applied. For performances the term was fifty years from the date of the performance, but for most other works the term was increased from life plus fifty years to life plus seventy years, thus going above international minima. Supposedly this was to give copyright owners more time to recoup their investment and to take into account the greater longevity of authors. For multimedia works the author became the director and producer and the term was to run from the death of the last surviving author. For collective works the term effectively became perpetual because for these works the term begins to run from the date of publication of each individual part. These increases in the term were subject to a proviso where copyright is claimed, that the work is it's "author's own intellectual creation", a term not defined in the Directive. Further, the Directive has the unusual effect of bringing some public domain works back into copyright.

Changes to the term of copyright in the United States are more recent, the CTEA creates a new term of 95 years for works commissioned owned by corporations (after 1998), but for works created after 1 January 1923 and before the CTEA came into effect the term is life plus seventy years. The CTEA was subject to an abortive challenge in the U.S. Supreme Court on the grounds that there is a Constitutional limitation on extending the term of copyright, it does not promote science and the useful arts, and because it is contrary to freedom of speech under the First Amendment.

One of the main difficulties in protecting multimedia works is that they often straddle the categories used in U.K. copyright law. This is particularly the case where a work involves two-dimensional representations of three-dimensional objects. Where this happens it is difficult to determine the category into which a work should be placed. Furthermore, different categories offer different levels of protection and some multimedia works may be hard to fit into any category. In relation to infringement proceedings the category into which a multimedia work is placed will affect what constitutes a substantial portion and the level of originality that portion needs to attain. If a three-dimensional copy of a two-dimensional work is made or vice versa much will depend on the visual similarity between the copy and the original. Functional objects may still attract copyright, but the skill and labour involved in the copying are irrelevant.

Photographs are often two-dimensional representations of three-dimensional objects. However, they may be just two-dimensional copies that are totally lacking in originality. Works of art, which are in the public domain, may be kept in the private domain using the thin copyright that attaches to many photographs. This thin copyright only protects the original elements of a photograph and some photographs lacking in such original elements will not attract copyright protection. Digital copies have been analogised to photocopies and as such may not be copyrightable. Similar problems can be encountered in relation to interface software where some elements of the software are in the public domain, and other elements constitute ideas rather than

the expression of ideas. In the United States multistage tests have been developed to separate the protected an unprotected elements of computer programs and then evaluate their originality, however, in the U.K. this approach has specifically been disavowed in favour of much less sophisticated tests. While multistage tests have problems simple tests for substantive similarity are even more inadequate when evaluating the originality of multimedia products.

8.16 Video Games

Video game technology has been available on the mass market since the early 1970's and are structurally similar, if not the same as, many multimedia products. Case law concerning video games is therefore very important when considering the legal treatment of multimedia products. From case law in the U.S. and the E.U. it is clear that for such works to be copyright what matters is "quality of the personal intellectual creation". The creation of derivative works by users depends on the sophistication of the program and the degree to which the user can manipulate it. Intent is also important in that the user must intend to create a derivative work. The originality of a game cannot be challenged just because the user has some control over it. Where the fluidity of a video game is impaired it may not be classified as an audio-visual work. Furthermore, the alteration of a video can be prohibited if the author of some of its elements chooses to assert his moral rights. The fixation of a video game is also important because a work must be fixed before copyright subsists in it. However, in a recent appeal decision in the United States the creation of a derivative work from a video game was held not to be fair use even though the derivative work did not incorporate any part of the work in fixed form. In recent cases in Australia the interpretation of the fixation requirement has become quite liberal so that the end result is more significant than the means used to generate it.

Where fair use is claimed in relation to the use of video games recent U.S. decisions make it clear that the courts take a dim view where use is commercial. It is also clear that the fourth factor in the test for fair use is the most important. Even when the

effect on the market for value is small the courts place considerable weight on the likely effect on future markets. Since there is no way of quantifying this it seems a very dubious way of determining whether use is fair or not. The most significant of these cases, so far as multimedia products are concerned, are those that involve the creation of derivative works. What is clear from the analysis of these cases is that the more original works deserve more protection than those of limited creative value. In order to achieve this courts need a more flexible approach to copyright exceptions in order to allow the creation of genuinely transformative derivatives while at the same time protecting more original works.

8.17 The Internet and the Copyright Treatment of MP3 File Sharing Applications

Computers are very good copying machines and when used in combination with the Internet produce an ideal environment for piracy. The exchange of music files over the Internet is perceived by the record industry as a huge threat to its revenue streams. Formerly music files were too big to transfer easily using the Internet, however, with the arrival of digital compression and the MP3 standard this became feasible. Further, the development of file sharing software allowed users to locate MP3 files easily. The debate over the legality of this technology centres on the extent of fair use on the Internet. The MP3.com case concerned the mass copying of large numbers of CD's for commercial gain and was a clear violation of the copyright owner's exclusive right to make copies and fell outside of the scope of fair use. Following the development of file sharing technology Diamond Multimedia developed a device for playing MP3 files via the hard drive of a PC. The legality of the device was challenged as a contravention of the relevant provisions of the AHRA. However, the MP3 player did not fall within the definitions set out in the Act because recordings were made indirectly via the hard drive of a computer, which had significant non-infringing uses and therefore did not need to conform to the security standard prescribed by the AHRA.

The Napster case was not so straightforward since the defendants did not copy CDs directly, but merely provided the ability to link to files on users computers without files passing through their own server. Ultimately the defendants were held liable on the basis of their ability to monitor infringement. While they attempted to shelter under the service provider exemption of the DMCA it was held that they had made an inadequate attempt at introducing a policy prohibiting infringement and since they operated via the Internet they could not claim to be a mere conduit. While the appeal court amended the injunction because it was over broad they upheld the decision of the court below distinguishing the Sony case on the ground that the consumers in that case were not engaging in mass distribution of copyright works. Following the Napster case websites continued to provide file sharing facilities but maintained the anonymity of users and relinquished the ability to monitor users so that they lacked the requisite knowledge to be held liable for copyright infringement. This was also significant because these operate through linking. For contributory infringement to apply to linking there must be direct infringement which users are encouraged to commit. Liability only arises if the plaintiff has actual or constructive knowledge of infringement. Link liability may also arise from browsing. In the Record TV case a website streamed unlicensed copies of TV broadcasts to users. In the ensuing action for copyright infringement the defendants attempted to disclaim ownership of the site and claimed that such use as there was amounted to time shifting and therefore fell within the fair use exception. Eventually the case settled.

