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**REINVENTING THE  
PACKAGE HOLIDAY BUSINESS**

**NEW INFORMATION AND  
COMMUNICATION TECHNOLOGIES  
IN THE BRITISH AND GERMAN  
TOUR OPERATOR SECTORS**

**Volume I**

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**Ph.D.**

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**This Thesis Is Dedicated To My Parents**

**Declaration of Author's Rights**

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## **Abstract**

Tour operators and travel agents are threatened with disintermediation in the travel and tourism industry, especially as a consequence of altered customer demand and new information and communication technologies which foster direct bookings. In this thesis, however, it is argued that major European tour operators are reinventing their business activities to adapt to these changes and to secure their strategic position in the package holiday business. These tour operators are in particular developing and implementing new information and communication technology strategies to support both their production and distribution of holiday packages and, moreover, to enable them to automatically assemble and market individually tailored holidays. Data to support this argument was gained from an extensive empirical survey in Britain and Germany. A total of 44 tour operators were interviewed in Britain and Germany, which controlled over 65% of their respective national market shares. The interviewed tour operators also included ten of the top twelve European tour operator groups. Leading tour operator associations and charter airlines were interviewed in addition. This research provides a detailed insight into the tour operator sector, particularly in Britain and Germany, thus contributing to research in the travel and tourism industry. Moreover, a theoretical framework is developed and proposed, largely based on industrial organisation and new institutional economics literature. The application of this framework in this thesis for the study of the package holiday business contributes to travel and tourism research, and provides a useful methodology for the study of a sector or industry.

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#### Abbreviations

- N. A. = not annotated, or not available
- → = reference to a table in the appendices (especially Appendices 9 - 11)

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## **Chapter 1. Introduction**

### **1.1 Main Hypothesis and Objectives**

The travel and tourism industry can be said to be going through a state of change, affected and directed in particular by developments in new information and communication technologies and customer demand (Klein et al., 1996; Poon, 1993 and 1994; Schertler, 1994b; Schertler et al., 1994 and 1995a; Sinclair and Stabler, 1991; also Amann et al., 1995; Hawkins et al., 1991, p. x). The package holiday business is especially affected, and indeed its existence is ultimately threatened by these developments. New technologies, most of all on-line trading platforms such as the Internet's World Wide Web and the commercial CompuServe and Microsoft Network, self-service booking kiosks and interactive television channels, are enabling travel and tourism principals to distribute their products directly to customers and, correspondingly, are allowing customers to book travel and tourism components directly from travel and tourism principals, thus by-passing tour operators and travel agents. Moreover, customers are increasingly demanding more individual holidays than the typical inclusive tours provided by 'mass-market' tour operators (Datzer, 1995a, p. 35; Devas, 1991, p. 8-5; Edwards, 1993, p. 15; Jordans, 1990, p. 34; Mintel, 1994b, pp. 3 - 5; Poon, 1993 and 1994; Spielberg, 1995). These developments combined impose the major threat of disintermediation (or redundancy) of tour operators and travel agents in the distribution chain for holidays.

It is hypothesised here, however, that major European tour operator groups are redesigning their business activities both in the production and the distribution of holiday packages and reinventing the way they operate, in fact 're-engineering' their business (Hess et al., 1995 and 1996; Norman, 1993; Österle, 1995 and 1996; Schertler, 1996), to counter or reduce the threats imposed by new technologies and to cater for altered customer demand. As a key part of their new business strategies, these tour operator groups are implementing new information and communication technologies (ICTs) and ICT-based systems together with links between these and

other systems in the industry. A number of these new system strategies (or information technology strategies), which were implemented by leading European tour operators, in most cases involving a complete replacement of their previous systems, are summarised in Table 1.1. Cost figures regarding some of these projects are included, wherever available, to underline the value and importance of these system strategies to the respective tour operators. In addition, information about the time scales of the system developments and implementations are listed and indicate, how recent these developments have taken place, thus supporting the relevance of this study.

Tour Operator Group <sup>1</sup>	Name of New or Enhanced Tour Operator System(s)	Details of Changes in Tour Operator System(s) and Associated Project Costs <sup>2</sup>	Time Scale of System Development and Implementation
Airtours PLC / Airtours Holidays Limited, Helmshore/Lancashire, England	<b>Airtours Central System; Tradewinds System</b>	system enhancements of central system; completely new system for Tradewinds	back-office system enhanced during <b>late 1993/1994</b> ; new system for long-haul and tailor-made holidays brand Tradewinds introduced in <b>mid 1995</b> ; major system overhaul planned for <b>1996/1997</b>
British Airways Holidays Limited, Crawley/West Sussex, England (British Airways PLC (BA), England)	<b>BA Link Option 2</b> (distribution system)	complete replacement of old distribution system	system implemented for some destinations on <b>24 April 1995</b> , with the rest successively following
Club Méditerranée S.A. ( <b>Club Med</b> ), France / Club Méditerranée Deutschland GmbH, Düsseldorf, Germany	N. A.	complete replacement of all individual systems in group	system fully operational in Germany since <b>mid 1995</b>
<b>DER-Tour</b> , Frankfurt am Main, Germany (Deutsches Reisebüro GmbH (DER), Germany)	<b>Phoenix</b>	complete replacement of old TOUR system; costs of about DM 25 (£10.4) million during 1994 and 1995	project started in January 1994; model completed in July 1994; system development started in August 1994; holidays on system since <b>late 1995 / early 1996</b>

Tour Operator Group <sup>1</sup>	Name of New or Enhanced Tour Operator System(s)	Details of Changes in Tour Operator System(s) and Associated Project Costs <sup>2</sup>	Time Scale of System Development and Implementation
<b>First Choice Holidays</b> PLC / First Choice Holidays & Flights Limited, Crawley/West Sussex, England	<b>Merlin</b> (central database system); <b>Delphi / Speake</b> (planning system); N. A. (distribution system)	complete replacement of old central database system; major enhancements of planning and distribution systems; costs for distribution system alone in excess of £300,000	Merlin project started in January 1994; Merlin partly operational since <b>November 1994</b> ; Delphi / Speake project started in <b>1993</b> ; Delphi / Speake and distribution system operational since <b>early</b> <b>1996</b>
<b>Hetzel-Reisen GmbH &amp;</b> <b>Co. KG, Stuttgart,</b> <b>Germany</b>	<b>TOS</b> (Tour Operator System)	complete replacement of old system	system fully operational since <b>23 August 1994</b>
International Tourist Services Länderreisedienste GmbH (ITS), Köln, Germany	<b>ITOS</b> (International Tour Operator System)	complete replacement of old system; costs in excess of DM 20 (£8.3) million	project started in mid 1993; system fully operational since <b>1 August</b> <b>1994</b>
<b>Kreutzer Touristik</b> <b>GmbH, München,</b> <b>Germany</b>	<b>TOPIX</b>	complete replacement of old system	implementation of system started in January 1994 and completed in <b>August</b> <b>1994</b>
<b>Kuoni Reisen Holding</b> <b>AG, Switzerland /</b> <b>Kuoni Fernreisen GmbH,</b> <b>Kriftel, Germany</b>	<b>FlexiPack</b> (Flexible Packages) / <b>Kuoni Platform 2</b>	completely new system in Germany; British system enhanced for £500,000	German system installed in <b>mid 1994</b> , based on the British system; enhancements for British system completed in <b>October 1994</b>
The <b>LTU Group /</b> <b>LTU Touristik GmbH &amp;</b> <b>Co. Betriebs KG,</b> <b>Düsseldorf, Germany</b>	<b>PROVIT</b>	complete replacement of all individual systems in group	project started in 1992; system fully operational at Jahn Reisen since <b>May</b> <b>1996</b> and at all other tour operators by <b>late 1997</b>
<b>NUR Touristic GmbH,</b> <b>Oberursel, Germany</b>	<b>NURVIS</b> (NUR Verkaufs- und Informationssystem / distribution and information system)	major system enhancements; DM 56 (£23.3) million spent on systems during 1992 to 1994, of which a large proportion was spent on NURVIS; for 1995 and 1996, further DM 37 (£15.4) million planned on systems for Belgian subsidiaries and DM 12 (£5) million for various tasks	system fully operational since <b>October 1994</b> ; links to Belgian subsidiaries planned for <b>1995</b>
<b>Sun International N.V.,</b> <b>Belgium /</b> <b>Bridge Travel Group,</b> <b>Broxbourne/Hertfordshire,</b> <b>England</b>	<b>ITOS</b> (International Tour Operator System)	complete replacement of all individual systems in the Sun International group, including SITOS (Sun International Tour Operator System)	system fully operational since <b>mid 1994</b>
The <b>Thomson Travel</b> <b>Group /</b> <b>Thomson Tour Operations</b> <b>Limited, London, England</b>	<b>TOLCICS</b> (administration system) and various other back- office systems	enhancements of back- office systems; costs of about £2.5 million	back-office systems enhanced in <b>1994</b>

Tour Operator Group <sup>1</sup>	Name of New or Enhanced Tour Operator System(s)	Details of Changes in Tour Operator System(s) and Associated Project Costs <sup>2</sup>	Time Scale of System Development and Implementation
Touristik Union International GmbH & Co. KG (TUI), Hannover, Germany	<b>IRIS-Neu</b> (Integriertes Reservierungs- und Informationssystem / Integrated Reservation and Information System)	replacement of system IRIS-Alt; about DM 80 to 90 (£33.3 to £37.5) million per year were spent at TUI on information technology, of which about DM 30 (£12.5) million per year were spent on IRIS-Neu alone	system introduced in <b>August 1992</b> for some destinations; system fully operational since <b>mid 1995</b>

<sup>1</sup> The names of the tour operator groups are stated first, followed by the names of the interviewed tour operator subsidiaries (see Chapter 4).

<sup>2</sup> Total project costs including hardware, software and labour; information about the costs of the projects was in many cases not given due to its sensitivity; the exchange rate of £1.- = DM 2.40, as in early 1995, was adopted to approximate the value of the German expenses.

Key names and dates are highlighted. All data was gained from interviews during November 1994 to May 1995 in Britain and Germany as outlined in Chapter 4, with information regarding the time scales updated with information published in the trade press (see Chapter 6).

**Table 1.1**

**New or Enhanced Systems of Major European Tour Operators**

The main purpose of this research is to critically examine the hypothesis that tour operators are reinventing their business activities both in their production and their distribution of holiday packages, in particular by implementing new ICT-based system strategies, to secure their strategic position in the package holiday business. This overall hypothesis is split into three sub-hypotheses.

- The first sub-hypothesis is that without a change in their operations, tour operators are threatened with disintermediation in the travel and tourism industry. A detailed analysis of the package holiday business is conducted to explore this sub-hypothesis, identifying and investigating the main reasons for tour operators to reinvent their activities and to enhance their systems or install new ones.
- The second sub-hypothesis to be explored is that tour operators are implementing new systems which are more flexible regarding automated production and distribution of packaged holidays and which allow them to ‘re-engineer’ their business activities. The development of the new systems of tour operators and the

corresponding strategies is documented, and the systems' main functionalities, in particular when compared to the previous systems which were enhanced or replaced, are analysed.

- The third sub-hypothesis is that the 're-engineered' activities are reducing the threats imposed by new direct booking technologies and altered customer demand and, thus, may well secure the position of tour operators in the business not only in the short, but also in the long-term. For this purpose, the main consequences arising from implementation of these new systems on the strategic position of tour operators and on the structure of the package holiday business as a whole are identified and assessed.

These three sub-hypotheses combined, i.e. the threatened position of tour operators in the package holiday business resulting in tour operators implementing flexible systems which allow them to re-design their activities and, thus, are likely to again secure their position in the industry, are therefore supporting the overall hypothesis.

A theoretical framework, primarily based on a review of industrial organisation literature, was developed and applied in the collection and analysis of primary and secondary data. The main evidence was gained from an extensive empirical survey of tour operators and other organisations in the package holiday business in Britain and Germany. While forming the central part of the examination in this thesis, the empirical survey combined with the literature survey and the application of the theoretical framework provide unique information about an entire industrial sector. Indeed, it appears that relatively little research has been published to-date which investigates a whole sector of an industry in such detail.

## 1.2 Organisation of Thesis

The remainder of this chapter is dedicated to outlining the scope, and correspondingly the limitations, of this study and to providing some general background information, while at the same time further underlining the relevance of this research. Moreover, some key terms which are used throughout this thesis are defined. The sections are arranged as follows:

- The travel and tourism industry is outlined (Section 1.3) and it is shown that the industry is of major importance to the World economy and that of Europe in particular. Moreover, the key importance of the British and German travel and tourism industries are underlined, thus providing the first part of the argument, which is to be continued and completed in Section 1.5, explaining why these two countries are concentrated upon in the empirical study.
- The holiday business and the distribution chain for holidays are then presented (Section 1.4). In particular, the main types of travel and tourism organisations, i.e. principals, consolidators, tour operators, travel agents and destination agencies, are characterised.
- The package holiday business and the role of tour operators are further discussed (Section 1.5), and it is argued why tour operators in contrast to the other players in the holiday business are concentrated upon. It is also discussed why international tourism, and in particular outgoing tourism, is given more attention than domestic and incoming tourism. Furthermore, the argument is completed as to why the countries of Britain and Germany are focused on.
- The significance of new information and telecommunication technologies (ICTs) to travel and tourism companies and tour operators in particular are discussed (Section 1.6). The term 'tour operator system' is specifically elaborated.

While these sections are mainly intended to outline the scope of the study, to provide background information and to argue the relevance of the research, the information provided moreover contributes to research by drawing on a variety of publications and presenting information on the package holiday business which appears not to exist elsewhere in academic sources in such a concise and focused form.

In Chapter 2, related literature is reviewed. The chapter is divided into two main parts. In the first part, literature on the travel and tourism industry is discussed and it is concluded that the package holiday business appears to have been little researched with regards to the use of new ICTs by tour operators, thus adding to and concluding the argument of the relevance of this research. In the second part, theories and methodologies for the study of inter-organisational arrangements, sectors and industries are reviewed, particularly from the areas of industrial organisation and new institutional economics. The theoretical framework by Klein (1995a and 1996) is outlined in detail, and it is argued that it provides a useful basis for the analysis of the package holiday business.

In Chapter 3, a multi-layer theoretical framework is proposed for the study and analysis of the package holiday business. The theoretical frameworks by Porter (1980 and 1985) and Reve (1990) are reviewed and incorporated into the proposed framework. It is argued that the proposed framework is useful both in the preparation of the empirical survey as well as in the analysis of the gained results. A multi-layer framework, unlike the other essentially single or double-layer frameworks discussed in the previous chapter, was chosen so as to systematically structure and organise the information while at the same time preserving more of the complexity of the studied relationships.

In Chapter 4, general methodological issues are discussed and the empirical survey is outlined. A pluralist approach is taken, combining qualitative and, though to a lesser extent, quantitative methodologies. An extensive empirical survey, which was conducted in Britain and Germany between November 1994 and May 1995, is outlined, which is then reported in the subsequent chapters to support the discussed hypotheses. The survey consisted of semi-structured telephone and in-depth face-to-face interviews with representatives from 44 tour operators in Britain and Germany, which controlled an estimated combined market share, according to turnover, of greater than 65% of the total tour operator business in their respective countries. Moreover, British and German subsidiaries of large French and Swiss tour operator



groups were included in the study, thus gaining information on ten of the largest twelve tour operator groups in Europe. Furthermore, all leading charter airlines in Britain and Germany as well as a number of major tour operator associations were interviewed.