The MP3Board case is significant because it involved a successful pre-emptive action against the RIAA. The case involved a website containing a database of links to MP3 files that actively encouraged users to download MP3 files. The site did not exercise control over its users. The RIAA issued four take down notices and in response two of the sites ISPs disrupted service. In reply the plaintiffs sought declaratory relief in the district court claiming that the defendant's actions amounted to anti-competitive conduct and tortious interference with business contracts. The plaintiffs further alleged that they were protected by the safe harbour provisions of the DMCA and claimed injunctive relief preventing the issue of more take down notices. The

defendants counterclaimed, however, a number of counts, particularly the tortious interference with business contracts were upheld. In relation to ISP liability under the DMCA significant guidance may be derived from the Ellison case brought in the California district court. Here an ISP was sued over an infringing copy of an electronic book stored on its network. The court held the "right and ability to control" referred to in s.512 means more than the ability to block and erase files after infringement has occurred. The plaintiffs here derived no financial benefit from infringement and the test of "intermediate and transient storage" was satisfied where the defendants had a policy of removing material after eleven days.

Probably the most significant recent case concerning file sharing is the Kazaa appeal to the Dutch Court of Appeal, which involved an action for contributory copyright infringement, brought against a website involved in the distribution of MP3 files and other file formats. Notably the site exercised no control over its users and had failed to secure a streaming licence from the plaintiff collecting society. Here the court held the appellants not liable on the grounds that the termination of their services would not prevent the exchange of files and because Kazaa's software had substantial non-infringing uses. Similarly, in the factually analogous Grokster case in the U.S.A. the plaintiffs failed to show that the defendants knew or had reason to know of the infringement.

Apart from the distribution of multimedia files on the Internet the role of search engines must not be overlooked. The retrieval of multimedia files on the Internet requires software filters, software can be protected using patents, but this type of protection can be problematic. Search engines can trawl the Internet for all kinds of information; however, graphical search engines are not good at identifying the copyright status of images. In Kelly v. Arribasoft the Ninth Circuit Court of Appeals decided a case involving the infringement of photographs by a picture search engine. The appellants claimed fair use and the court held that the display of thumbnail images did constitute fair use while the display of full size images did not. The decision was based largely on the fact that use of thumbnails was necessary for the normal

functioning of the search engine while the display of full size images was not. Further, it was considered important that the display of full size images would harm future markets if the practice were allowed to continue. However, the approach of the U.S. courts is not likely to be emulated in the U.K. In Antiquesportfolio.com Plc. v. Rodney Fitch & Co. Ltd the court held that even the most mundane of copies could be considered copyright even where any effort expended is purely technical. The size of the image copied being irrelevant to the issue of substantiality where the whole image was copied.

Finally, this thesis considers the future development of network technology and its effect on the distribution of multimedia works. Here three key stages of network development are identified, the third generation coming into operation by about 2005. This will make those services available on fixed networks available as mobile services. The development of the WAP standard will provide fast, secure, interactive services. In relation to multimedia distribution the main problem with such services concern jurisdiction and enforcement. Thus the importance of controlling ISPs is only likely to grow since they are at the moment the only organisations that know the true identity of users.

8.18 Technical Protection

While the answer to the machine may be in the machine technical solutions can only solve technical problems, and even then not for long[53]. However, one of the central tenets of this thesis is that rights management does have a role to play in the information society, but that there are serious problems to overcome before effective CMS become a reality. In terms of copyright law the present hard-line approach that increases the number and extent of owner's rights is not workable in the long term since it distorts the balance of copyright in the owners favour without creating corresponding access rights for the public. Technical solutions can only ever offer a

[53] See chaper 4 above.

partial solution since passwords, for example, may be bypassed, and downloadable executables may be metered out. Hardwired solutions are likely to be unpopular with consumers, and in any event technical solutions will require a high degree of intelligence if they are to have the functionality, and ease of use that the public is likely to demand. However, this seems a long way off at the moment because there is no generally accepted standard for digital rights management systems. Another reason for this is simply that the infrastructure needed to make small payments on the Internet is just not there, or is not well established. In terms of self-help devices, especially digital locks the major limiting factor is the low cost of circumvention technology as opposed to the relatively high cost of self-help devices. While the courts in Europe and the U.S. have generally taken a more favourable view of the use of self-help devices, this prevails only where self-help devices are disclosed to the consumer.

While access control can be effective it is indiscriminate, and copy protection involves complex programming and can often be circumvented. The structure of the Internet itself is designed to resist technical solutions, and given the number of people with technical expertise using the Internet any technical solution will be broken sooner rather than later. Digital signatures help to affirmatively identify individuals; however, they will not stand up to the full range of processing. Encryption technology is difficult to install, and there is no central administration for keys. With regard to linking, caching, and framing there is technology that will prevent their misuse, however, the use of such technology is relatively rare because it tends to frustrate the operation of the Internet.

Despite the ease with which information products and services can be distributed using the Internet the key problems are the same as for analogue media most notably the problem of payment and metering. In particular it is very difficult to keep track of derivative uses. It is impossible to allow prior viewing by consumers, as is any notion of product returns. While standards such as XML and IP version 6 have been developed with the aim of facilitating transactions in copyright works, adoption of

such standards is slow, not helped by the fact that the Internet has no centralised administration. Also security cannot really be guaranteed beyond a particular network due to this lack of control. While tracking can facilitate enforcement of rights, it is still difficult to establish a clear audit trail, and any identifiers used must be unique and provide clear identification of a work and the rights involved. Ultimately enforcement has to be cost effective and it is the cost factor that most inhibits the use of technological measures.

Tracking can help to detect copyright infringement, but for this to be really effective a system of unique identifiers that would threaten users privacy and anonymity would be required. Standard setting offers great assistance to the development of copyright management systems, however, standards can and will be manipulated by industry, as is clearly illustrated by the Microsoft litigation. The only real solution is to have copyright laws that are fair, and are seen to be fair. The erosion of copyright limitations and exceptions can only make matters worse. What is required is a general notion of fair use that is programmed into copyright management systems and a more flexible approach to statutory interpretation combined with legislation that is not too technology specific.

8.19 Licensing

Licences are often, but not always, contractual instruments originally used for transactions in real property. In the context of copyright they are often contractual promises not to assert legal rights over property in exchange for money[54]. Licences can also be just simple permissions that do not involve money at all. Licences that take the form of a contract are formed where there is an offer, the offer is accepted, and the parties intend to create binding relations. Offers can be to the world or to individuals and must be taken at their face value. In some circumstances the time of formation of contract may be critical, and with electronic media much may depend upon whether processing is instantaneous or deferred. Websites can combine both

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[54] See chapter 5 above.

types of offer, and the question of which is involved in a particular transaction will depend on the wording of the offer and all the other circumstances surrounding the transaction. Under English common law there is no need for the parties to understand the terms of agreement, however, these terms must be brought to the attention of the party to be bound. Furthermore, this must be done before or at the time of formation of contract, only if the terms of agreement are incorporated into the contract will they bind both parties. In relation to electronic goods/services much rides upon whether one is dealing with goods or services, and whether the parties involved are dealing as businesses or consumers. The replacement of UCTA is the Unfair Terms in Consumer Contract Regulations 1999, which implements Directive 93/13 on unfair terms in consumer contracts. Article 5 of the Directive defines a term in a consumer contracts as 'unfair' if contrary to the requirement of good faith, and it causes a significant imbalance in the parties' rights and obligations arising under contract, to the detriment of the consumer. This introduces the notion of detriment into consumer law and contractual construction in favour of the consumer, however, much will depend upon the intelligibility of the language used.

There are a number of ways in which a party may indicate their consent to the terms of a licence the most obvious being a signature. Consent is a particular problem where a party acts through an agent; this is particularly the case where the agent is not human. Electronic agents for example may be able to contract on behalf of their owners. This can give rise to a generic rule that such contracts are binding, or conversely such contracts may be unenforceable. This situation could though become very problematic as electronic agents begin to replicate human interaction. Written signatures are not possible in the online environment, for many transactions this may not matter, but for certain transactions such as those involving land physical signatures are a legal requirement.

The Electronic Communications Act 2000 and the Digital Signature Directive attempt to regulate the authentication of electronic contracts by creating a system of

registration for cryptography support services. They give electronic signatures the same legal status as physical signatures, these instruments further prescribe minimum standards in relation to information to be provided to consumers and create certain exceptions to facilitate the technical functioning of the Internet i.e. caching. With regard to licensing little is said except that licences are not to interfere with the provisions of the legislation as regards the validity of electronic contracts.

Normally licensees must be able to see the terms of a contract before it can legally bind them, however, in relation to the distribution of computer software a slightly different practice has evolved in relation to mass-market licences. So-called "shrink-wrap" licences allow vendors to place a notice on packages containing software that refers to the terms and conditions sealed inside. There has been considerable doubt as to the validity of such licences; however, case law in the U.S.A. and the U.K. suggests that shrink-wrap licences are valid so long as the consumer is given a chance to reject the software. This analysis has been criticised as being too simplistic, as favouring the licensor over the licensee, and because it places the onus of cancelling the agreement on the licensee.

Similarly statutory schemes that regulate licensing have been criticised as being over broad and too favourable to the interests of the content industry. This is most clearly seen in the tendency of legislators to give digital uses a separate status from other uses of copyright works; thereby justifying extra payments in respect of them. In particular the National Information Infrastructure White Paper in the U.S. concentrates on issues of network infrastructure, but with regard to intellectual property issues it allows right owners to control every use of a work and to refuse access to it. By giving right owners more rights in relation digital works than they have over analogue works they would convert many uses of works that are currently non-infringing uses into infringing uses. While licences cannot in themselves do this, affected uses would violate the licence. While the report does encourage the issue of special licences to schools and libraries, it places licensees under no obligation to do this. Another significant instrument in this area is the UNCITRAL Model Law

concerning paperless communication. This was developed by UNCITRAL since it was felt that diffuse national laws were an inappropriate way of regulating international trade. The Model Law can be divided into two main sections, the first covers electronic commerce generally. The second concerns special areas of electronic commerce, mainly carriage of goods. What is evident from this instrument is that while the legal problems are the same as before (i.e. time of formation of contact and offer and acceptance), the depth of analysis is much greater.

In the United States commercial transactions are to a large extent regulated by s.2 of the U.C.C., however, this is not designed to cover online transactions. Consequently a s.2B of the U.C.C. was proposed to simplify and modernise the law regarding commercial transactions, to allow continued expansion of custom and practice, and to harmonise the law in the various jurisdictions of the United States. The new section went through many drafts, died and was resurrected as UCITA, this is designed to regulate "computer information transactions" and was to govern such transactions as licences rather than sale of goods. UCITA validates shrink-wrap licences and recognises electronic authentication, it gives consumers a right of review the terms of a contract prior to assent, but pays scant regard to fair use considerations. It also validates contracts formed by electronic agents and has been criticised for being premature and for overtly favouring the computer/content industry over consumers. However, by 2002 UCITA had been adopted by only two states, and at least four states have adopted anti-UCITA laws preventing another state from imposing the law on their residents. UETA was developed in tandem with UCITA in order to give near full recognition of digital signatures. Under its terms digital signatures are to have equal status with their analogue counterparts and the terms of electronic contracts are deemed binding even where the parties are not aware of the terms of agreement.

Although licences can be a flexible means of conducting commercial transactions, it is also arguable that they have been abused as a commercial instrument, particularly by the software industry. When used in this way the licence terms allow right owners to enforce their rights following an initial sale. Open source software was developed as a

response to this, and the key feature of this type of software is that it is not encumbered in this way. Open source licences were developed to enforce this freedom and to promote creativity. However, this does not always work in practice because licensors can only sue for infringement once the licence is exceeded and licences do not usually bind third parties. Furthermore, licensors can only sue for infringement to the extent that the licence is exceeded, if a licence is poorly drafted this leaves would-be infringers with a lot of scope. Licensors may though have other remedies available in contract subject to the usual rules concerning formation of contract, remoteness of damage, sufficiency of consideration and so on. Another form of software designed to promote creativity is shareware, this allows potential licensee's to try software before they purchase it. However, this can also present problems if the licence is not tightly drafted. Again the licence will not bind third parties, and may not prevent unauthorised distribution, especially where any benefit derived by the infringer is indirect. Another problem with the enforcement of licences stems from the popularity of intranets and extranets; these are essentially private networks that cannot be accessed by the public. Consequently, when infringement occurs on such networks it is very hard to detect. Furthermore, extranets in particular can be administratively complex. Thus licensing of such networks requires a very sophisticated licensing package, and/or very complex metrics and billing software.