Chapters 5 to 7 are each dedicated to one of the three sub-hypotheses stated above. In Chapter 5, the main reasons for tour operators reinventing their business activities, in particular by enhancing their systems and installing new ones, are identified and explored. In Chapter 6, a documentation of the development of the new systems of tour operators and the corresponding strategies together with an analysis of the systems' main functionalities, in particular when compared to the previous systems which were enhanced or replaced, is provided. Finally, in Chapter 7, the main consequences of these new systems for the strategic position of tour operators that implement them and for the structure of the package holiday business in general are identified and explored.

In the final Chapter 8, the main results of the analysis presented in Chapters 5 to 7 are summarised, in particular with regards to supporting the overall hypothesis, and conclusions are drawn. Recommendations for future research in the package holiday business are also made. Moreover, implications of the theoretical framework, which was proposed in Chapter 3 for the study of the package holiday business, are discussed for the study of other sectors and even industries other than the travel and tourism industry.

### 1.3 The Travel and Tourism Industry

The worldwide travel and tourism industry can be thought of as having originated in the journeys made throughout recorded history for reasons of trade or religious pilgrimage, with even the word 'holiday' deriving from the words 'holy day', denoting a day of celebration in honour of a particular saint (Key Note Report, 1993, p. 9). The modern travel and tourism industry, however, has become a sophisticated and complex industry, providing a wide range of products not only for religious and business travel, but also for many other purposes, with the industry also encompassing diverse organisations. In fact, it can be seen as an 'umbrella industry' (Jordans, 1990, p. 7; Lundberg, 1980, p. 1), comprising a series of interrelated businesses, embracing, amongst others, travel and transportation companies, accommodation and catering enterprises, tour operators, travel agents and providers of recreation and leisure facilities.

The travel and tourism industry can be characterised so as to consist of all those individuals and organisations that are involved in the production, distribution and consumption of travel and tourism products, or, more generally, those individuals and organisations involved in travel and tourism. Travel can be defined as the movement of people from one place to another by any means and for any purpose (Lickorish and Kershaw, 1958, p. 2), while tourism is defined by The Tourism Society as

*“the temporary, short-term movement of people to destinations outside the places where they normally live and work, and their activities during the stay at these destinations“ (Committee for Consumer and Leisure Studies, 1993, p. 72; Tourism Society, 1991, p. 2).*

This definition of tourism was adopted by the British Government. However, the United Nations (UN), the World Tourism Organisation (WTO) and the German Federal Office of Statistics (Statistisches Bundesamt) define tourism more specifically so as to comprise

“... the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes“ (Committee for Consumer and Leisure Studies, 1993, p. 72; also Statistisches Bundesamt, 1994).

Both definitions of tourism encompass visits for all purposes including business and conference trips, day visits from home for leisure and recreational purposes and visits to friends and relatives.

The UN and the WTO also distinguish between travellers and visitors (Bhatia, 1986, p. 96). Both can be national (i.e. domestic) or international (i.e. foreign) depending on their place of residency and the location of the place visited. Travellers are those consumers that consume travel products, and visitors are those that consume tourism products. Visitors are further distinguished into being either excursionists or tourists, with excursionists spending less than 24 hours and tourists at least 24 hours but less than one year visiting a destination (Devas, 1991, p. 1-1). Travellers are further distinguished as either travelling visitors or as commuters, depending on the frequency of their travel. Commuters and, with some exceptions, excursionists are outside the scope of this thesis due to the focus on the package holiday business.

The domains of travel and tourism clearly overlap, since travel can take place for tourist purposes as well as for other purposes. Travel and tourism can therefore be further divided into non-tourist travel, i.e. travel not for tourist purposes; non-travel tourism, i.e. tourism that does not involve travel; and tourist travel, i.e. the combination of travel and tourism activities. Non-tourist travel is outside the scope of this thesis because of the focus on the package holiday business. However, instead of referring to the ‘tourism industry’ in the following, the use of the term ‘travel and tourism industry’ is continued due to its common usage in the literature.

Discrepancies in the definitions of travel and of tourism can be observed in the literature. These discrepancies exist in particular between historical and modern day definitions, since modes of, and attitudes towards travel and tourism have changed

considerably during the past decades. For example, in Switzerland in 1876, tourists were defined

“... as ‘people who travel for the pleasure of travelling, out of curiosity, and because they have nothing better to do,’ and even ‘for the joy of boasting about it afterwards’“ (Lundberg, 1980, p. 5; also Bhatia, 1986, p. 95).

Moreover, modern day definitions also differ, as discussed by, for example, Freyer (1993, pp. 403 - 411) and Lundberg (1980, p. 5), being perhaps a reflection of the industry’s diversity and complexity.

The travel and tourism industry is, in several respects, of major importance to basically every country in the world. It is important in a socio-cultural sense by providing arts, entertainment and leisure facilities, and it is important in an environment-sustaining sense (Tourism Society, 1990a, p. viii, and 1991; WTO, 1991, p. 29). Moreover, the industry is economically very significant to almost all countries in the world, both in terms of financial value as well as number of people employed. In fact, the travel and tourism industry as a whole is considered to be the largest industry in the world, both according to gross domestic product and employment (Hawkins et al., 1991, p. ix; WTTC, 1992 and 1993). The World Travel & Tourism Council (WTTC) estimated that the travel and tourism industry produced more than US\$ 3.3 trillion in gross output (GDP) worldwide in 1995, being equivalent to nearly 11% of world gross output (Table 1.2). An estimated 212 million people were employed in the industry worldwide, nearly 11% of global workforce or one in every nine workers. The European travel and tourism industry alone accounted to more than a third of the global travel and tourism GDP with an output of more than US\$ 1.3 trillion; and more than 36 million people were employed in the European industry (Table 1.2) (also Pfeiffer, 1992, pp. 14 - 16; Pompl and Lavery, 1993).

Group of Countries or Country <sup>1</sup>	GDP (US\$ billions)	GDP of Total	GDP Growth 1995 to 2005	Employment (millions)	Employment of Total	Employment Growth 1995 to 2005
World	3,379.0	10.9%	54.6%	212.2	10.7%	59.2%
OECD	2,636.4	11.6%	33.0%	46.0	11.9%	12.5%
Europe	1,351.0	11.9%	48.4%	36.2	10.2%	27.0%
European Union	1,008.0	13.5%	37.4%	18.3	13.3%	8.7%
United States	870.2	10.5%	31.1%	14.4	11.4%	16.7%
Japan	480.0	10.5%	42.1%	6.4	9.9%	7.9%
Germany	270.9	12.9%	29.3%	4.3	12.4%	5.5%
France	212.4	14.2%	27.5%	3.0	13.3%	2.7%
Italy	159.5	13.0%	28.1%	2.7	13.1%	8.1%
United Kingdom	141.6	12.0%	28.1%	3.1	12.2%	9.6%

<sup>1</sup> The top six countries in the world according to their GDP (gross domestic product or gross output) are listed.  
Source: WTTC, 1995.

**Table 1.2**  
**Travel and Tourism Estimates for 1995**

While the travel and tourism industry is a major contributor to the world's economy as a whole and Europe's economy in particular, the industry is also a vital part of the economies of Germany and the United Kingdom. According to these estimates, Germany ranked third and the United Kingdom sixth amongst all countries in the world in 1995 regarding the value of the gross domestic product (GDP) produced by their national travel and tourism industries (Table 1.2). Almost US\$ 271 billion, being equivalent to 12.9% of Germany's GDP, and more than US\$ 141 billion, being equivalent to 12.0% of the UK's GDP, were contributed by the national travel and tourism industries, respectively, with 12.4% of Germany's total workforce, i.e. 4.3 million, and 12.2% of the UK's total workforce, i.e. 3.1 million, being employed within the industry. Moreover, the economic importance of the travel and tourism industry is forecasted to further increase during the next ten years (Table 1.2).

#### **1.4 The Holiday Business and the Distribution Chain for Holidays**

Three fairly distinct time phases in the life cycle of a holiday are distinguished here. The 'pre-holiday period' is the period before a customer embarks on a holiday; the 'holiday period' is the time which spans from when a customer embarks on a holiday until his or her return; and the 'post-holiday period' is the time after the return of a customer from a holiday. During the pre-holiday period, travel and tourism companies add value to the service 'holiday' through information provision, information reduction and other services, for example in the form of creating expectations and increasing the feeling of security by issuing insurances. During the holiday period, value is constantly added to a customer's holiday, for example through transportation, accommodation, catering and entertainment components. During the post-holiday period, value is produced especially through after-care such as handling complaints, supplying memorabilia such as photographs and staging meetings for the travellers from a former travel group. Although a tour operator provides services during the holiday period (for example through provision of tour representatives) and during the post-holiday period, the focus here lies on the pre-holiday period. The reason for this is that tour operators utilise new ICTs most extensively during this period to assemble holiday components and to sell and distribute these as packages, while new ICTs are less important to tour operators during the holiday and the post-holiday periods.

A number of different types of organisations are involved in the production and distribution of holidays, which are distinguished according to their functions. The main types are travel and tourism principals, consolidators, tour operators and travel agents (Freyer, 1993, p. 131; Kaspar, 1991; Lavery, 1989; Renshaw, 1992, pp. 81 - 112), each of which is described in more detail in the following. Tourist authorities, tourist boards, area tourist boards and tourist information centres (TICs), or tourist information offices, are further types of organisations which are particularly important to the incoming and domestic holiday business. However, due to the focus on the package holiday business which has traditionally been dominated by outgoing

tourism (Section 1.5), these latter organisations are outside the scope of this thesis. In addition, these organisations can in fact be treated as special cases of travel and tourism principals (when for example promoting a certain destination, which, as 'nature', 'environment' or 'culture', could very broadly be regarded as a travel and tourism component), of consolidators (when for example selling local accommodation in bulk such as for conferences or conventions) and of travel agents (when for example handling reservations and bookings of various travel and tourism components).

*Travel and tourism principals* produce the basic travel and tourism products or components, such as transportation, accommodation, catering and entertainment. *Consolidators*, also referred to as 'bucket shops', purchase certain types of travel and tourism components from a number of these principals, thus acting as a pool, and then sell these components to other companies and consumers, while conducting marketing and distribution activities and bearing part or all of the financial burden of unsold stock. One of the main advantages for travel and tourism principals in dealing with consolidators is that the financial risk of excess capacities is passed on; and one of the main advantages for tour operators, travel agents and consumers is that lower prices can be achieved through the bargaining power of consolidators over travel and tourism principals. In principle, consolidators could exist for basically any type of travel and tourism component, with some of the largest in Britain and Germany in 1995 having operated as flight (both scheduled and charter), cruise ship or accommodation consolidators. Moreover, seat-only departments of large tour operator groups, which were set up to sell excess capacity of in-house charter airlines and excess purchased capacity, both of which if unsold would result in high financial expense, can also be regarded as consolidators. While both consolidators and tour operators act as wholesalers in the travel and tourism industry, consolidators concentrate on one type of travel and tourism component whereas tour operators distribute a larger variety.

The main function of a *tour operator* is to purchase and assemble a large number of components produced by the travel and tourism principals in the transportation, accommodation and other travel and tourism sectors, and sell these to consumers as travel and holiday packages (Hebestreit, 1977, pp. 11 - 12; Holloway, 1992, pp. 37 - 43; Mill and Morrison, 1992, pp. 479 - 486). The terms 'travel and holiday package', 'packaged holiday', 'holiday package', 'holiday trip' and 'holiday tour' are used interchangeably (see Skuse, 1995, for the legal definition of a 'package' in the European Union). Tour operators require knowledge of product availability, expertise to judge market conditions and negotiation skills to deal with suppliers; and their strengths usually lie in their ability to buy airline seats, hotel beds and other travel and tourism products in bulk (Hölzel, 1983; Robinson, 1976, pp. 89 - 90). Functions such as information gathering and information reduction as well as achieving economies of scale through mass production and also, increasingly, economies of scope through offering a large variety of packaged holidays can be regarded as being among the main 'value added' by tour operators. (It is interesting to add that the word 'tour', and thus the words 'tourism' and 'tourist', are

“... a derivation of the Latin word 'tornus' meaning a tool for describing a circle or a turner's wheel“ (Bhatia, 1986, p. 95).)

The main tasks of a *travel agent* are

“... to give advice to potential tourists on the merits of alternative destinations, on the modes of transport available and the routes to be followed for a given destination, and to make the necessary arrangements for a chosen holiday, which may involve the booking of accommodation, transport or other relevant services. Because the agent has accumulated knowledge, expertise and contacts, he is a useful and sometimes invaluable, intermediary“ (Robinson, 1976, p. 89).

The travel agent acts as a distributor, broker or retailer on behalf of travel and tourism principals and tour operators by selling their services and is rewarded by a commission. The main functions of a travel agency are, therefore, the provision of travel information, preparation of itineraries, liaison with service providers, planning and costing tours, ticketing, provision of foreign currencies and the arrangement of insurance (Bhatia, 1986, pp. 261 - 265; Renshaw, 1992; Sülberg, 1983, pp. 95 - 97).



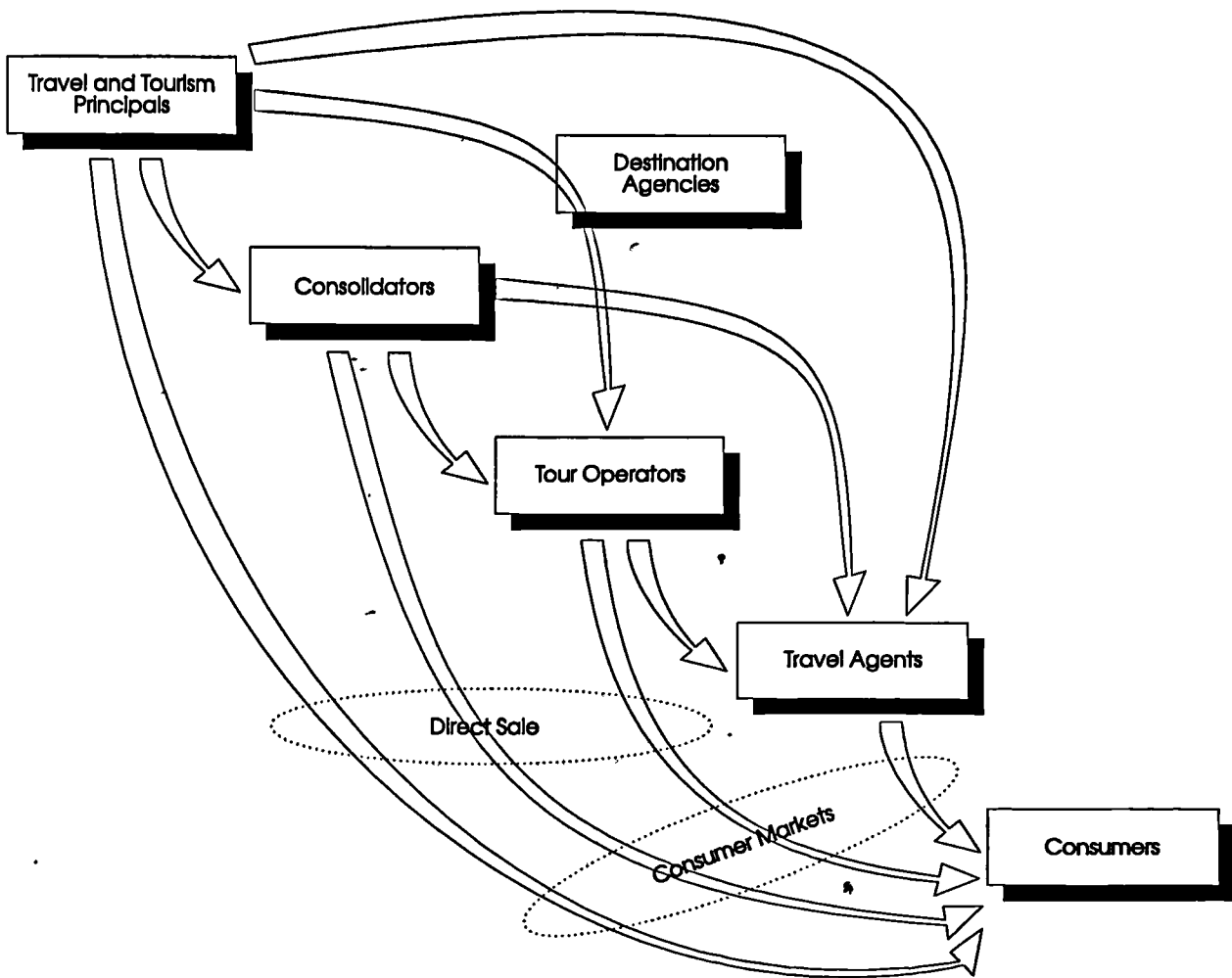
Whereas many of the functions executed by travel agents and tour operators are similar, the most distinctive difference between them is that tour operators sell their travel or holiday packages in their own names (Freyer, 1993, p. 166), while travel agents retail travel and holiday products, with few exceptions, on behalf of others. Due to the similarities in the tasks, however, some companies trade as both tour operator and travel agent (Key Note Report, 1991, p. 5). Moreover, three of the most important representative bodies for travel agents in the world, the American Society of Travel Agents (ASTA) in the United States, the Association of British Travel Agents (ABTA) in the UK and the Deutscher Reisebüro-Verband e. V. (DRV) in Germany, are also the main representative bodies for tour operators within their countries. In fact, supported by the introduction of new information and communication technologies, a trend can be observed towards the obscuring of the differences in the roles of tour operators and travel agents (Section 7.6).

The holiday business can, to a certain extent, be compared to the retail industry, especially the grocery retail sector (FVW International, 1994c; Jegminat, 1994b). Travel and tourism principals are the producers; consolidators and tour operators the wholesalers; and travel agents the retailers. However, in contrast to retailing, the travel and tourism industry is fairly unique in that retailers do not have to pre-purchase stock (Price, 1988, p. 47), that most of the products cannot be stored (Section 1.6) and that most of the products are produced only after they have been sold (often long in advance).

Destination agencies have to be included furthermore in the production and distribution chain for holidays. Destination agencies, also referred to as resort offices, overseas departments or incoming agencies, are either co-operating agencies or partly- or wholly-owned subsidiaries of tour operators located at the destinations to which customers travel. Destination agencies have two primary functions. The 'holiday period' function regards the ground handling of passengers having arrived at the destination such as conducting transfers between airports and hotels, organising local guided tours as well as looking after the customers. The pre-holiday period

function of destination agencies is to purchase or arrange, especially, accommodation, catering and entertainment components at the holiday destinations as an agent of a tour operator and to handle the communication between the tour operator and the principals that provide these components.

Holidays, at first as individual components and at a later stage as packaged tours, are distributed or sold to final consumers by these various organisations over different distribution channels. These range from direct sales channels to indirect sales depending whether or not the holiday components or packages are sold via intermediaries to consumers (Figure 1.1). As indicated in Figure 1.1, consumer and business markets are distinguished, as suggested by Holland and Lockett (1994; also Klein and Williams, 1995, p. 2). In particular the differentiation between travel and tourism principals, consolidators, tour operators, travel agents and consumers as the various steps in the distribution of holidays provide a basis for the analysis of the main forces which shape the package holiday business (Chapter 3).



(Unless indicated, all distribution channels are referred to as indirect sale channels, and all market relationships are business market relationships. The arrow via destination agencies indicates that tour operators can purchase components either directly from travel and tourism principals or with the help of (internal or external) destination agencies.)

**Figure 1.1**  
The Main Distribution Channels for Holidays

The expressions 'independent tour operator' and 'independent travel agent' are used by some organisations, for example the Association of Independent Tour Operators (AITO) in Britain, to distinguish these companies from those belonging to a larger chain or group. However, since many of these 'independent' operators have formed associations such as AITO to achieve combined bargaining power and economise on certain functions such as marketing, and are, therefore, obviously no longer independent in a strict sense, the expressions 'independent tour operator' and 'independent travel agent' are not used here. In contrast, the terms 'independent travel' and 'independent holidays' denote unpackaged travel or holidays, respectively, i.e. travel or holidays arranged by consumers themselves, with the possible assistance of a travel agent, and thus need to be distinguished from the terms independent tour operator and independent travel agent.

## **1.5 The Package Holiday Business and Outgoing Tourism**

Holidays are either sold as individual (or unpackaged) components or as packages, and it is tour operators that provide the latter. The modern operation of tour operators (as well as of travel agents) has its origins in the mid-nineteenth century. It was Thomas Cook, who, on 5 July 1841, hired a train for his friends in Leicester to attend a religious delegate meeting in Loughborough (Bhatia, 1986, p. 256), and, in 1845, inspired by this idea and its success set up a professional agency business (Brendon, 1991; Lundberg, 1980, pp. 106 - 109). Other companies were founded subsequently, such as the Bennett Travel Group in Norway in 1850, Wagons-Lits Travel in Belgium in 1872 (renamed Wagonlit Travel in 1993) and 'Ask Mr Foster' in the United States in 1888 (part of the Carlson Travel Group since 1979). However, the travel agency and tour operator business began to develop on a large scale only after World War II with the development of air holiday package tours, stimulated by the availability of bulk aircraft seats and hotel beds (Freyer, 1993, pp. 25 - 26; Lundberg, 1980, p. 109).

Tour operators have gained a key importance, and often dominant positions, in the package holiday business in Europe during the most recent decades, in particular through horizontal and (backward and forward) vertical integration (Ascher, 1985; Bywater, 1992; Freyer, 1993, pp. 166 - 185; Kärcher and Williams, 1994 and 1995; Renshaw, 1992, pp. 57 - 63, and 1994). It was estimated that 50 tour operators controlled around 80%, according to turnover, of the package holiday market in Europe in 1992 (Bywater, 1992, p. 2). In 1994, the 14 leading European tour operators alone accounted for a combined turnover of almost DM 33 billion, having served in excess of 32 million customers (Table 1.3). Tour operators are therefore concentrated upon in this study, with information about other key sectors such as the airline, accommodation, cruise ship, destination agency and travel agent sectors being incorporated wherever useful.

Rank <sup>1</sup>	Tour Operator Group	Country <sup>2</sup>	Turnover in 1994 (DM billions)	Customers in 1994 <sup>3</sup> (millions)
1	Touristik Union International GmbH & Co. KG (TUI)	D	5.59	4.81
2	NUR Touristic GmbH	D	3.95	3.94
3	The Thomson Travel Group	GB	3.13	4.10
4	The LTU Group	D	2.97	2.15
5	International Tourist Services Länderreisedienste GmbH (ITS)	D	2.85	2.01
6	Club Méditerranée S.A. (Club Med)	F	2.55	2.28
7	Airtours PLC	GB	2.12	3.50
8	Nouvelles Frontières	F	1.89	1.91
9	Hotelplan Internationale Reiseorganisation AG	CH	1.62	1.47
10	Kuoni Reisen Holding AG <sup>4</sup>	CH	1.41	N. A.
11	First Choice Holidays PLC	GB	1.39	2.05
12	Deutsches Reisebüro GmbH (DER)	D	1.36	1.90
13	Transpool <sup>5</sup>	S	0.95	0.98
14	The Globus Group (Cosmos)	GB	0.87	1.60
<b>Total</b>			<b>32.65</b>	<b>32.70</b>

<sup>1</sup> In decreasing order in terms of turnover in 1994, including that of national and international subsidiaries.

<sup>2</sup> Country, i.e. CH for Switzerland, D for Germany, F for France, GB for Britain and S for Sweden.

<sup>3</sup> 1993 figures for ITS, Club Med and Hotelplan.

<sup>4</sup> Until 17 February 1995 called Reisebüro Kuoni AG.

<sup>5</sup> Transpool was created in early 1995 through the merger of the Swedish tour operator group Nordpool with the Swedish airline Transwede Airways A.B.; figures stated are only those of Nordpool.

Source: FVW International, 1995b, p. 11. (For more recent figures see FVW International, 1996a.)

**Table 1.3**

**The 14 Leading European Tour Operator Groups in Early 1995**

Ten of the largest twelve European tour operators groups, which are listed in Table 1.3, were interviewed (see Chapter 4). Britain and Germany, however, were concentrated upon in particular in the empirical study for a number of reasons, some of which are discussed in Section 1.3. A further reason is that it can be argued that the British and the German tour operator sectors are among the most 'mature' and highly developed in the world (Medlik, 1988, p. 8). This is reflected, for example, in the fact that 9 out of the 14 leading tour operator groups in Europe were British or German (Table 1.3).

While this study is not, as such, a comparative study of the package holiday sectors in Britain and Germany given the objectives stated in Section 1.1, the study is enriched by several comparisons between the sectors to highlight important, though mainly historical developments. These comparisons include: (i) Private ownership in Britain compared to state ownership in Germany; (ii) rather simple ownership structures in Britain compared to complex cross-ownership structures in Germany; (iii) vertical integration into charter airlines by British tour operator groups compared to vertical integration into accommodation providers by German tour operator groups; (iv) differences in direct-sale habits; and (v) legislative differences. However, regarding the main technological trends observed it can be argued that there are little differences between the developments in Britain and Germany, reflecting the trend that the package holiday business is increasingly becoming an international business, as is discussed in Chapter 7.

The holiday business is distinguished, for example by the UN and the WTO, into international tourism and national (or domestic) tourism, with international tourism being further split into international departures (or outgoing) and international arrivals (or incoming). Specifically regarding the empirical survey, more attention is given to international tourism and in particular to outgoing tourism. The World Tourism Organisation estimated that international tourist activity would rise by 4% - 5% a year until the year 2000 (WTO, 1991, p. 23) and, therefore, argued that

“international tourism will become a more important part of the world economy as tourism grows more rapidly than other areas of the economy. This will result in: a larger portion of jobs and income deriving directly from international tourism; and more local economies will be heavily supported by (and, as such, dependent on) international tourism“ (WTO, 1991, p. 29).

Regarding international tourism expenditure alone, Germany ranked second and the UK fourth of all countries in the world in 1992 (Table 1.4), thus underlining the focus on these two countries in the empirical study. In 1992, Germans spent US\$ 37.3 billion on tourism abroad, being equivalent to 13.5% of world total, and citizens

of the UK spent US\$ 19.8 billion on tourism abroad, being equivalent to 9.7% of world total (Table 1.4). In contrast, while Germany and the UK have been important countries regarding generation of international tourism, they have been less important as tourism receiving countries, with the UK ranking sixth and Germany seventh in the world regarding international tourism receipts, and seventh and tenth, respectively, regarding international tourist arrivals (Table 1.4).

Group of Countries or Country <sup>1</sup>	International Tourism Expenditure (US\$ billions)	International Tourism Expenditure of World Total	International Tourism Receipts (US\$ billions) <sup>2</sup>	International Tourist Arrivals (millions) <sup>2</sup>
World	275.9	100.0%	297.9	481.6
OECD	228.1	82.7%	215.9	300.0
Europe	148.9	54.0%	155.3	290.2
European Community	116.6	42.3%	115.2	192.5
United States	39.9	14.5%	[1].....53.9	[2].....44.6
Germany	37.3	13.5%	[7].....11.0	[10].....15.1
Japan	26.8	9.7%	[21].....3.6	[38].....2.1
United Kingdom	19.8	7.2%	[6].....13.7	[7].....18.5

<sup>1</sup> The top four countries in the world according to their international tourism expenditure are listed.

<sup>2</sup> Figures in squared brackets are rank among all countries in the world.

Source: WTO, 1994, pp. 5 - 7, 15, 22 - 24, 104.

**Table 1.4**  
**International Tourism in 1992**

Moreover, the importance of Germany and the United Kingdom as tourism generating countries has been the situation for a number of years rather than just a recent phenomenon (Devas, 1991, p. 3-5; Jim Fitzpatrick and Associates, 1989, pp. 10 - 20; Middleton, 1988; NEDC, 1992, p. 78; Ritchie et al., 1992, pp. 4 - 7; Tourism Society, 1990b). In 1985, for example, the USA, Germany and the UK together generated one third of all international tourism receipts in the world (Medlik, 1988, p. 8), and the British Tourist Authority (BTA) believed in 1988 that (West) Germany acted

“... as the most important generator of tourists within Europe and arguably in the World, and this trend looks likely to continue“ (BTA Germany, 1987/88, p. 4).



Further figures, which highlight the important role of Britain and Germany as outgoing travel and tourism generating regions, as well as of Europe as a whole, were published by the International Air Transport Association (IATA). 32.7% of all IATA scheduled international passenger traffic took place in Europe in 1993 alone, not including international traffic between Europe and other continents (IATA, 1995), with the United Kingdom ranking second and Germany ranking third among all countries in the world in terms of international passenger traffic (Table 1.5). Moreover, it was estimated that the United Kingdom and Germany would both remain at these high ranks until at least 1998 (Table 1.5).

Rank	Country	Number of Passengers in 1993 (millions)	Country	Estimated Number of Passengers in 1998 (millions)
1	United States	75.0	United States	94.0
2	United Kingdom	57.7	United Kingdom	72.9
3	Germany	39.8	Germany	52.2
4	France	35.5	Japan	47.2
5	Japan	34.9	France	45.3

The top five countries in the world are listed, which together accounted for 76.4% of total world traffic in 1993. Source: IATA, 1994, p. 14.

**Table 1.5**

**Scheduled International Passenger Traffic in 1993 and Estimates for 1998**

Outgoing tourism in Germany and in the United Kingdom, when compared to incoming and domestic tourism, is especially important. In the early 1990's, the value of outgoing tourism exceeded both the values of domestic and incoming tourism in the UK, accounting for £12.5 billion (Table 1.6). The relative importance of outgoing tourism was even higher in Germany, with DM 57.5 billion accounting roughly for the same value as domestic and incoming tourism combined (Table 1.6). (However, this stands in contrast to the number of tourist visits, where domestic visits by far exceed the number of outgoing and incoming visits combined, since they include visits to friends and families (Table 1.6).)

Direction of Tourism	Value of Tourism in Germany (billions) <sup>1</sup>	Value of Tourism in the UK (billions) <sup>2</sup>	Number of Tourist Visits in Germany (millions) <sup>3</sup>	Number of Tourist Visits in the UK (millions) <sup>4</sup>
<b>Domestic</b>	DM 44.9 (US\$ 28.8)	£ 8.2 (US\$ 14.4)	N. A. (about 80)	85.4
<b>Incoming</b>	DM 17.0 (US\$ 10.9)	£ 7.7 (US\$ 13.5)	18.1	18.5
<b>Outgoing</b>	DM 57.5 (US\$ 36.8)	£ 12.5 (US\$ 22.0)	44.0	28.7
<b>National Total</b>	DM 119.4 (US\$ 76.5)	£ 28.4 (US\$ 49.9)	142.0	132.6

Incoming and outgoing figures differ slightly from those in Table 1.4 due to different statistical methods and definitions. Figures stated in Deutsche Mark or Pound Sterling are approximated by US Dollars for reasons of comparison.