On a slightly different level licensing is inhibited by electronic agents since the contractual status of the agreements made by them is uncertain, especially in relation to click-wrap agreements. Electronic agents operate on the principle of agency. With regard to acceptance of click-wrap agreements, it is simplest for agents to routinely accept click-wrap agreements. While the validity of these contracts is questionable, some U.S. statutes, notably UCITA would automatically treat such agreements as legally binding. So far as the general validity of click-wrap agreements is concerned U.S. courts seem quite ready to accept their validity. However, the same courts find the legal validity of browse-wrap agreements questionable. The jurisprudence behind this is based on acceptance determined by the circumstances surrounding the contract. Critically assent in relation to browse-wrap agreements is generally less affirmative

than for click-wrap agreements. Also these courts have adopted a layered approach to contract formation that favours acceptance based on the behaviour of the parties.

While the public policy exceptions to the law of copyright have been eroded, the use of software licensing has expanded to become the foundation of electronic commerce. The laissez-faire attitude to the freedom to contract in Britain and America has made licensing an efficient way of protecting copyholders rights downstream from their source in a way that is just not possible under copyright law. Simultaneously the development of network infrastructure and the World Wide Web browser based virtual environment has evolved to a point where it can support multimedia transmissions needed to produce a virtual shopping environment in which non-substitutable goods can be sold. These multimedia products can be protected using restrictive licences, which are not subject to the same kind of public policy considerations as copyright law.

Although licences are flexible enough to cope with the more unpredictable usage patterns, which are prevalent in digital environments, they do not adapt well to unforeseen applications of content. Indeed the legal systems that created licensing as we know it also give rise to the kind of legal barriers which are currently slowing the development of electronic commerce, and even if this were not the case, the development of confidence in any new medium of trade takes time. This problem is most clearly manifested in terms of the development of new payment systems and the digital signature arrangements needed to provide transaction security. The most fundamental problem with digital licensing is its economic structure. Licensing seeks to extract maximum value from intellectual property by selling rights in the form of non-exclusive licences. This gives the licensee the right to do certain things with intellectual property i.e. post it up on a website rather than selling it outright. This creates a situation where licensees have to work out which rights they need and establish whom they are going to licence them from. This makes an already overburdened and complex right clearance system totally unmanageable; hence the need to introduce collective rights management systems. When we combine these

problems with the inherent qualities of digital data that make copying easy and lead to compromise of security, then the problem becomes really acute. This is why so many firms engaged in electronic commerce use the Internet as a means of marketing support rather than a primary means of generating revenue.

8.20 Legal Protection of Multimedia Works

In analysing laws enacted in the U.S. and the E.U. it is easy to conclude that it is difficult to compromise a general-purpose anti-circumvention statute with the technical structure[55] of the Internet i.e. linking and caching. While the European Commission generally encourages cross-border trade within the EEA, rules regarding jurisdiction are confused and inconsistent. In the U.S the situation is no better since the default rules regarding jurisdiction will be dependent on the wording of state long-arm statutes. Although facts, public domain material and unregulated uses are not protected by copyright, this is exactly what the DMCA and the Information Society Directive do through the indiscriminate protection of technological protection systems using severe civil and criminal penalties. Furthermore, in Europe the concept of exhaustion is not applied to rental rights thereby extending copyright even more. The Distance Selling Directive provides consumers of products distributed over the Internet with some useful rights such as basic information about products and services, as well as information about their providers. The Directive also gives consumers a right of withdrawal; however, the burden of proof in relation to most transactions is placed on the consumer. While Internet transactions involving satellites are not yet of great economic significance, this situation is likely to change. When this happens, this will create significant problems in relation to jurisdiction and enforcement. The Satellite Directive settles some problems concerning jurisdictional disputes, however, in relation to specific rights the Satellite Directive merely defers to the Berne Convention thus leaving most issues unresolved. It is also clear that moral rights and fair use will be significant issues in the digital environment; however, both concepts are likely to be treated as barriers to rights clearance. Indeed the more rights

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[55] See chapter 6 above.

clearance systems become an established means of negotiating over rights in multimedia works; the more difficult it will be to sustain any notion of fair use or moral rights.

While the Internet has global reach and facilitates easy distribution of copyright material, it also facilitates piracy. Technical protection devices can only operate effectively in a harmonised legal environment, however, in the United States and the European Union the key legislation concerning this fails to achieve this objective. This legislation is biased towards the content industry, it does not sufficiently protect consumers or harmonise laws, and some would argue that it in fact stifles creativity rather than promotes it. Even so the Internet is an ideal medium for cross-border trade and forms an integral part of the European Commissions conception of the internal market. However, before trade can flourish there needs to be greater certainty in relation to jurisdiction and applicable law on the Internet. The Commission aims to promote the free movement of goods and services on the Internet in terms of the removal of both direct and indirect restrictions. In the U.K. the approach to determining jurisdiction operates very much on a case by case basis. This requires an active step that goes beyond the mere provision of facilities. In E.U. courts the prevailing doctrine is that of "permanent establishment", unfortunately many websites do not fall within the definition of "permanent establishment". The Electronic Commerce Directive was enacted with the intention of improving the operation of the internal market by ensuring the free movement of "information society services" between Member States. The Directive defines these as "any service provided at a distance, by electronic means". This includes services provided at the individual request of the recipient not specifically exempted by the Directive or covered by the Brussels Convention. Under the Directive applicable law is that of the country in which the service provider engages in economic activity for an indefinite period. However, the Directive does not deal with consumer contract disputes. Significantly the Directive exempts ISPs from liability in respect of content where they have no knowledge of it. Should they become aware, they may escape liability if they are

expeditious in the removal of such content. The concept of establishment used in the Directive is poorly adapted to the electronic environment, although it's provisions concerning the minimum information to be provided to consumers will be useful. The Directive itself will be subject to periodic review.

In the United States jurisdiction is subject to due process and the doctrine of minimum contacts, referred to in case law as "traditional notions of fair play and substantial justice". This has been interpreted both broadly and narrowly. On a narrow interpretation this means physical presence in the jurisdiction. On the broader interpretation this means conducting certain activities in the jurisdiction. In relation to Internet jurisdiction a sliding scale has been developed with passive websites at the bottom and interactive websites at the top. A subsequent test is that of a "real and substantial connection" with the forum state. In the most recent case jurisdiction was refused because of free speech considerations, the breadth of the injunction, and the practical effect of enforcement. At an international level the Hague Convention regulates contracts between consumers and vendors who knowingly contract to supply goods or services in the course of their trade or profession. This is subject to two exceptions, i.e. when the consumer has arranged for completion of the contract in another state, and where the consumer is present in that state where the goods or services were being supplied. The Convention applies where there is no forum clause in the contract and contracts must take place in the State where the consumer is habitually resident. Under the Convention litigants in tort actions may sue in the State where the alleged act or omission occurred, or in the state where the injury arose. This scenario may be avoided where the defendant takes reasonable steps to direct activity away from a particular state(s). Also if the plaintiff is habitually resident in the state where injury arose jurisdiction will arise in that state alone.