Sources:

<sup>1</sup> Domestic: DRV, 1994a (1993 figure); Incoming and outgoing: OECD, 1994, p. 101 (1992 figures).

<sup>2</sup> Domestic and outgoing: TTG, 1995d (1993 figures); Incoming: OECD, 1994, p. 101 (1992 figure).

<sup>3</sup> Total: DRV, 1994a (1993 figure); Incoming: Euromonitor, 1993a, p. 15 (1992 figure); Outgoing: Lettl-Schröder, 1995 (1994 figure).

<sup>4</sup> Domestic and Outgoing: BTA, 1993, pp. 50 - 51, 77 (1992 figures; business visits were excluded); Incoming: Euromonitor, 1993b, p. 16 (1992 figure).

**Table 1.6**  
**Domestic, Incoming and Outgoing Tourism**  
**in Germany and in the United Kingdom in 1992/1993**

Corresponding to these types of tourism, tour operators can be grouped as 'domestic', 'incoming' and 'outgoing', depending on the locations of the majority of the packaged holidays sold and the customer location. Outgoing tour operators are tour operators that gain at least 50% of their turnover from the sale of foreign or international holidays to domestic customers; incoming tour operators sell mainly domestic holidays to international customers; and domestic tour operators sell mainly domestic holidays to domestic customers. The expression 'outgoing tour operator' is equivalent to the expressions 'outbound tour operator' (Jordans, 1990; also Euromonitor, 1993a and 1993b) and 'overseas tour operator' (Jordans, 1990; Key Note Report, 1990, 1991 and 1994b), the latter expression reflecting the geographical location of the British Isles.

Outgoing tour operators have gained a leading position in Britain and Germany compared to incoming and domestic tour operators. While the structure of the package holiday business in Britain and Germany and the dominant position of outgoing tour operators is analysed in more detail in Chapter 4, a further argument is presented here to underline the importance of the outgoing package holiday business, as well as the package holiday business in general. It could be argued that the success of outgoing tour operators in comparison to incoming tour operators stems particularly from the fact that, although incoming tour operators often possess good knowledge of destinations, outgoing tour operators are located closer to customers and thus have better control over distribution and buyer markets. The outgoing package holiday business has also gained financial importance due to mass-tourism, whereas the domestic package holiday business has the disadvantage that customers often visit friends or relatives or have good knowledge of the domestic market themselves, and consequently have less interest in purchasing packaged holidays.

Roughly half of all holidays sold in Germany and in the United Kingdom in 1994 were packaged (Table 1.7), with, for example, almost 43 million packaged holidays having been sold in Germany in 1994 and more than 17 million outgoing packaged holidays having been sold in the United Kingdom in 1994/1995. However, while only 11% of domestic UK holidays were packaged in 1993, 61% of outgoing holidays were sold as packages in 1992 (Table 1.7), thus underlining the importance of the outgoing package holiday business.

Country	Percentage of Packaged Holidays <sup>1</sup>	Number of Packaged Holidays (millions)	Percentage of Packaged Outgoing Holidays <sup>2</sup>	Number of Packaged Outgoing Holidays (millions)	Percentage of Packaged Domestic Holidays <sup>3</sup>
Germany	43% <sup>4</sup>	42.9 <sup>4</sup>	N. A.	N. A.	N. A.
United Kingdom	54% <sup>5</sup>	N. A.	61% <sup>6</sup>	> 17.0 <sup>7</sup>	11% <sup>5</sup>

<sup>1</sup> Compared to independent holidays.

<sup>2</sup> Compared to independent outgoing holidays.

<sup>3</sup> Compared to independent domestic holidays.

Note that few figures with regards to packaged holidays appear to have been published.

Sources:

<sup>4</sup> DRV, 1995; 1994 figures; also Von Lassberg, 1991, pp. 35, 37.

<sup>5</sup> Jolley, 1995b; 1994 figures.

<sup>6</sup> BTA, 1993, p. 76; 1992 figure.

<sup>7</sup> Noakes, 1995c; 1994/1995 figure.

**Table 1.7**

**Percentage of Packaged Holidays in Germany and in the United Kingdom**

UK and German citizens have increasingly sought foreign holidays over the past twenty years (NEDC, 1992, pp. 12 - 13), and it could be argued that the international holiday package has become the principal holiday product at least in the UK (East, 1990, p. 23). In fact, the package holiday has increasingly been thought of more as a commodity than a luxury both in Germany and in the UK (Datzer, 1995a; National Westminster Bank, 1988, p. 2), although in times of recession and job insecurity, it may be postponed (Key Note Report, 1993, p. 113).

Therefore, more attention is given to the outgoing (or foreign) package holiday business than to the incoming and domestic package holiday businesses regarding the empirical survey. However, as became obvious during the conduction of the survey, the results gained have wider implications, not only for the outgoing, but in fact for the whole of the package holiday business. Therefore, while more attention is being given to the outgoing tour operator business specifically regarding the collection of data, the argumentation and hypotheses are broadened to cover not only the outgoing, but indeed the whole package holiday business, as discussed in more detail in

Chapter 4. The term 'tour operator' is also predominantly used in the following, whereas the term 'outgoing tour operator' is only used when a specific reference to the outgoing package holiday business is necessary. This is mainly due to ongoing liberalisation and internationalisation of the package holiday business (Chapter 5 and Chapter 7), which makes it increasingly difficult to exactly distinguish between the outgoing, incoming and domestic package holiday business. In particular the large tour operator groups, which traditionally have been concentrating on the 'mass-market' outgoing holiday markets, have been expanding into the domestic and incoming markets, both nationally as well as internationally, during the most recent years.

## 1.6 New ICTs in the Travel and Tourism Industry and Tour Operator Systems

Business computing, as an academic science, is concerned with the study of information and communication systems, or in short 'information systems', in business and public administration (Wirtschaftsinformatik, 1994, p. 80). An information system (IS) is defined by the Wissenschaftliche Kommission Wirtschaftsinformatik (Academic Commission on Business Computing) of the Verband der Hochschullehrer für Betriebswirtschaft e. V. (Association of University Lecturers of Management Studies) in Germany as a socio-technological system, containing both human as well as technological components (Wirtschaftsinformatik, 1994, p. 80). The technological aspects are referred to as information and communication technologies.

Information and communication technologies (ICTs), or information technologies (ITs), are any type of technology used to store, process and transmit information. New ICTs, which are distinguished from 'old' ICTs such as signalling technologies or the early telegraph, are largely a result of the convergence of the fields of telecommunications and computing, or informatics, to telematics (Emmerson, 1994; Hamelink, 1988, p. 15).

"The word 'telematics' comes from the French *télématique* - a compound of two other words *télécommunication* and *informatique* -, which is ... intended to describe the growing integration between data transmission and data processing and storage" (Ovortrup, 1984, p. 11).

Moreover, new ICTs also include the more recent multimedia technologies, which have primarily resulted from the convergence of telematics technologies with consumer electronics (Dertouzos, 1991; Krüger, 1995).

New ICTs have become highly important to travel and tourism organisations and in particular to tour operators for a number of reasons. Travel and tourism products, especially the key components of transportation, accommodation, catering and entertainment, cannot be 'stored' for long periods of time. This perishability and extremely short product life has a number of consequences. The production of travel

and tourism products has to coincide with, or be shortly followed by, their consumption, which requires co-ordinated activities from the various individuals and organisations involved. In addition, since consumers often have only limited time for their travel or holiday available, the successive production (and coinciding consumption) of individual travel and tourism components has to be co-ordinated as well. Information and communication efforts are therefore necessary to guarantee reliable and adequate co-ordination, and new ICTs are very useful in supporting these efforts.

Furthermore, costs occur for committed resources such as airline seats, hotel beds, tour representatives and their like, which are not consumed or which are not used on a particular day. Since committed but unsold products can be of considerable value, the sale of these can be a crucial financial issue for travel and tourism organisations. New ICTs used for late bookings assist travel and tourism organisations in selling these unsold products by effectively prolonging the time span during which these products can be sold, i.e. the 'shelf-life', thus extending the offer time towards the time of the actual or intended consumption, and, therefore, increasing the likelihood that a buyer is found. However, not only actual costs but also opportunity costs could occur if new ICTs were not used. While some last-minute customer demand is a consequence of the prolonged selling time of holidays due to optimistic customers hoping 'to snap up a bargain', last-minute customer demand also exists due to unforeseen circumstances or ad-hoc decisions by customers which make a re-arrangement of holiday or travel plans necessary. Without the use of rapid new ICTs, parts of this last-minute demand could not be met, thus creating opportunity costs for travel and tourism organisations.

While the above reasons emphasise the importance of new ICTs for basically all travel and tourism organisations, there are a number of reasons that indicate the importance of new ICTs specifically for tour operators. Regarding the pre-holiday period, holiday packages have to be seen as abstract products, basically information packages, which specify the individual components of a holiday such as

transportation, accommodation, catering and entertainment. New ICTs as media to store, process and transmit this information are, therefore, useful tools for tour operators to support their business activities. In addition, since destination agencies and many of the tour operators' suppliers such as hotel operators are often located at distant locations, new ICTs are useful for communication between all parties involved.

Moreover, holiday packages, which consist of multiple and often a large variety of components provided by the travel and tourism principals, can be complex and heterogeneous. Indeed, fragmentation is one of the crucial properties of tour operators' and indeed of most travel and tourism products (NEDC, 1992, p. 19), and new ICTs are useful in dealing with this problem. The fragmentation is likely to increase even further in the future, as discussed in subsequent chapters, with an increasingly wide range of travel and tourism products available, combined with seasonality, greater customer awareness and more individual customer demand. Therefore, the information content of travel and tourism products and the need for information and communication exchange between travel and tourism organisations and customers will increase accordingly, making it necessary to establish and enhance information and communication channels, thus further augmenting the importance of new ICTs to the travel and tourism industry and to tour operators.

A functional perspective rather than a technical one is adopted here for the study of ICT-based systems. The technical aspects of the various systems used by travel and tourism organisations have been changing rapidly over the last few years, and since this trend is likely to continue, studying the technologies rather than the functions of the systems would lead to short-term results. Instead, studying the functions of the systems, which are likely to remain unchanged for a longer period of time, leads to more strategic and long-term results.

Tour operator systems can be conceptualised as ICT-based systems, ranging from personal computer (PC) based to mainframe solutions and from stand-alone to



networked systems, which are specifically designed to support the operations of tour operators. All tour operator systems fulfil internal functions, such as data storing, costing, pricing, accounting and providing management information, and, increasingly, also external functions, such as handling information and communication exchange with suppliers and customers, and collecting market research information.

Tour operator systems exist either as bespoke systems, developed individually for a single tour operator or a group of tour operators, for example all those systems listed in Table 1.1, or as standard, or 'off-the-shelf', systems, such as those listed in the industry reports Richer (1994 and 1996a), outlining the systems available on the British market, and Touristik Report Extra (1994/95), outlining the standard systems offered in Germany. According to these industry reports as well as the information gained from the interviews, it can be estimated that the large majority of tour operators in Britain and Germany with in excess of 30,000 customers (i.e. PAX) per year had adopted at least one tour operator system in the mid 1990's. With few exceptions, for example Klingenstein & Partner Studienreisen and, until 1992, Ikarus Tours GmbH (Table 5.11), only some small-sized tour operators, such as members of the Bundesverband Mittelständischer Reiseunternehmen e. V. (asr) in Germany, used non-tour operator specific systems, typically being PC-based and using general software such as word-processing or spreadsheet programs.

## **Chapter 2. Related Literature**

### **2.1 Introduction**

Technology, and new information and communication technologies (ICTs) in particular, fulfil various roles in tourism (Stipanuk, 1993). Technology can act as a creator, protector, enhancer, focal point and/or destroyer of the tourism experience; and technology can be a tool of the trade (also Buhalis, 1996b). The focus of this study lies solely on the role of new ICTs as a tool of the travel and tourism industry in the production and distribution of holidays.

Related literature is reviewed in this chapter to outline the existing state of research in this area, to position the research in the literature as well as to add to and conclude the argument commenced in Chapter 1 about the relevance of this research. This chapter is divided into two main sections. In the first part (Section 2.2), literature on the travel and tourism industry is reviewed, looking initially at case studies and then at more general discussions of the role of new ICTs in the industry. It is concluded that little research appears to have been conducted with regards to the use of new ICTs by tour operators. Therefore, more general literature is reviewed in the second part of this chapter (Sections 2.3 to 2.5), especially from the areas of industrial organisation and new institutional economics, which present theories and methodologies for the study of inter-organisational arrangements, sectors and industries. Particular attention is given to Klein's (1995a and 1996) research framework, which provides a comprehensive and detailed methodology for the study of inter-organisational arrangements.

Inter-organisational systems, electronic trading networks and electronic market systems are of central relevance to the purchasing and distribution activities of tour operators (Chapter 6). Therefore, an analysis of these systems is crucial to this study, making a characterisation of them necessary.

'Inter-organisational systems' (IOSs) are new ICT-based systems that are used by at least two organisations for the purposes of information and communication exchange (Cash and Konsynski, 1985, pp. 134, 137; also Alt and Cathomen, 1995, p. 34; Fornengo, 1988, p. 115; Suomi, 1992). The terms 'electronic trading network' (ETN) (Mansell and Jenkins, 1991, 1992 and 1993), or 'electronic trading platform', denote those IOSs which are mainly used for the purposes of trading products, i.e. goods and services. 'Electronic market systems' and 'electronic hierarchy systems' are distinct sub-groups of electronic trading networks.

An electronic market (EM) is a market where market related information is communicated and market related interaction between the market participants is handled using information and communication technologies (Bakos, 1991; Benjamin, 1989; Benjamin et al., 1990; Himberger et al., 1991; Malone et al., 1987 and 1989; Malone and Rockart, 1991; Schmid, 1993c; Schmid et al., 1991; Zbornik, 1993). Similarly, an electronic hierarchy (EH) is a hierarchy where information is communicated and interaction between the adjacent steps of the hierarchy is handled through information and communication technologies (Malone et al., 1987; Benjamin et al., 1990). It should be noted that whenever the term 'electronic' is employed in a systems context, new information and communication technologies are referred to.

An electronic market is a market where market activities such as selling and buying take place electronically, for example, when electronic marketing and electronic purchasing replace the non-electronic functions (Butler Cox Foundation, 1990, pp. 1 - 4). Hence, an electronic market is any situation or condition when supply and demand meet electronically, regulated by the 'price mechanism' (Bössmann, 1983, p. 106; Neale, 1957, p. 359). Accordingly, an electronic hierarchy is any situation or condition when supply and demand meet electronically, regulated by the 'control mechanism' (Bössmann, 1983, p. 106). While electronic markets and electronic hierarchies are abstract concepts, electronic market systems and electronic hierarchy systems are their corresponding physical forms or realisations. 'Electronic market

systems' (EMSs) (Klein and Langenohl, 1994, p. 263), also referred to as 'electronic marketplaces' (Bakos, 1991, in particular p. 296; Ritz, 1991c, p. 9; Schmid, 1993a, p. 1) and 'electronic retail markets' (Schmid, 1995), and 'electronic hierarchy systems' (EHSs) are ICT-based equivalents of physical market places and hierarchies, with electronic markets and electronic hierarchies being the respective underlying economic mechanisms, or indeed institutions (Section 2.3).

## **2.2 Literature on New ICTs in the Travel and Tourism Industry**

The literature on new ICTs, or more specifically IOSs, in the travel and tourism industry can broadly be grouped into case studies and descriptions of systems (Section 2.2.1) and into the more general literature on economic, social and other effects of new ICTs (Section 2.2.2).