Multimedia products distributed over the Internet often contain software, software that may take the form of source code or object code. Since the Commission views intellectual property as playing a significant part in the Information Society, it has sought to harmonise the protection of software. The Software Directive treats

software programs as literary works. While it does not protect ideas as such it protects computer programs that are the author's "own intellectual creation" and outlaws the circumvention of technical protection measures. Unfortunately the Directive does not define the term "computer program", and fails to deal with the concept of legal personality, which can vary substantially between civil and common law jurisdictions. The Directive provides for a minimum level of protection among Member States, however, the high degree of latitude given to Member States in the implementation of the Directive introduces a large degree of uncertainty with regard to its practical effect.

The protection of multimedia works on the Internet must necessarily entail the regulation of rental transactions since these are very prevalent in the entertainment industry. Hence the Rental Rights Directive was enacted with the object of securing a return on investment for multimedia developers, especially those involved in high-risk projects. The Directive grants copyright owners the exclusive right to authorise lending and an author's right to equitable remuneration in relation to public lending. These rights are subject to exhaustion within the EEA, if there is a first sale, and are tenable for a term of 20 years. They are also subject to very narrow exemptions regarding private use, teaching, and scientific research. The Copyright and Related Rights Regulations 1996 implement the Directive into U.K. law. These create a right to equitable remuneration only in respect of literary, dramatic and musical works, and films. They also provide copyright owners with the right to prohibit rental of films, which are classified as works of joint authorship. The authors of a film are thus the producer and the principal director.

While satellite communications are still expensive and have not yet assumed great importance in relation to the distribution of multimedia works, they are likely to do so in the future if the growth of satellite communications is similar to that of mobile phone technology. The challenges involved in regulating satellite technology include jurisdiction and enforcement issues, maintaining access, and ensuring fair competition. These are significant in relation to the distribution of multimedia products because

satellite communication systems will ultimately have the full range of multimedia capabilities. While the Satellite Directive has not yet entered into force it will affect all forms of distance selling including products and services. The approach of the Directive is deregulated so those market entrants are only subject to rules that are objective, transparent, and non-discriminatory. Perhaps the most significant provisions of the directive are those affecting jurisdiction. Where there is an uninterrupted chain of communication under the control of a single broadcasting organisation jurisdiction is taken to reside in the uplink State. The Directive protects recordings of audio-visual works rather than the works themselves. It grants authors the exclusive right to authorise communication to the public and applies specifically to collective agreements, even when unrepresented rightholders are involved. Jurisdiction is still determined primarily by the Brussels Convention and defendants are to be sued in their country of domicile. The problem with the Directive is that it does not apply to non-contractual disputes and will only apply to some types of multimedia works. Further, it does not help to solve the fundamental problem of applying the permanent establishment doctrine to the Internet.

According to the European Commission distance selling has an essential role in the functioning of the internal market. The Commission has therefore sought to approximate laws concerning distance contracts between consumers and suppliers. The Distance Selling Directive regulates five main aspects of distance contracting, namely: (1) provision of information about contracts; (2) the right of withdrawal from contracts; (3) the time of contractual performance; (4) credit card payments; and (5) inertia selling. Certain transactions are exempted from the Directive including those involving vending machines, financial services, foodstuffs, immovable property, and contracts with service providers made on pay phones. Significantly the Directive sets minimum standard of contractual information to be given to consumers including the vendors name and address, a description of the goods or services, the price, the duration of contract, and arrangements for payment and delivery. Problems with the Directive include its failure to define cancellation arrangements and the placing on the consumer of the burden of proof in situations where a refund is required. Further, the

omission of financial services from the scope of the Directive is significant and will require a legislative solution.

Until late 2001 the WIPO Copyright Treaties were not implemented into European law, and it was with this end in mind that the Commission introduced the Information Society Directive. This applies to direct or indirect, temporary or permanent reproduction by any means in any form, in whole or in part. Consequently the Directive has very complex provisions regarding temporary and incidental reproduction. This must inevitably have some adverse impact on the functioning of the Internet since this goes to the root of Internet communications. The Directive introduces the right of communication to the public without defining the term "public". The exceptions created by the Directive are very narrow and fixed, only some of them are compulsory, creating a risk of inconsistent implementation. Further, the anti-circumvention provisions of the Directive are far too broad and will prohibit many devices that have legitimate uses. Consequently right holders will be able to exert a great deal of downstream control, including control over public domain materials. The Information Society Directive borrows heavily from the DMCA, it is too technology specific and leaves too many terms undefined. In the end result the Directive does not harmonise rules, does not facilitate free movement of goods and services, and does not remove competitive distortions.

While the European Commission sees moral rights as increasingly relevant in the Information Society, the treatment of moral rights among Member States is very inconsistent. The U.K. has pursued a minimalist approach to moral rights, so in both the U.K. and the U.S.A. it is possible to obtain outright control of an author's work. In the rest of Europe authors retain moral rights even where their economic rights are divested. This represents a serious obstruction to the production of multimedia works since moral rights, especially the right of integrity and the right of withdrawal, can be asserted after the production process is complete. Fair use plays a vital role in the practical operation of copyright law; however, it seems unlikely that the Information Society Directive will produce a consistent treatment of copyright exceptions. What is

required is a broader conception of fair use like that applied in the United States. This is needed because fair use deals with situations of market failure and because the alternatives to fair use are either too inflexible or unconscionable. If copyright is to be seen to be fair an expansion of fair use/ fair dealing is the only practical way to counteract the effects of discrimination through technical devices and licence conditions.

The U.S. equivalent of the Information Society Directive is the DMCA, which was introduced in order to update the U.S. Copyright Act so that it can deal with the challenges of the digital age and to implement the provisions of the WIPO Treaties. The DMCA implements a near complete ban on circumvention devices and has a limited range of extremely narrowly defined exceptions, including exceptions for reverse engineering, encryption research, and security testing. The provisions of the DMCA go far beyond what is required by the WIPO Treaties, and also provide a range of very severe civil and criminal penalties, which it is claimed have the effect of stifling creativity. The DMCA provides a specific exemption for service providers, however, to fall within this so-called "safe harbour" service providers must meet a number of very stringent tests. In sum the DMCA is over broad, unpredictable and complex.

8.21 International Copyright

If enforcement is to be effective multimedia products must be protected at international level, however, there is no true international copyright since copyrights must be enforced at national level. While international Treaties can set global minima, they cannot ensure consistent application and enforcement of copyright in multiple jurisdictions. The WIPO Treaties attempt to remove administrative barriers by obliging states not to impose formalities in relation to the acquisition of rights. While the WCT has no provisions regarding transient reproduction, the WPPT emphasises the need to maintain a balance between the interests of performers and producers and the broader public interest. The WCT gives rightholders the right to control digital

copies and the right to authorise communication to the public. It sets out a limited range of exceptions including limited liability for ISPs. Significantly the WCT creates an obligation to provide adequate legal protection for technological protection measures and rights management information, as well as the provision of effective legal remedies in respect of this. The WPPT creates a specific right of reproduction for phonograms and has many provisions that mirror those of the WCT; however, it is notable that the WPPT does not protect audio-visual performances, which are to be the subject of a separate protocol.

8.22 Collective Administration and Collective Licensing

The notion of authorship first developed in Greece around 700 BC, however, the modern conception of authorship developed during the middle ages following the invention of the printing press[56]. In the United States authorship has been conceptualised both as something mystical that happens inside an authors head and as the act of embodying ideas in a physical form. However, the predominant view is that the author of a work is the person who independently translates it into a fixed tangible expression. This expression must be original and without a minimum level of originality a work will not be afforded even thin protection. Furthermore, this conception of authorship is tempered by the idea/expression dichotomy, which does not allow mere ideas or discoveries to be copyrighted. In Europe the creation of the Information Society has led to a more diverse conception of authorship in which the number of authors of a particular work is immaterial so long as it is possible to ascertain who makes the choices in the creative process. In both Europe and the United States works created under a contract of employment belong to the employer, and films and sound recordings, including the rental right, belong to the producer. In determining authorship of collaborative works under U.K. law there must be an enforceable agreement and/or a common understanding. The work involved should not be distinct from the work of the other authors. Further, there should be a

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[56] See chapter 7 above.

substantial original contribution made pursuant to a common design, and this should entail the right kind of skill and labour.

The early history of collective administration of rights in Europe begins with Caron de Beaumarchais, an 18th century composer who suffered greatly at the hands of the French aristocracy whose efforts led to the creation of the first laws protecting performer's rights. Subsequently the first collecting society SACEM was formed in France in the 1860's through the petitioning of the musician Bourget in order to collectively enforce the rights of performers. Collecting societies may be purely voluntary or may operate on a statutory footing, and membership can be compulsory or non-compulsory. The effectiveness of collecting societies depends on four key factors, namely: (1) the state of copyright legislation; (2) the attitude of government institutions; (3) the user friendliness of licensing and collection regimes; and (4) the attitude of rights holders in relation the running of collecting societies. The kinds of licensing performed by collecting societies falls into two main categories i.e. blanket licensing and per copy licensing. Blanket licensing is convenient where large amounts of copying is going on and involves the taking of some kind of usage survey. Per copy licensing involves the direct measurement of usage. This is more suitable for smaller volumes of copying and has recently been revolutionised by the introduction of sophisticated copyright management systems. In either case user education is important in ensuring compliance. While it has been argued that the incorporation of fair use into licensing regimes will confuse the public, it is also true that the absence of fair use in licensing will create a perception of unfairness amongst the public.

Collecting societies exist because they are a more efficient way of collecting royalties for their members. Other advantages include increased compliance, reduced transaction costs, and simplified licensing procedures. However, with the arrival of rights management technology it is questionable whether these advantages will remain such a potent force in the future. The main disadvantage of collective administration is that it creates a risk of anti-competitive behaviour both vertically and horizontally, and as collecting societies grow so does this risk. Much of the concern regarding anti-

competitive behaviour among collecting societies is focused on the pricing of licences and how this is determined. These prices may be set individually or across a range of similar uses. It is this second method that gives rise to serious disputes, multimedia production as it exists currently depends mostly on individual licences; however, this must change if copyright licences are to be issued through one-stop-shops. As well as being entities that collect and distribute royalties collecting societies have a clear social role in providing benefits for their members. These befits are facilitated by a fund paid for by deductions from royalties.

Since the early 1980's the European Commission has been concerned with the approximation of copyright laws, and since the mid 1990's has developed the concept of the Information Society, a vision of Europe's future based upon the economics, and commercial exploitation of information. Collecting societies provide the administrative structures for such exploitation, and the Internet provides the physical infrastructure. The Commission has therefore sought to promote the administrative convergence of collecting societies in the form of "one-stop-shop" initiatives, while at the same time checking the antitrust implications of administrative convergence among collecting societies. During this time the process of digitisation and the expansion of the Internet have increased exponentially to a point where existing copyright regulation has become inadequate. The need to harmonise national laws and to manage information collectively has therefore become ever more pressing, and what was once encouragement from the Commission has turned into bullying. This was evident following the amendment of the German Copyright Act in January 2002, which improved the contractual situation of authors and performers. Previously the European Commission had failed to give serious consideration to contract rules relating to copyright, however, on September 1, 2001 the Commission organised a study concerning "The conditions applicable to contracts relating to intellectual property in Member States"[57]. Another arena in which this bullying is obvious is that of jurisdiction and applicable law. The Commission in its E-Commerce Directive was

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[57] Martin Schippan, "Codification of Contract Rules for Copyright Owners - The Recent Amendment of the German Copyright Act", E.I.P.R. 2002, 24(4), p172.

keen to ensure that "information society services" should be subject to the general principle of free movement of services. The rule set out in Article 3 of the Directive provides that service providers should comply with the country - of - origin principle, however, in relation to intellectual property the Commission adopts a laissez faire approach, specifically exempting intellectual property transactions, consumer transactions, and the emission of electronic money[58]. Further, this approach is very evident in the Information Society Directive, which gives over broad protection to technological protection devices and reduces exceptions to a minimum. It must be noted, however, that this trend is global and is not just a European obsession.