### **2.2.1 Case Studies of New ICT Use in the Travel and Tourism Industry**

The literature presents a large number of cases studies on IOSs and electronic trading platforms in the travel and tourism industry. However, it appears that no extensive classification or overview of the various technologies and systems has previously been published and, thus, a classification is created here by typifying the main systems used in the travel and tourism industry. This categorisation is applied while reviewing the literature concerning IOSs in the British and German and, to some extent, European and global travel and tourism industry. Several of the systems presented are, or are becoming, important to the tour operator business in Britain and Germany, as discussed in later chapters (especially Chapter 6). Hence, outlining these systems here provides a basis for understanding the discussions in the following chapters on the various systems which tour operators use for purchasing / distributing activities and/or to which tour operator systems are connected. The main

aim of this review, however, is to identify the obvious lack of case study literature on tour operator systems, thus justifying the empirical focus of this study.

IOSs in the travel and tourism industry are information, communication, reservation and/or booking systems. (However, in the literature, the term ‘reservation system’ is typically used interchangeably with the term ‘reservation and booking system’, in particular in the context of ‘computerised reservation systems’ (CRSs).) The proposed classification of IOSs and more general electronic trading platforms in the travel and tourism industry is presented in Table 2.1. IOSs are distinguished according to:

- geographic scope of the IOSs
- whether IOSs were used for:
  1. general products including (but not solely) for travel and tourism
  2. a wide range of travel and tourism products
  3. specific types of travel and tourism products
- the number of suppliers linked to the IOSs, ranging from many- to single-supplier (including corporate) IOSs.

The systems of greatest relevance to this study are systems from the grey-shaded areas in Table 2.1 (see especially Chapter 6).

Geographic Scope	General Electronic Trading Platforms	Travel and Tourism IOSs for Many Types of Products	Travel and Tourism IOSs for Specific Types of Products	Single-Supplier and/or Corporate Travel and Tourism IOSs
<b>Global</b>	<ul style="list-style-type: none"> <li>• CompuServe</li> <li>• Internet</li> </ul>	<ul style="list-style-type: none"> <li>• Amadeus</li> <li>• Galileo International</li> <li>• SABRE</li> <li>• SITA</li> <li>• Worldspan</li> </ul>	CONFIRM RS, SAHARA, TravelWeb, and Utell International for accommodation bookings	global groups, e.g. scheduled airlines, hotel chains, car hire companies, business travel agents
<b>Inter-national</b>	<ul style="list-style-type: none"> <li>• ESSAI</li> <li>• interactive television channel systems</li> </ul>	<ul style="list-style-type: none"> <li>• Abacus</li> <li>• Apollo</li> <li>• EuroSoft</li> <li>• System One</li> <li>• TIM European project</li> </ul>	UNICORN for ferry bookings	international groups, e.g. airlines, hotel chains, tour operators, ferry operators
<b>National</b>	<ul style="list-style-type: none"> <li>• Datex-J / T-Online</li> <li>• Minitel</li> <li>• New Prestel</li> </ul>	<ul style="list-style-type: none"> <li>• CitySoft</li> <li>• Fastrak</li> <li>• GermanSoft</li> <li>• Istel</li> <li>• Robin / Merlin</li> <li>• START</li> <li>• StiNET</li> </ul>	MEHR for accommodation bookings; TicketSoft for ticket bookings	national groups, e.g. hotel chains, tour operators, travel agent chains
<b>Regional (and Local)</b>	<ul style="list-style-type: none"> <li>• Bodensee Shopping Mall</li> </ul>	<ul style="list-style-type: none"> <li>• TIM Austrian project</li> <li>• TIS</li> </ul>	Berliner Bettenbörse for accommodation bookings	regional groups, e.g. small tour operators and travel agents

The three middle columns refer to IOSs with many suppliers. Most of the examples listed in the column 'General Electronic Trading Platforms' are not IOSs in the strictest sense, but rather underlying technological platforms for IOSs. For reasons of simplicity, these are, however, included here in the overall classification of IOSs.

**Table 2.1**  
**Proposed Classification and Corresponding Examples of IOSs**  
**in the Travel and Tourism Industry**

The IOSs, which are listed by name in Table 2.1, are described in more detail in the following sections:

- The predominantly consumer trading platforms CompuServe, Datex-J / T-Online, Internet, TravelWeb and interactive television channel systems are outlined in Appendix 1.
- The global IOSs Amadeus (including System One), Galileo International (including Apollo), SABRE, SITA and Worldspan (including Abacus) are delineated in Appendix 2 (and Section 2.5.3).
- The national British and German reservation systems Fastrak, Istel, Robin / Merlin, START and StiNET are described in Appendix 3.
- All remaining systems together with a number of corporate IOSs are described in Appendix 4. Further (mainly domestic and incoming) travel and tourism IOSs are also presented in Appendix 4. With the exception of Toursol, these systems listed focused initially on transportation, accommodation, weather, cultural, entertainment and similar information. Tour operator information has only more recently been incorporated into some of these systems.

Foremost, literature on new ICTs in travel and tourism centres on ‘computerised reservation systems’ (CRSs), or ‘computer reservation systems’, especially the four ‘global distribution systems’ (GDSs) Amadeus, Galileo International, SABRE and Worldspan. However, the GDSs

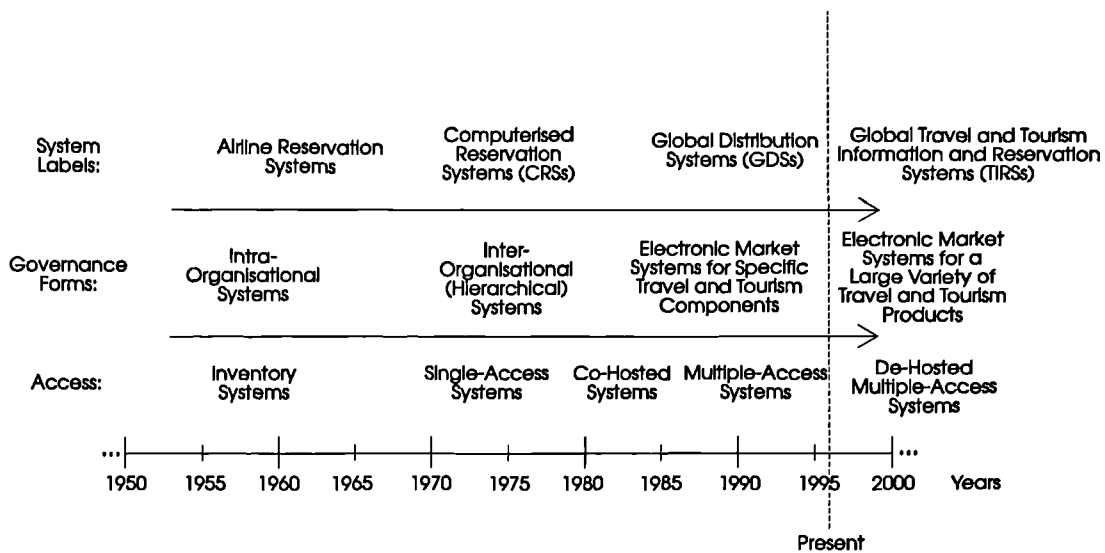
“... have numerous limitations, not only for long haul travel but also for travel in general. They were designed more for business travel than leisure travel ..., and tend to favor larger travel suppliers who can either afford the substantial fees to be listed on the CRS or have their own reservation system that can be interfaced with the CRS. Smaller travel suppliers which represent the majority of the travel industry are not well represented on the CRS“ (Sheldon, 1993b, p. 32).

Therefore, most GDS case study literature investigates the role and importance of the GDSs to the business and independent (i.e. unpackaged) holiday sectors, not the package holiday sector.

In fact, as is shown in the analysis of the empirical survey, tour operators in Britain and Germany have used few external systems in the past, with the exception of videotex (viewdata) systems. Therefore, it appears that while extensive attention has been given in the academic literature to the development, usage and impact of reservation systems by scheduled airlines, (business and leisure) travel agents and, more recently, international hotel chains, car rental companies and other travel and tourism principals which mainly operate in the business and independent holiday sectors, the package holiday business and the tour operator business in particular have been explored to a lesser extent. Some case studies can be found on individual (internal) tour operator systems, especially in trade publications, which are incorporated into the analysis (Chapter 6). Generally, however, there is an obvious lack of (academic) literature on the use of new ICTs, tour operator systems and IOSs in the tour operator business.

While the GDSs have been of little importance to the package holiday business in the past, they are increasingly becoming so (Archdale, 1993 and 1995; Kärcher, 1995b; Scales, 1994; also Chapter 6). Indeed, the author elsewhere (Kärcher, 1995b) argues that the GDSs are becoming global travel and tourism information and reservation systems for the entire travel and tourism industry (Figure 2.1).





(Source: Kärcher, 1995b. The different attributes of the four GDSs are shown over time.)

**Figure 2.1**  
The Evolutionary Development of GDSs

Since the GDSs are becoming important to the package holiday business, they are outlined here in greater detail so as to enable a better understanding of the analysis presented in later chapters. The GDSs, and SABRE in particular, are discussed in Section 2.5.3, using Klein's research framework, which thus also enables a better understanding of the way Klein's framework can be applied.

## 2.2.2 General Studies of New ICT Use in the Travel and Tourism Industry

“... There is little research on the tourism industry and its operation which is analytical in emphasis, providing explanations of the processes which occur, their causes and effects. The interrelationships between the industry, the consumer and the destination have been neglected, largely because modelling has been insufficiently integrated. The dynamics of tourism supply ... have also received little attention ... Innovations in information technology have been reported in the trade press but academic researchers have only recently considered their implications for the organisation and development of the industry“ (Sinclair and Stabler, 1991, p. 4).

During the more recent years, however, an increasing number of studies have been published investigating the adoption and diffusion of new ICTs in the travel and tourism industry.

Some general studies highlight the importance of new ICTs to the travel and tourism industry (Bennett, 1993; Bennett and Radburn, 1991; Ribbers, 1994; Sahlberg, 1993; Schertler, 1994c; Tuach, 1990; Vlitos Rowe, 1995; Von Bornstaedt, 1992). Therefore, it is argued that ongoing technological changes demand that travel and tourism companies change, adapt and seize new opportunities (Champness, 1995; Dendle, 1995; Fischer, 1996a and 1996b; Leschinsky, 1996; Schertler, 1994a and 1994d; Thorne, 1995; Wootliff, 1996). The general solution suggested is ‘business process re-engineering’ (BPR) and its inter-organisational forms of ‘inter-organisational business process re-engineering’ (ioBPR) and ‘business network re-design’ (BNR); terms referring to the general redesign, or re-invention, of business processes.

A key topic in the travel and tourism literature is the emergence of electronic market systems (EMSs) (Himberger and Schmid, 1991; Maier and Röckelein, 1995; Merz et al., 1995; Schmid, 1993a, pp. 13 - 20, 1993b, pp. 470 - 472, 1994a and 1994b). More specifically, developments such as the conversion of CRSs to global EMSs (Ernst and Walpuski, 1994a and 1994b; Feldman, 1992; Frary, 1996), the impacts of the GDSs on the scheduled air travel sector (Barth, 1990; Copeland, 1991; Doll, 1989), the impacts of the GDSs and hotel reservation systems on the international

accommodation sector (Lindsay, 1992), the establishment of EMSs in specific sectors, for example the air-cargo sector (Brütsch, 1993; Christiaanse, 1995) and the rail-cargo sector (Marti, 1993), and the use and consequences of the Internet (Lanfranco, 1996) are investigated.

In particular, it is argued that the emerging EMSs and new technologies, such as automated ticket and boarding passes (ATB2) (Jolley, 1995a), are threatening travel agents with disintermediation in the holiday distribution system (Blackwood, 1994; Boyce, 1993; Classe, 1996; Cohen, 1994; Creak, 1994; Economist, 1995f; Edwards, 1993, p. 18; Hill, 1994; Ritz, 1992; Rohte, 1994; Schiller and Zellner, 1994, p. 65; Taylor, 1995; Vaughan, 1995). Some authors propose that travel agents can respond to this threat by 'adding value' to holiday products, especially by providing a personal service, giving advice and support, supplying expertise and (specialist) product knowledge, selling complex products and giving reassurance (Beck, 1996; Davies, 1994; Färber, 1993; Harding, 1995; Hung, 1996; Richer, 1995a; Terret, 1995). Effectively, travel agents should become 'travel consultants' or 'information brokers', indeed information logistics companies (Klein, 1993). Similarly, tour operators are threatened with disintermediation in the holiday distribution system (Kärcher, 1995a; Kärcher and Williams, 1994; Rohte, 1994).

The main hypothesis stated and discussed here is that major (European) tour operator groups have been realising these threats and have been responding to them by implementing new co-ordination strategies and especially new ICT-based system strategies to counter and reduce the threats. In contrast to many other publications, this study investigates 'concrete' responses to these various threats, rather than only investigating the threats and theorising about 'potential' responses. Moreover, extensive case study information is provided, supporting both the main hypothesis as well as giving detailed information on the adoption and diffusion of new ICTs in the package holiday business. Few studies seem to have been conducted in the past investigating an entire travel and tourism sector, such as the study of the travel agent

sector by Bennett (1990). This, therefore, justifies both the theoretical focus as well as the methodological approach of this research.

### 2.3 Institutions and Organisations

One of the most fundamental constituents of the theory presented is the characterisation of an organisation in contractual, or institutional, terms and it is, therefore, necessary to define both institutions and organisations. At any given point of time, an economy can be seen as a network of individuals and organisations with relationships between them. Underlying these relationships are formal and informal values, mechanisms or rules, or, in other words, institutions. In fact,

“... the human economy is an instituted process“ (Polanyi, 1957, p. 250).

“Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction“ (North, 1990, p. 3).

Institutions are created by individuals perceiving reality, transmitting this perception to one another, and, at some time afterwards, taking this perception for granted.

“Reality, while socially constructed, is ‘experienced as an intersubjective world known-or-knowable-in-common-with others,’ which exists historically prior to the actors ... To arrive at shared definitions of reality, individual actors transmit an exterior and objective reality; while at the same time this reality, through its qualities of exteriority and objectivity, defines what is real for these same actors. ... Each actor fundamentally perceives and describes social reality by enacting it and, in this way, transmits it to the other actors in the social system ... Hence, institutionalization is both a process and a property variable. It is the process by which individual actors transmit what is socially defined as real and, at the same time, at any point in the process the meaning of an act can be defined as more or less a taken-for-granted part of this social reality. Institutionalized acts, then must be perceived as both objective and exterior. Acts are objective when they are potentially repeatable by other actors without changing the common understanding of the act, while acts are exterior when subjective understanding of acts is reconstructed as intersubjective understanding so that the acts are seen as part of the external world (...)“ (Zucker, 1977, pp. 727 - 728).

As a consequence of their existence, institutions, by providing a structure to everyday life, reduce uncertainty and guide human interaction. Institutions include any form of constraint that human beings devise to shape human interaction and, thus, define and

limit the set of choices for individuals by providing a framework within which human interaction takes place (North, 1990, pp. 3 - 4; also 1989, 1991a, 1991b and 1992).

North defines organisations as

“... groups of individuals bound by some common purpose to achieve objectives“ (North, 1990, p. 5).