8.23 Competition Law

Collecting societies are natural monopolies by their very nature, under U.K. law an abuse of dominant position will occur where a copyright owner uses exclusive rights granted by copyright to expand into markets outwith the primary market for a particular copyright work. Apart from failure to grant licences on reasonable terms abuse of dominant position in relation to copyright may take a number of forms including manipulation of standards, frustrating access to works, and preventing interoperability of software. Further, collecting societies are undertakings within the meaning of Article 86 of the EC Treaty. Under ECJ case law unfair competition has been found where collecting societies impose obligations on their members that exceed the objectives of the society. Violations of competition law have also been found where royalty rates, measured on an objective standard, have inexplicable variations between one country and another. In one case breaches of Article 86 were found in a case where TV companies failed to license TV listings to competitors on reasonable terms. This was significant because access to the material was enforced and the case concerned listings and not just primary material. This further raises the point that compulsory licensing may be necessary in relation to collectively administered material in order to prevent situations of market failure and to improve certainty for multimedia producers. Collective administration is based on a number of

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[58] Lokke Moerel, "The Country-of-origin Principle in the E-Commerce Directive: The Expected

key principles i.e. the right to exercise rights individually, the need for collecting societies to offer a comprehensive repertoire, and the need of those receiving income from collecting societies to have a role in running them. At an international level these principles include reciprocity, national treatment and the maintenance of international minima. As well as implementation through international agreements these principles are affected through bilateral agreements between the various national collecting societies. Collective administration is usually enforced through licensing regimes; however, it can also be enforced through a system of levies. Copyright levies were first introduced in Germany in 1965; they are charges on equipment or media made as a means of controlling private home copying. When levies were first introduced there was no other effective means of remunerating right holders for this kind of use, and digital media had not yet emerged. Used in combination with rights management technology levies can constitute a form of double taxation. This has been recognised to some extent in the provisions of the Information Society Directive. However, the European Unions approach to levies remains chaotic. In their most recent report concerning collecting societies the E.U. has rejected any notion of CMS ever being effective and favours the imposition of levies in relation to the making of recordings for home use.

In relation to the commercial development of multimedia products collective licensing is essential because of the shear number of rights involved. Licences must specify the content to be developed, the pre-existing rights involved, and indeed must specify all the rights involved in the creation and distribution of a multimedia product. Unfortunately all the authorisations involved may not be available from one collecting society, and even where they are the society may not have authority to grant those rights. Where this is the case, those permissions must be obtained from the rightholder. The absence of authorisation in respect of just one right in one piece of copyright material can potentially prevent exploitation of a multimedia work, or at the very least greatly increase its cost. Further, special permission must be sought to digitise a copyright work unless it is a pre-existing work with very broad terms of

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"One-stop-shop", C.T.L.R. 2001, 7(7) p186.

licence or assignment. This is an especially important consideration where a multimedia work is to be distributed using the Internet. Moral rights are also a problem because in many European countries they cannot be assigned, so even where a collecting society has full authority to handle owner's rights moral rights may require a separate warranty from the author of the work.

Ultimately enforcement is the most significant thing that collecting societies do. Without this none of their other functions can be undertaken. However, the more effective a collecting society is at enforcing members rights, the higher its administration costs, these being subtracted from royalties. European collecting societies are far more efficient in terms of enforcement than their American counterparts, so consequently a row has arisen over administration costs in relation to the administration of foreign rights. This puts European collecting societies under pressure to reduce administration costs and the efficiency of enforcement. This is combined with pressure from the U.S concerning their ten-percent levy used to pay for social provisions. If European collecting societies bow to this pressure they will become more like mere money collecting machines. With regard to enforcement on the Internet, the most significant factor holding this back is the reluctance of right holders to allow material to be digitised in the first place. This occurs mostly because the market for material distributed via the Internet is in its infancy and because security on the Internet is still a problem. Thus right owners do not know what their copyrights are worth or whether they will be secure from infringement[59].

The current licensing structures used by collecting societies tend to be based on inflexible structures geared to large institutions i.e. blanket licensing. These fail to consider the way in which copyright material is used by most businesses. This is particularly significant in relation to copyright usage on the Internet. Here the most important considerations in licensing are the volume of material used, ease of use, the economic model used, and methods of payment. In turn these will affect the way value is added and pricing. Unfortunately there is often a mismatch between the

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[59] Comments of Helen Arnolt of Scottish Media Group on 6 August 2002.

economic models used on the Internet and those upon which conventional licences are based. Because the market for products distributed via the Internet is not yet mature, the approach of collecting societies is tentative, that is assuming they have permission to authorise digital uses. Despite these problems the European Commission considers Internet distribution of multimedia products to be an important element of the Information Society. It has financed 10 pilot projects under the auspices of the INFO 2000 programme in order to promote rights clearance on the Internet. These projects tend to fall within three main categories, namely rights clearance, the provision of information and catalogue data, and promotion of interoperability of rights clearance and related software. While the E.U. has established a number of pilot projects for the collective clearance of multimedia works on the Internet, there is as yet no coherent structure available for doing this.

8.23 Over all Conclusions

In overall conclusion the author finds that in the longer term copyright must be replaced by something else, however, copyright will take a long time to die. In the end copyright is a generic form of protection and should not be used to create special rights in digital works. Rights management will undoubtedly play a significant role in the future development of copyright or whatever replaces it. However, collecting societies are not an appropriate mechanism for clearing rights for the production of multimedia works, but for the moment there is little to take their place. Ideally rights clearance for multimedia requires dedicated clearinghouses that can provide licences that are flexible and appropriate for digital uses. However, were such clearinghouses to exist, they would wield a vast amount of power over our cultural heritage, and would require very strong regulation. Ultimately effective rights management systems based on closed secure networks may come into being, but there are serious problems to be solved before they can be effectively implemented. Payment infrastructures are a particular problem, especially in relation to the monitoring of and payment for small items.

8.24 Summary of Conclusions

While digital technology gives rise to many legal issues this does not justify the creation of a new field of law. Digital technology does not create new legal issues, rather it exacerbates the legal problems that existed for mono-media. Although technical protection is of use to some companies, it can be expensive and will not be accepted by the public while it makes access to and payment for information goods more inconvenient. The best way of obtaining such an infrastructure for multimedia rights clearance would be through a system of centralised clearinghouses. However, this would require considerable convergence of licensing law and copyright, and greater use of compulsory licensing. The development of Electronic Copyright Management Systems is likely to drive the development of circumvention technologies unless the law imposes equity upon them. Further, international copyright laws must have fair use provisions relating to electronic uses of works if they are to retain the balancing function that they performed in the past.

To begin with copyright emphasised the paramount importance of promoting the common good, however, in recent years copyright has promoted private enrichment at the expense of the common good. The public domain has been eroded by the steady expansion of owners' rights (including the introduction of the database right and the lengthening of the duration of copyright). This has had the effect of bringing parts of the public domain into the private domain. Legislative attempts at harmonising copyright in Europe and the U.S.A. have failed to achieve this because of their complexity and over breadth. Further, this legislation is inadequate in its implementation, has poorly defined exceptions and simply fails to deal with many issues such as moral rights and jurisdiction. Anglo-American copyright law is ill equipped to deal with multimedia works because of its inconsistent treatment of derivative works and moral rights. The treatment of exhaustion of rights as between Europe and the U.S.A. will also give rise to legal dispute.

Multimedia works are hard to define. The systems of categories used in Anglo-American copyright regimes are not suitable for the classification of multimedia works. While there are problems with infrastructure such as lack of bandwidth and the compatibility of software, these problems are steadily being solved. New laws are not a good way of regulating the Internet because such laws tend to favour the content industry at the expense of consumers. Such laws are often complex and can be out of date before they are implemented. The only real way to control copyright infringement on the Internet is through ISPs and hardware manufacturers; however, draconian solutions ultimately cannot work. What is required is a system of dispute resolution procedures backed up by effective enforcement mechanisms, including compulsory licences in situations of market failure. While the Internet could be turned into a closed secure network, this would have serious implications for privacy and anonymity on the Internet. The only real alternative is to keep the Internet as an open network and to find more indirect ways of making money from it.

While it is difficult to combine licensing and fair use this essential in order to maintain access to the public domain. Copyright is currently dependent upon the notion of copying. This is inappropriate in the digital environment since the real issue is access. Further, the application of this concept on the Internet can have the effect of outlawing the creation of transient and incidental copies that are essential for its normal functioning. Many multimedia works involve two-dimensional representation of three-dimensional objects. These representations cannot be readily classified in conventional copyright categories. This is important because the category into which a work is placed will affect what constitutes a substantial part of a work, whether a work is original or not, and the duration of copyright. The copyright protection of multimedia works is analogous to that of video games. This will depend upon the degree of user manipulation, the fluidity of the moving image and the form in which the program is fixed. When considering fair use in relation to video games the most significant factors are the nature of use and the effect on the market value including future markets.

With the advent of the MP3 standard the sharing of files on the Internet has become comparatively easy, this has given rise to much litigation. Although those cases involving direct copying can be easily classified as copyright infringement, those cases involving linking are far less clear. The leading case of Napster hinged upon the knowledge of the defendant, and while the Sony case distinguished, the reasoning of the court was specious and based upon scant evidence. The result of this is that many website operators have completely relinquished control of user behaviour. Search engines are important in locating multimedia files but can also infringe copyright. However, such case law as there is indicates that the use of search engines is fair use so long as this use does not go beyond what is needed to allow search engines to function. In terms of the future development of the Internet telecommunications technology has reached a third stage in which mobile networks will be able to duplicate the functions of fixed networks. The net result of this will be that the issues of jurisdiction and enforcement will become even more of a problem.

Technical solutions require a high degree of intelligence and functionality; however, this is a long way off at present. Even if this is achieved technical solutions on the Internet are unlikely to offer long term protection because of the large number of technologically savvy individuals connected to the Internet. Payment systems available on the Internet do not yet have sufficient infrastructure to offer a high degree of transaction security, and billing systems are not yet sophisticated enough to handle derivative uses of copyright works. Consumer confidence will therefore hinder the development of e-commerce until this situation is remedied. Further, the Internet has no central administration so the adoption of standards facilitating transactions in copyright works is therefore slow. Although tracking will help the enforcement of rights on the Internet the identification standards needed to fully facilitate this are not yet in place. While this situation is improved by the use of copyright management systems such systems must incorporate fair use if they are to be both fair and effective.

With regard to the licensing of software, offers can be made to the world or to individuals. Websites can combine both types of offer, and which type is involved will depend upon the wording of the offer and the surrounding circumstances. Consent to electronic contracts may be a particular problem where a party acts through an agent or where a written signature is required. Recent laws, especially in the U.S.A., concerning the validity and enforceability of licences tend to favour copyright owners, allowing them to exert a lot of downstream control over content. As such these laws frequently convert previously non-infringing uses of copyright content into infringing uses by virtue of the law of contract. What is evident from these instruments is that the legal problems are the same as for analogue media; however, the depth of analysis is much greater. Software is often licensed using so-called 'shrink-wrap' licences, the legal validity of which is doubtful. However, the courts seem to be willing to uphold the legal validity of shrink-wrap licences, so long as the consumer is given the opportunity to reject the software. While alternatives to conventional licences have been developed, they still seem difficult to enforce because they do not bind third parties, and because licensors may only sue for infringement to the extent to which the licence is exceeded. Although the courts seem willing to enforce click-wrap licences the legal status of browse-wrap licences is more uncertain. In relation to the rights clearance process, there is a strong tendency to maximise value through the issue of non-exclusive licences. Thus there is no outright control of content making the process unmanageable, especially for unforeseen applications of content.

The legal protection of multimedia works on the Internet is patchy. In the E.U. and the U.S.A. rules concerning jurisdiction are confused and inconsistent. The predominant theory of jurisdiction in the E.U. is based on the concept of 'permanent establishment', and websites frequently fall outside the scope of this definition. While satellite communications have little economic significance at present this situation is likely to change in the future. Such systems will have multimedia capabilities; however, the Satellite Directive will apply only to non-contractual disputes and only to some types of multimedia work. Furthermore, the Information Society Directive does not deal adequately with temporary and incidental reproduction, and its anti-

circumvention provisions are too broad. The exceptions to the Directive are narrow, fixed, and only some are obligatory. Inconsistent treatment of moral rights means that in many parts of Europe it is not possible to gain outright control of a work, whereas in the U.K. and the U.S.A. this is possible. Ultimately the only way to effectively counteract discrimination through licence conditions and technical devices is through the expansion of fair use. However, the Information Society Directive singularly fails to do this.

The predominant view of authorship is that the author of a work is the person that translates it into a fixed tangible expression. Under U.K. law collaborative works must be created through an enforceable agreement or a common understanding. The work should not be distinct from the work of other authors and there should be a substantial contribution from each co-author made pursuant to a common design. In Europe the need to manage information collectively has become evermore pressing, and what was once encouragement from the Commission has turned into bullying. Compulsory licensing may be necessary in relation to collectively administered material in order to prevent situations of market failure and to improve certainty for multimedia producers in the rights clearance process. Even though the apparent contradiction between rights management and the use of levies has been recognised, the E.U.'s approach to copyright levies is chaotic. Rightholders are still reluctant to sell rights for digital uses of their work because the market for such material is in its infancy and because they fear the risk of infringement of digitised works distributed on the Internet. While the E.U. has established a number of pilot projects for the collective clearance of multimedia works on the Internet there is as yet no coherent structure available for doing this.

Currency

Please note this thesis is only up to date as of 27 August, 2004, and it is anticipated that some of the law discussed will have changed by the date of its final publication.

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