These objectives can be formal (explicit or written) or informal (implicit or unwritten) and can be interpreted in a broad sense as agreements, contracts or institutions. Thus, organisations can be characterised as groups of (at least two) individuals bound by formal or informal agreements, contracts or even bonds, which have been established by nature, voluntarily or compulsorily, and which can or cannot be terminated by an individual. Different organisational forms can be characterised according to the nature of the agreements, contracts or objectives, for example a company or firm according to its legal boundaries or commercial goals, a sector or industry according to its type of products (Nightingale, 1978), a state according to its constitution, and a family according to its natural bonds. Using a sports analogy (North, 1990, in particular pp. 4 - 5) and seeing life as a game, individuals are the players, organisations the teams and institutions the rules of the game.

Commercial organisations (in particular firms), sectors and industries, constitute the objects of major interest in the conducted analysis and are therefore characterised more specifically. A firm is seen as a nexus of contracts or treaties (Aoki et al., 1990). These contracts, whether formal or informal, are internal or external depending on the boundaries of a firm (Reve, 1990). The ‘legal’ boundaries of a firm are determined through its ownership structure. It can be argued, however, that in some industries the ‘economic’ or ‘commercial’ boundaries of firms are becoming increasingly blurred, for example through ‘common knowledge’, and legally-external relationships between firms could be interpreted instead as internal contracts

(Antonelli, 1988b; Taylor and Williams, 1991). While an exact delineation of a firm's boundaries is not of concern to the analysis, in the proposed theoretical framework (Chapter 3) a distinction is nevertheless made between ownership relationships and co-operative relationships, i.e. relationships between firms which are not linked through ownership but which adjust their trading behaviour according to joint decisions including the creation of common knowledge (Borman, 1994 and 1995; Borman et al., 1992).

Complex forms of organisations consist of multiple sub-organisations, each with their own set of objectives, and it is therefore useful to analyse organisations at various levels of abstraction. Relative to the organisation under investigation, 'higher-level organisations' and their constituent 'lower-level organisations' can be distinguished. (Clarke (1993) uses the term 'supra-organisation' when referring, effectively, to a 'higher-level organisation'.) For example, from the perspective of a firm, a sector and an industry can be interpreted as higher-level organisations (also Reddy and Rao, 1990), consisting of a group of lower-level organisations such as firms with the common objectives to produce, distribute and consume certain types of goods or services.

Accordingly, the terms 'intra-organisational' and 'inter-organisational' have also to be seen in relation to the organisation studied. For example, from the perspective of a tour operator, its relationships with other departments or subsidiaries of its tour operator group are inter-organisational, as are its relationships with companies outside the tour operator group. This 'relative theory of organisations' is a fundamental part of the proposed theoretical framework (Chapter 3), though it is simplified in the framework by distinguishing five main levels of analysis.

## 2.4 The Study of New ICTs and Inter-Organisational Relationships

“Economic activity is increasingly dominated by the production, distribution and consumption of information, both in its own right and as an adjunct to physical goods and services“ (Monk, 1992, p. 36).

Hence, an industry with a multi-organisational and transaction and communication intensive environment with a high information content, such as the travel and tourism industry, lends itself to the adoption of new ICTs (Dordick et al., 1981; Dordick and Wang, 1993). It has been argued that new ICTs enable organisations to position themselves in an industry and gain competitive advantage (Keen, 1986 and 1991) and that new ICTs can change company and industry structure (Barrett and Konsynski, 1982; Cash and Konsynski, 1985; Hootman, 1972; Kaufman, 1966; Porter and Millar, 1985). Christiaanse and Derksen (1993), for example, show how information technology, and electronic integration in particular, can shift the power between suppliers and buyers such as from airlines to travel agents.

A number of theories and research frameworks have been suggested to study the consequences and impacts of new ICTs on inter-organisational relationships in a sector or industry.

“To appreciate the complex and subtle chain of organizational and productive changes induced by the introduction of New Information Technology a new industrial organization approach such as the one developed by the merging of industrial economics and transaction cost economics seems to be the most suitable“ (Antonelli, 1988a, p. 2).

Therefore, key theories and research methodologies from the areas of industrial organisation and new institutional economics are reviewed in the following.

Malone et al. (1987 and 1989) and Malone and Rockart (1991) emphasise the importance of electronic markets, which are emerging in various industries worldwide (for example Alt and Zbornik, 1992; Conrath, 1993a and 1993b; Hautz, 1991; Humberger and Zbornik, 1991; Ritz, 1991b; Schmid and Zbornik, 1992). They hypothesise, in fact, that

“... information technology will lead to an overall shift toward proportionately more use of markets - rather than hierarchies - to coordinate economic activity“ (Malone et al., 1987, p. 484).

This hypothesis is based on the argument that electronic markets have a number of advantages over electronic hierarchies (also Himberger et al., 1991, p. 6; Ritz, 1993), especially in having lower transaction costs (also Wigand, 1995).

Clemons and Reddi (1993 and 1994; also Clemons and Row, 1992), in contrast, argue that, as a consequence of the adoption and diffusion of new ICTs, firms will increasingly engage in co-operative activities. They call this the ‘move to the middle hypothesis’; a move away from both hierarchies and markets.

“This hypothesis states that the lower cost and better monitoring capability of IT and the lower relationship specificity of IT investments will cause firms to engage in a greater degree of outsourcing; moreover, this increased outsourcing will be from a reduced set of suppliers with whom the firm has long-term cooperative relationships“ (Clemons and Reddi, 1993, p. 809).

Holland and Lockett (1993 and 1994) propose a theory of ‘mixed-mode operation’ of IOSs. They hypothesise that firms may operate a ‘mixed mode’ of governance forms at any particular time, rather than only ‘pure’ governance forms. They suggest a research framework consisting of the four elements ‘co-ordination strategy’, ‘market complexity’, ‘network structure’ and ‘asset specificity’ (Holland and Lockett, 1993, pp. 536 - 538). Each of these elements interacts with each of the other elements. This research framework and the ‘mixed-mode hypothesis’ form part of Klein’s research framework, which is discussed below.

Holland and Lockett moreover argue that whatever governance form (market, hierarchy or network) is chosen for an inter-organisational arrangement, new ICTs can make this arrangement more efficient and effective (Holland and Lockett, 1994, p. 409). Conversely, from a negative or pessimistic point of view, each governance form can be, to some extent, ‘abused’ by the organisation(s) implementing or operating it. Reimers (1995), for example, discusses the imperfect establishment of electronic markets; and Webster (1995) highlights the potential control of electronic



distribution media by strong players, leading to an imbalance of power within the trading relationships.

Reekers and Smithson (1995a; also 1994b and 1995b) present a theoretical framework based on transaction cost theory, resource dependence theory and the network approach. It consists of the five elements 'co-ordination', 'structure', 'dependence', 'efficiency' and 'environment', including interdependencies among these elements. These elements are effectively included in the elements of Klein's framework, as outlined below.

Klein (1995a and 1996, especially pp. 176 - 216) suggests a research framework for the study of inter-organisational relations and IOSs, based on an extensive literature review from industrial organisation, institutional economics, socio-economics, organisation theory, business strategy and resource-based strategy. Klein's framework appears to be the most detailed framework published to-date on the study of industrial inter-organisational arrangements and it is, therefore, discussed in detail in the remainder of this chapter. Core ideas from this framework are incorporated into the theoretical framework proposed for the study of the tour operator business (Chapter 3).

Klein and Williams argue that

“there is an obvious deficit of methodological discussion in the area of IOS research issues“  
(Klein and Williams, 1995, p. 2).

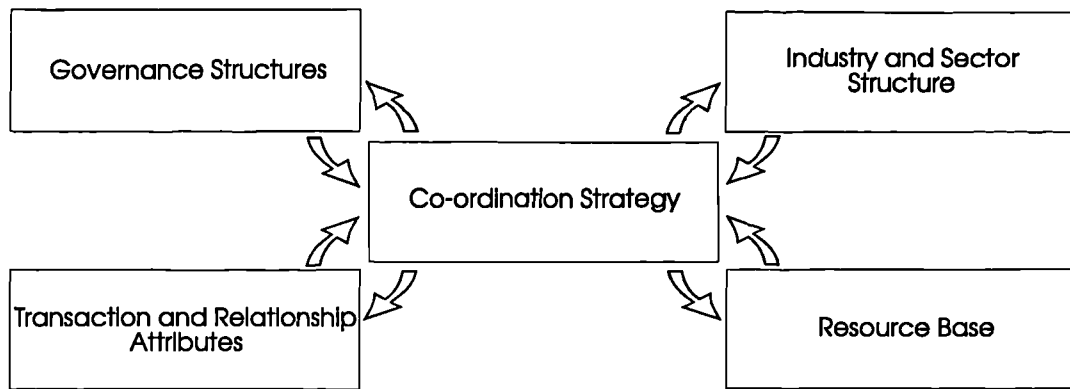
Therefore, the review of the research frameworks in this chapter, the development of the proposed framework (Chapter 3) and the subsequent use of the framework in the empirical survey and analysis contribute to academic research in the area of new ICTs used in inter-organisational arrangements. Hence, this adds to and completes the argumentation of the (theoretical, empirical and methodological) relevance of the research presented in this thesis to academic research.

## **2.5 Klein's Research Framework**

### **2.5.1 The Main Elements of Klein's Single-Layer Framework**

At the core of Klein's research framework is what is termed 'co-ordination strategy' (Klein, 1995a and 1996, pp. 179 - 181). A co-ordination strategy consists of the decisions involved in the co-ordination of the activities of those organisations, which are linked by the inter-organisational relationships under investigation. A co-ordination strategy is part of the overall strategy (Mintzberg, 1987) of a higher-level organisation, which is formed by those lower-level organisations that are involved in the inter-organisational relationships studied. The strategic management decisions of the higher-level organisation usually include decisions about communication procedures, resource allocation and the choice of a governance form, depending on the organisation's overall strategy, its industrial environment or other factors, as shown in the framework. In particular, a co-ordination strategy contains the choice of a communication medium, such as an IOS including its design and implementation features. For four operators, 'system strategies', i.e. the strategies concerning the use of information and communication technological (ICT) systems, are a central part of their co-ordination strategies (Kärcher and Williams, 1994 and 1995).

A co-ordination strategy is shaped by contingencies of four different types: Industry and sector structure, governance forms (or governance structures), transaction and relationship attributes, and resources (or resource base). In turn, a co-ordination strategy influences the other four elements of the framework, either simultaneously or at different times (Figure 2.2).



(Source: Klein, 1995a, p. 14; also 1996, p. 182. 'Market and industry structure' is renamed 'industry and sector structure' without changing its original meaning to avoid misinterpretations of the term 'market', which is used in this thesis as a term for a specific governance form and not for a general business environment.)

**Figure 2.2**

### The Main Elements of Klein's Theoretical Framework

The mutual impacts of an industry and sector structure, governance forms, transaction and relationship attributes and resources on one side, and a co-ordination strategy on the other, are one of Klein's (1996) main hypotheses. Klein applies four case studies of inter-organisational arrangements to empirically support this hypothesis:

- Euroselect for groceries wholesalers (Klein, 1996, pp. 217 - 221; also Klein and Kronen, 1993)
- Rosenbluth International Alliance (RIA) for business travel agents (Klein, 1996, pp. 221 - 224; also Clemons et al., 1992)
- IBOS (Inter Bank On-line System) for payment transfers (Klein, 1996, pp. 224 - 227; also Gapper, 1993)
- CommerceNet for companies trading on the Internet (Klein, 1996, pp. 227 - 230; see also TravelWeb in Appendix 1).

A further example, the computerised reservation system SABRE, is suggested here and described in Section 2.5.3 to support Klein's hypothesis, while explaining the framework in more detail.

The four main elements of Klein's theoretical framework are outlined in the following. For each element, four sets of issues are discussed:

- a) Theories and methodologies for the study of the respective element of the framework
- b) Key factors to study, i.e. main factors to be considered in an investigation and empirical analysis of each of the elements
- c) Examples of impacts on co-ordination strategy, i.e. contingencies of the elements of the framework for a co-ordination strategy
- d) Examples of impacts of co-ordination strategy, i.e. the reciprocal impacts of a co-ordination strategy on the elements of the framework.

a) Examples of theories and methodologies:

In the study of each of the four elements, various theories, methodologies and models can be applied.

- *Industry and sector structure*: Key methodologies for the analysis of industry and sector structure are discussed in detail in Chapter 3. Klein (1996, pp. 188 - 190) suggests that an analysis of the structure of an industry and sector can be conducted in three ways: i) An analysis of an organisation within the studied network, or, using the terminology suggested here, a lower-level organisation within the investigated higher-level organisation; ii) an analysis of the network or higher-level organisation in relationship to other corresponding networks or organisations; and iii) an analysis of the higher-level organisation within its industry. These three perspectives are incorporated in a modified form in the proposed multiple-layer theoretical framework by distinguishing five levels of analysis (Chapter 3).
- *Governance forms*: Literature provides an extensive discussion of governance forms (Boisot, 1986; Gebauer, 1995; Johannisson, 1987; Ouchi, 1980; Reddy and Rao, 1990; Richardson, 1972; Stiglitz, 1989; for overviews see Thompson et al., 1991; Zbornik, 1996). In particular, the three main forms of markets, hierarchies and networks (co-operations) are characterised in detail (Antonelli, 1992; Powell,

1990; Thorelli, 1986; Williamson, 1975, 1985 and 1991), including their advantages and disadvantages when interpreted from a transaction cost perspective.

- *Transaction and relationship attributes*: New institutional economics (Furubotn and Richter, 1993; Prowse, 1993), and especially transaction cost theory (Bössmann, 1981, 1982 and 1983; Ciborra, 1992; Coase, 1937; Joskow, 1991; Joskow and Schmalensee, 1983; North, 1990; Picot, 1982, 1985 and 1987; Williamson, 1975, 1979, 1981 and 1985), including a transaction cost analysis of impacts of new ICTs on governance forms (Ernst, 1990; Hubmann, 1989), provide core theories for the study of transactions and relationships.
- *Resource base*: Resources are key determinants in an organisation's competitive position in an industry or sector (Klein and Kronen, 1995; Rasche and Wolfrum, 1994). They are core competencies of a firm (Hamel, 1994). Resources can be distinguished as own (or core), pooled, shared / licensed and external (including outsourced) resources. Resources are particularly relevant in connection with transaction costs due to their asset specificity (Riordan and Williamson, 1985), which can be classified into site specificity, physical asset specificity, human asset specificity, dedicated assets, and time specificity (Joskow, 1991, p. 126; Malone et al., 1987, p. 486).

b) Key factors to study:

Major factors to study in an analysis are stated in Table 2.2.

Elements of the Framework	Key Factors to Study
<b>Industry and Sector Structure</b>	<ul style="list-style-type: none"> <li>• structure of supply</li> <li>• structure of horizontal competition</li> <li>• structure of demand</li> </ul> <p>For each of these three aspects, key factors to study include:</p> <ul style="list-style-type: none"> <li>• structure or degree of concentration, dominance, competition or co-operation among the various companies as well as their dynamics</li> <li>• type of products, including their complexity of description, standardisation, uniqueness, volatility, dynamics, uncertainty or risks, and modularisation or segmentation</li> <li>• structure of prices, including their transparency, volatility, dynamics and uncertainty</li> </ul>
<b>Governance Forms</b>	<ul style="list-style-type: none"> <li>• dominant governance forms and other relevant governance aspects of industries, sectors and companies</li> <li>• aspects of enforcement, regulation or control, such as harmonisation or standardisation of trade procedures, licensing and regulation</li> </ul>
<b>Transaction and Relationship Attributes</b>	<ul style="list-style-type: none"> <li>• frequency, asset specificity, centrality, integration and uncertainty or complexity of transactions</li> <li>• switching costs, search costs (acquiring information), negotiating costs (bargaining and contracting) and monitoring costs (policing and enforcing)</li> <li>• dependency versus autonomy, opportunism versus trust, neutrality, defection risk, standardisation of contracts, personal relationships and information complexity</li> </ul>
<b>Resource Base</b>	<ul style="list-style-type: none"> <li>• physical (or tangible) resources such as machinery and systems</li> <li>• non-physical (or intangible) resources such as human knowledge and skills, decision-making procedures and harmonisation of routines</li> <li>• development and maintenance of resources such as workforce training</li> </ul>

**Table 2.2**

Examples of Key Factors to Study for Each of the Four Main Elements

It is argued here that Klein's research framework should be seen in two ways. On the one hand, the framework acts like a 'tool box', in which various theories, methodologies and models can be stored like 'tools' (see points (a) and (b) above). Some of these theories may even be contradictory. From there, they can be selected according to their relevance and usefulness depending on the task being considered. On the other hand, Klein's framework is a 'tool' in itself, enabling the researcher to structure and organise complex information (see points (c) and (d) below).

c) Examples illustrating impacts of each of the four main elements on the co-ordination strategy:

- *Industry and sector structure*: Contingencies of industry and sector structure (such as increasing size of competitors or development of new products) can lead to changes in a co-ordination strategy such as decisions to: i) integrate vertically or horizontally through take-overs, acquisitions or mergers; ii) reduce a firm's size through sales or de-mergers; iii) co-operate through strategic alliances, networks or other co-operative forms; or iv) concentrate on certain customer segments. Correspondingly, management decisions about the initiation and design of inter-organisational arrangements including the implementation or modification of IOSs have to be made to adjust to these new inter-organisational structures.
- *Governance forms*: The co-ordination strategy of an organisation and in particular the organisation's own governance form can be shaped by dominant organisation-external governance forms. For example, a dynamic and unstable market-environment can lead to an organisation adopting a flexible profit-centre based structure to be able to adapt quickly to changing environments, or the organisation can deliberately implement a hierarchical structure to reduce complexity and induce stability. An IOS can be chosen to correspond to an organisation's governance form so as to support its communication structure.
- *Transaction and relationship attributes*: High transaction costs such as inventory costs can lead to an organisation implementing an IOS (Ebers, 1994), for example as part of materials requirement planning (MRP) or just-in-time production (JIT), and thus influence a co-ordination strategy.

- *Resource base*: Resources can impact on a co-ordination strategy by, for example, determining the design and implementation of IOSs, such as through a limitation of capital, time and human labour available.

d) Examples illustrating impacts of the co-ordination strategy on each of the four main elements:

- *Industry and sector structure*: The co-ordination strategy of an organisation can impact on an industry and sector structure. For example, the decision of an organisation to integrate, to introduce new products or to implement an IOS to connect with its suppliers or customers can lead to changes in an industry and sector structure by forcing competitors to respond to these decisions.
- *Governance forms*: An organisation's co-ordination strategy can impact and influence other governance forms. For example, a successful governance structure can be copied by the organisation's competitors or be imposed by the organisation on its trading partners (Webster, 1995).
- *Transaction and relationship attributes*: A co-ordination strategy can impact on transaction and relationship attributes. Holland and Lockett (1994), for example, argue that IOSs have the potential to make governance forms more efficient. An IOS can decrease transaction costs for example by reducing the time-to-market period or asset specificity; or it can increase costs by for example imposing switching costs; and, overall, it can change relationships between the organisations involved in the transactions.
- *Resource base*: IOSs can impact on the resource base of an organisation or its environment. IOSs can be interpreted as an infrastructure to support the flow of information on capital and human resources (Taylor and Williams, 1991). Thus IOSs can deliver access to complementary resources and enable the sharing, exchanging or pooling of these.



## **2.5.2 Discussion and Criticism of Klein's Research Framework**

It could be argued that one of the greatest weaknesses of Klein's research framework is its breadth. Applying all methodologies provided and analyses suggested would lead to an overwhelming amount of information for even a relatively simple inter-organisational arrangement. However, rather than studying all factors involved, the complexity of the investigated inter-organisational arrangement can be reduced by focusing on what appear to be the most crucial and important factors shaping the studied elements, relationships and systems at the relevant moments in time. The theoretical framework, then, is useful in providing methodologies (as a 'tool box') as well as in delivering a guideline (as a 'tool') in identifying and analysing the most influential and dynamic factors.

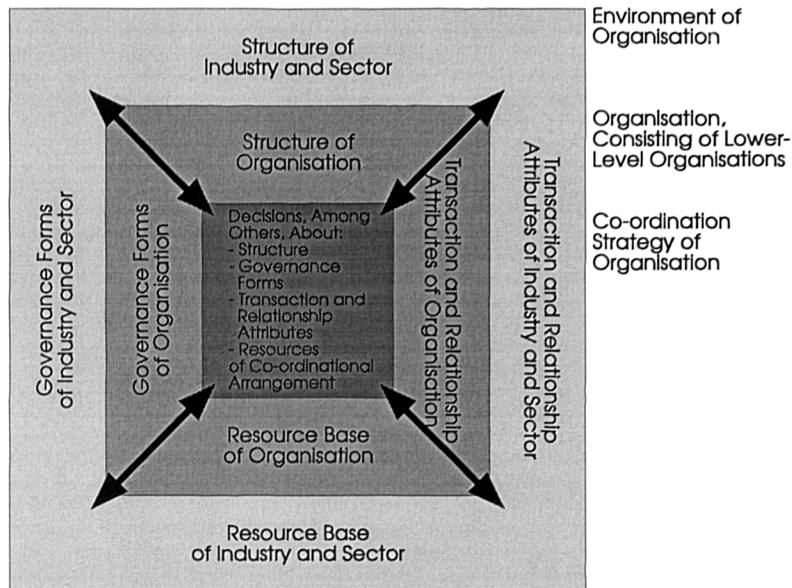
Thus, what initially seems to be a major weakness of the framework, is, in fact, one of its greatest strengths. Instead of applying narrowly defined methodologies, this theoretical framework allows the study and analysis of individual factors, while at the same time taking into consideration the complexity of the relationships investigated. Handy (1993, p. 16), for example, argues that traditional theories on organisations often do not reflect the 'real business world' due to excess reductionism in the number of studied variables. Therefore, the breadth of the framework, allowing the researcher the option of narrowing or widening the study depending on the situation and the aims of the analysis, is indeed one of its major advantages (also Chapter 4).

A drawback of Klein's theoretical framework (1995a and 1996), however, is the lack of practical advice on and procedures for an analysis of inter-organisational relationships and systems. The research presented here aims to take Klein's framework a step further by applying it to the study of the tour operator sectors in Britain and Germany. Yet, the aim of this research is not to provide a step-by-step analysis which can be applied to any sector or industry. Rather one of the theoretical objectives of this study is to adapt Klein's framework to this particular study and

sector. Nevertheless, experience gained from the use of this framework could be of value to the study of other sectors and industries, as discussed in the final Chapter 8.

Klein's research framework is intended for the analysis of a single IOS such as SABRE rather than a complex set of IOSs such as those in a whole sector or industry. Klein also takes a company rather than sector or industry perspective. Although discussing it, Klein does not elaborate on the issue that all four main elements of the framework refer to both the environment of the higher-level organisation, whose co-ordination strategy is under investigation, as well as to the higher-level organisation itself. Hence, the environment of the higher-level organisation needs to be analysed regarding its structure, governance forms, transaction and relationship attributes, and resources; as does the higher-level organisation itself. Therefore, Klein's initially single-layer framework can be redrawn as a double-layer framework as shown in Figure 2.3. (Klein's single-layer research framework and, in fact, this modified double-layer research framework is expanded to a multiple-layer framework in Chapter 3.)

Although the four elements of the framework overlap, Klein (1996) argues that incorporating an analysis of these inter-relationships into the framework will result in additional complexity. For this reason, the inter-relationships of the four elements are not discussed at length. Nevertheless, they are displayed in graphical form in Figure 2.3 by linking the four elements with each other, compared to displaying them as completely separate blocks as in Figure 2.2.



**Figure 2.3**

**Klein's Research Framework Modified**

This modified research framework is applied in the following section to the case of the global distribution system (GDS) SABRE for a number of reasons:

- This application outlines Klein's framework and in particular the relationships and interactions of the four main elements and a co-ordination strategy in more detail, with the aim of facilitating the understanding of the proposed and more complex theoretical framework (Chapter 3) as well as of the subsequent analysis.
- SABRE, as the first CRS in the world, is a relatively well known IOS because a number of publications have characterised and analysed aspects of the system and its development, thus making the case study and its application to Klein's framework easier to understand.
- The case study supports Klein's (1996) hypothesis of the mutual impacts of the four elements of the framework and a co-ordination strategy.
- The case study outlines key developments for all four GDSs Amadeus, Galileo International, SABRE and Worldspan. The four GDSs have gained key importance in some sectors of the travel and tourism industry, and are increasingly

gaining importance to the tour operator business, as discussed in Chapter 6, thus necessitating a presentation of them and a review of the literature on them in this study.

### **2.5.3 Case Study: SABRE**

SABRE was operated by SABRE Travel Information Network (STIN), a subsidiary of AMR Corporation, which also owned American Airlines Inc. (Further historical and ownership information of SABRE, as well as of the other three GDSs, is presented in Appendix 2.) In the terms of the framework, the lower-level organisations in the SABRE case were all those organisations that were connected to SABRE, such as scheduled airlines including American Airlines, car rental companies and travel agents, as well as AMR and STIN as the owner and operator of SABRE. These organisations formed a higher-level organisation with the common aim of exchanging information and conducting trading via SABRE. The co-ordination strategy of this higher-level organisation was the sum of all the strategies of the lower-level organisations which concerned the co-ordination of their activities via SABRE, for example agreed-upon communication standards, technical decisions by STIN, and decisions by the users of SABRE regarding their interconnection to the system.

SABRE's co-ordination strategy was shaped by the structure of the US and global travel and tourism industry, and by the scheduled airline sector in particular, by governance forms in the industry and sector, by transaction and relationship attributes, and by resources. Examples of the impacts of these four main elements of Klein's research framework on SABRE's co-ordination strategy are highlighted under point (a) below. Impacts of SABRE's co-ordination strategy on the four main elements in turn are listed under point (b). As suggested in Section 2.5.2, a distinction is made between elements external to the organisation, i.e. factors that are external to the higher-level organisation SABRE, and elements internal to the

organisation, i.e. factors internal to SABRE. In general, internal factors tend to be more under the control and influence of the organisation, whereas external factors tend to be less controllable.

a) Examples of impacts on SABRE's co-ordination strategy:

a1) Examples of the impact of organisation-internal main elements on co-ordination strategy:

- *Structures*: The internal organisational structure of American Airlines Inc., i.e. the structure of functions and departments and their locations such as airports, aircraft maintenance halls and offices, was originally implemented in SABRE's physical structure as an inventory system.
- *Governance forms*: American Airlines implemented SABRE as an internal, i.e. intra-organisational system, during the 1950's and 1960's (Copeland, 1991, p. 56), thus matching its hierarchical governance structure. (In 1976, SABRE was expanded to an external, i.e. inter-organisational system (Taylor, 1993c), initially being co-hosted (i.e. network-based) and eventually market-based.)
- *Transaction and relationship attributes*: High inventory costs made American Airlines' look for ways of reducing these and resulted in the creation of an inventory system to streamline the distribution of and the control over the sale of airline seats (Lange, 1993, p. 14).
- *Resources*: Max D. Hopper, who joined American Airlines in 1972, shaped SABRE extensively with his competencies and entrepreneurial behaviour (Rifkin, 1992).

a2) Examples of the impact of organisation-external main elements on co-ordination strategy:

- *Structures*: Most of the European national reservation systems, which were installed at the end of the 1970's, such as START in Germany, were multi-access systems in contrast to the single-access systems in the United States including

SABRE (Ellis, 1992). A single-access system displayed the availability of airline seats, their prices and other information only for the airline(s) that owned the particular system; thus travel agents required a separate terminal for every reservation system to which they wanted to be connected. Eventually, in 1978, competitive and US Government pressure made SABRE open-up to other airlines as well, allowing five other carriers including United Western Airlines to display their information on SABRE (Lange, 1993, pp. 36 - 40). During the early 1990's, the demand for user-friendly booking systems made SABRE provide the PC-version Eeasy SABRE on CompuServe.

- *Governance forms:* A market-based travel and tourism industry was eventually reflected in the structure of SABRE as a multiple-access system and, in fact, an electronic market system (Lange, 1993).
- *Transaction and relationship attributes:* Between 1967 and 1975, despite the support of American Airlines and IATA (Table A12.3), several approaches failed to develop an industry-wide 'neutral' booking system. For example an attempt was made to extent the worldwide telecommunications and information network of the Société Internationale de Télécommunications Aéronautiques (SITA) (Table A2.1) to a reservation system. Since no agreement could be made, American Airlines decided to continue developing SABRE alone despite the high development costs (Rifkin, 1992, p. 2). In 1976, shortly after the failed attempts to create an industry-wide system, American Airlines (as well as United Airlines) expanded the previously intra-organisational system to an inter-organisational system by installing terminals in travel agencies and in large organisations with travel departments (Hopper, 1990, p. 122), among others because travel agents were seeking ways to reduce costs and increase productivity when booking airline seats (Lange, 1993, pp. 16 - 17). Delta Air Lines, Eastern Airlines and TWA followed suit during 1981 and 1982. Prior to these changes, approximately only 30% of all airline seat bookings were made through travel agencies in the US, using telephone and telex connections, while the remainder were achieved through the airlines' own sales offices in the centre of towns and at airports. In 1978, this figure had already increased to about 40%, indicating a trend in the increasing

importance of sales through travel agencies for airlines. In 1993, more than 109,000 SABRE terminals were in operation worldwide, having changed the airline-travel agent relationships immensely (Taylor, 1993c).

- *Resources*: After IBM started to develop similar reservation systems for other major airlines like Delta Air Lines and Pan Am in the United States, American Airlines chose to continue developing its system alone, especially to secure resources (and gain asset specificity) (Lange, 1993, p. 12).

b) Examples of impacts of SABRE's co-ordination strategy:

b1) Examples of the impact of co-ordination strategy on organisation-internal main elements:

- *Structures*: Following its success, SABRE was separated from American Airlines' core business into the subsidiary SABRE Travel Information Network (STIN) to enable it to operate more independently (Hopper, 1990; Lange, 1993, pp. 80 - 81), thus changing the company's structure.
- *Governance forms*: Rising costs of operating, maintaining and further developing SABRE made American Airlines seek strategic co-operations, for example with Amadeus in 1991, which however failed (Vowler, 1993).
- *Transaction and relationship attributes*: It can be argued that quantitative transaction cost advantages of SABRE for American Airlines included a reduction in production, inventory, distribution and administration costs, the creation of economies of scale, and an increase in turnover, profit and market share; qualitative transaction cost advantages included a differentiation from competitors, a lock-in of customers, a reduction in customers' power, an opening-up of new business opportunities, a faster reaction to market changes, and an increased operational and managerial efficiency (Echtermeyer, 1993, p. 28; Lange, 1993, p. 22). On the other hand, it can be argued that due to the 'antiquity' of the CRSs and the investments made, the airline consortia were 'trapped in old technology', with the cost of rewriting being prohibitive (Vowler, 1993).

- *Resources*: SABRE provided American Airlines with marketing data about competitors as well as data for revenue management systems (RMSs) and inventory control (Taylor, 1993c). SABRE also gave American Airlines information on customers and competitors (Copeland, 1991, pp. 59 - 60)

b2) Examples of the impact of co-ordination strategy on organisation-external main elements:

- *Structures*: SABRE changed the balance of power in the airline industry by aiding American Airlines in strengthening its competitive position in the industry (Hopper, 1990, p. 122; Truitt et al., 1991). After the first SABRE terminals were installed in Europe in 1985, several major European airlines decided to develop reservation systems as a counter measure (Holloway, 1988, p. 190), leading to the creation of two rival consortia in 1987, namely Amadeus and Galileo, which became operational in 1991 and 1989, respectively.
- *Governance forms*: In 1978, American Airlines made the move from a single-access to a co-hosted system (and was the first US airline to do so). United Airlines followed this move shortly afterwards, co-hosting, amongst others, Delta Air Lines. Moreover, during the late 1980's, these previously single-access or co-hosted systems became multi-access systems, electronic market systems (EMSs) and global distribution systems (GDSs) for a variety of travel and tourism components, such as airline seats, hotel rooms, rental cars, and cruises (Truitt et al., 1991), and, more recently, for holiday packages (Kärcher, 1995a).
- *Transaction and relationship attributes*: Transaction cost reductions have been achieved in the relationship of airlines with travel agents, for example as a result of increased speed and reduced costs of communication, and through improved integrity, accuracy and efficiency (National Westminster Bank, 1988, p. 3). Although the airline reservation systems were originally intended as barriers of entry, they also supported the 1978 airline deregulation phase in the United States (Copeland, 1991, p. 56).
- *Resources*: After American Airlines separated from IBM, IBM produced PARS (programmed airline reservation system) in 1964, which was sold, amongst others,



to Continental Airlines, Delta Air Lines, Eastern Airlines, Northeast Airlines and Western Airlines, and, in 1970 through Eastern Airlines, to Trans World Airlines (TWA) and United Airlines. The basic technology of SABRE thus also became the basis for all other subsequent major reservation systems in the world (also Figure A2.1). In later years, SABRE's national and global increase in technical network resources made competitors increase theirs (Echtermeyer, 1993, pp. 78 - 88; Feldman, 1991; Lange, 1993, pp. 72 - 74), thus leading towards concentration in CRS supply. For example, PARS, DATAS II and Abacus merged in 1990 to form Worldspan; Galileo and Apollo merged in early 1993 to create Galileo International; and System One was incorporated into Amadeus at the end of 1994.

The information presented in this case study on the four GDSs Amadeus, Galileo International, SABRE and Worldspan highlights key developments in the travel and tourism industry, which are increasingly affecting the tour operator business (Chapter 6). Therefore, this case study enables a better understanding of the developments described in later chapters. Moreover, this case study allows a clearer insight into the application of the proposed theoretical framework. In the proposed theoretical framework (Chapter 3), this organisation internal and external analysis of impacts is expanded to a more complex five-level analysis, and the analysis is conducted in three steps:

- A study of impacts on co-ordination strategies of tour operators (Chapter 5)
- A study of co-ordination strategies of tour operators (Chapter 6)
- A study of impacts of co-ordination strategies of tour operators (Chapter 7).

## **Chapter 3. Theoretical Framework**

### **3.1 Introduction**

A theoretical (or conceptual) framework is developed and proposed in this chapter. This theoretical framework underpins the empirical investigation of this thesis. It was used in the preparation and conduction of the empirical survey by identifying key factors and structuring the survey so as to limit the extent of investigation, as well as in the analysis of the results obtained by structuring the collected data (Chapter 4).

“A conceptual framework explains, either graphically or in narrative form, the main dimensions to be studied - the key factors, or variables - and the presumed relationships among them. Frameworks come in several shapes and sizes. They can be rudimentary or elaborate, theory-driven or commonsensical, descriptive or causal“ (Miles and Huberman, 1984, pp. 28 - 29).

The theoretical framework is subsequently applied as a structure and guide for the empirical survey (Chapter 4). It is also used as a setting in which the key factors which impact on and influence the co-ordination strategies of tour operators can be studied (Chapter 5). The framework is then applied to the analysis of the main new system strategies which tour operators are implementing as part of their new co-ordination strategies (Chapter 6). Moreover, the theoretical framework is used to outline major consequences of the new system strategies and the corresponding co-ordination strategies on the package holiday business and the travel and tourism industry in general (Chapter 7). Finally, implications of the proposed framework for the development of a methodology for the study of other sectors and industries are discussed (Chapter 8).

Positioning models based on theories by Porter (1980 and 1985) and Reve (1990), for the study of industries in general and for the tour operator business in particular, are reviewed in Section 3.2. In Section 3.3, five layers of analysis are suggested and incorporated into the proposed theoretical framework for the study of the tour

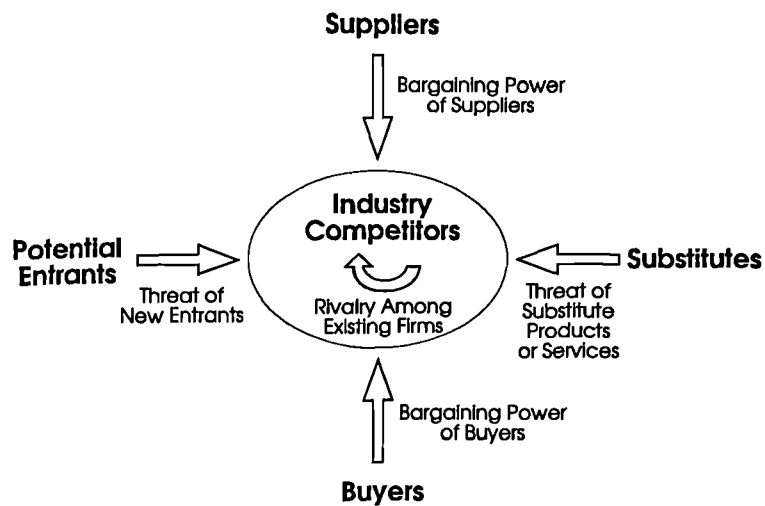
operator business. It is argued that this proposed conceptual framework maintains the benefits present in Porter's and Reve's models, but in addition allows a more detailed study of the business, while at the same time better preserving the complexity of the tour operator business. In Section 3.4, the application of the proposed theoretical framework is discussed in more detail with respect to the study presented in the subsequent chapters.

The theoretical framework is then extended (Section 3.5) specifically for the study of complex factors which are leading to the adoption of new system strategies (this study itself is presented in Chapter 5). The framework is extended by combining it with Klein's framework. Klein's research framework (Section 2.5) was developed for the analysis of the consequences of inter-organisational relations and corresponding IOSs on industrial organisation, and the reciprocal consequences of industrial organisation on inter-organisational relationships and the design of IOSs. However, Klein's research framework was devised primarily to investigate the inter-organisational relations and systems of a specific group of organisations, such as CommerceNet, Euroselect, IBOS, RIA and SABRE, rather than sectors such as the package holiday business and industries such as the travel and tourism industry, which consist of multiple and complex constellations of inter-organisational relationships and systems. A theoretical framework is therefore proposed, which extends Klein's single-layer research framework so as to investigate inter-organisational relationships and IOSs, and this extended framework is subsequently tested in the context of the whole tour operator sector. (The usefulness of this extended theoretical framework for the study of other sectors and industries is discussed in Chapter 8.)

### 3.2 A Discussion of Positioning Models

The system of the main distribution channels for holidays (Figure 1.1) can be interpreted as the 'pre-holiday value system' of the package holiday sector, extending Porter's (1985) value system model to a whole industrial sector. The concepts of the 'value chain', i.e. the sequence of 'value-adding' business processes or units within a single firm, and the 'value system', i.e. the linking of the value chains of a number of individual firms, were developed by Porter (1985, pp. 33 - 61) as tools for diagnosing competitive advantages of firms. These two models are based on the idea that a firm or a series of firms, respectively, can be seen to provide a sequence of processes or activities during which value is added to a product, similar to a production sequence. In this view, the distribution system for holidays can be seen as a value system, consisting of a sequence of activities during which value is added through, for example, the provision of information and a reduction of costs as a result of bargaining power. (Although not further described here, two further value systems exist, namely the 'holiday value system' in which the actual transportation, accommodation and other components are provided once a holiday has been sold and a consumer embarks on it; and the 'post-holiday value system', i.e. when a consumer who has returned from a holiday is catered for.)

Porter's value chain and value system models are a core part of his previously developed competitive positioning model (1980, pp. 3 - 33). This positioning model serves as a framework for the structural analysis of industries and for the development of strategies to competitively position firms. Porter determines five forces that drive industry competition. These are the competitors in the business, their suppliers and buyers, potential entrants, and substitute products (Figure 3.1). Each of these five forces imposes threats on a company that operates in the industry, as indicated by arrows in Figure 3.1.



(Source: Porter, 1980, p. 4.)

**Figure 3.1**

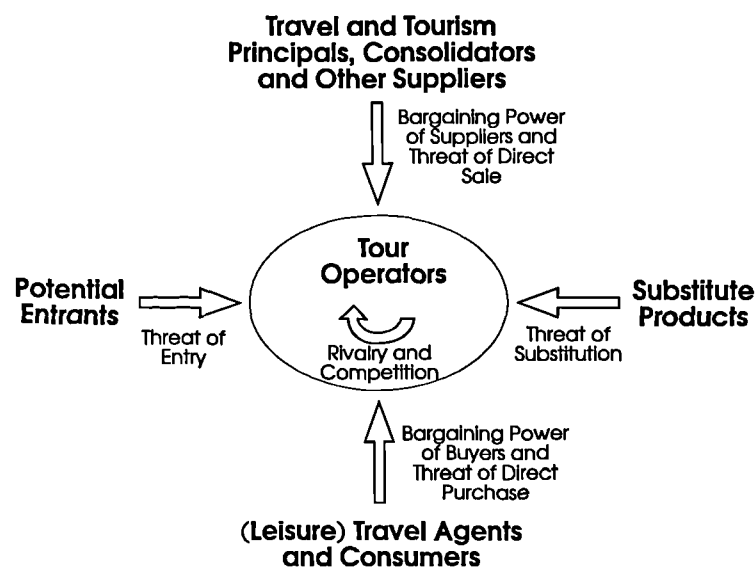
**Porter's Competitive Positioning Model**

Porter's models are not necessarily applicable to all industries, for example those that contain feed-back loops, i.e. when products run backwards through previous stages of the production chain, since Porter's models imply sequential production processes. Nevertheless, regarding the pre-holiday period, Porter's models are useful for an analysis of the travel and tourism industry and the holiday sector in particular, due to relatively sequential distribution processes and relatively determinable boundaries of the various organisations (or functions) involved. Amann et al. (1995), for example, use Porter's models to analyse the travel and tourism industry in general. Ribbers (1994, pp. 11 - 13) and Schertler (1994d) use Porter's models to assess impacts of information technology on the travel and tourism industry. Desinano and Vigo (1995, pp. 66 - 67) apply Porter's models to the hospitality industry. Finally, Intat (1993, pp. 41 - 47) uses Porter's models specifically for an analysis of the tour operator business.

When applying Porter's model to the tour operator business, the five industry forces are:

- Tour operators as the competitors in the business
- Travel and tourism principals, consolidators and other companies such as system operators as the suppliers of tour operators
- (Leisure) travel agents (interpreting the term 'buyer' broadly) and final consumers as the buyers of tour operators' products
- Potential entrants, i.e. any company from inside and outside the travel and tourism industry wanting to establish a tour operator business
- Substitute products, i.e. any product that might substitute packaged holidays such as unpackaged holidays and home entertainment.

Porter's competitive positioning model can be adapted accordingly as shown in Figure 3.2.



(Adapted from Porter, 1980, p. 4.)

**Figure 3.2**

A Competitive Positioning Model for the Tour Operator Business

Each of the five forces in the tour operator business poses threats to a tour operator. Tour operators can create competition and rivalry amongst themselves. Travel and tourism principals, consolidators and other suppliers, depending on their size and importance, can pose threats in the form of price demands, i.e. bargaining power, or even by cutting out tour operators by selling directly to travel agents or consumers. Similarly, travel agents and consumers can threaten tour operators with their bargaining power and by direct purchasing. Potential entrants endanger tour operators by entering their business; and substitute products threaten to substitute packaged holidays.

Tour operators can adopt a number of strategies to deal with these threats (Porter, 1980, 1985 and 1987), in particular the key strategies of:

- Price (low cost) or quality leadership within the business
- Horizontal integration (including diversification within the business) by taking over or merging with other tour operators
- Diversification (including integration) into other businesses
- Backward vertical integration
- Forward vertical integration
- The establishment of entry barriers
- The development of new products (*innovation*).

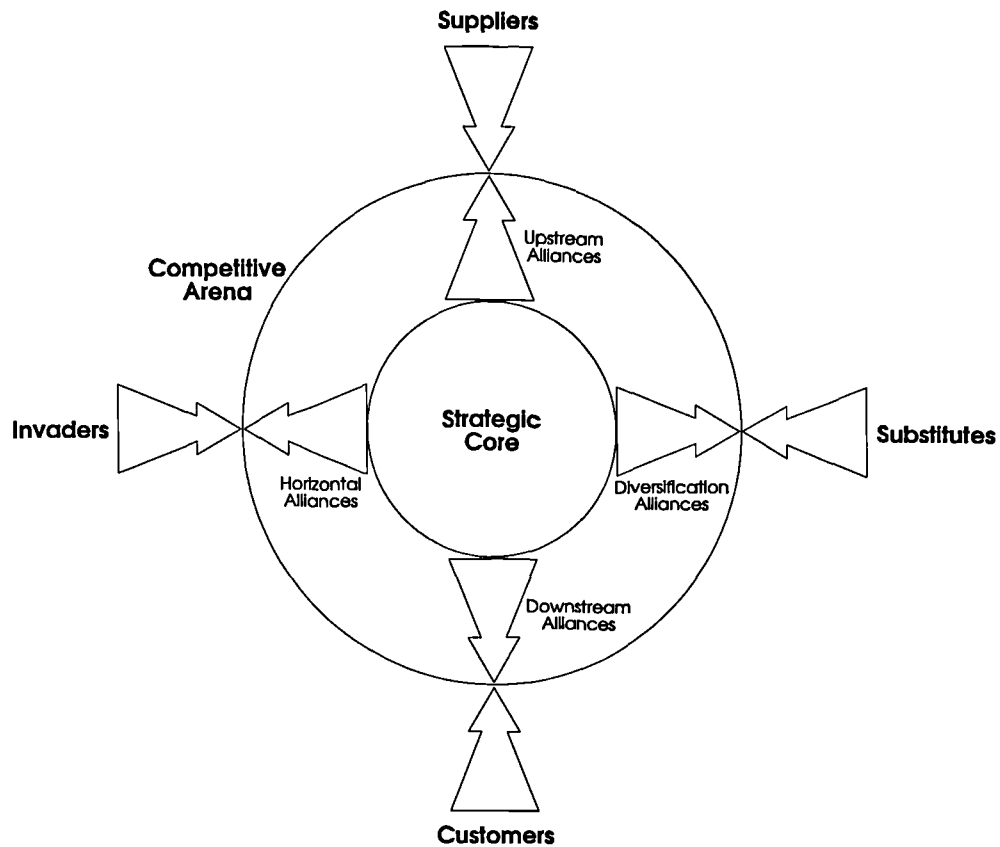
Strategies of economies of scale and economies of scope are related to these. Furthermore, 'value added' by tour operators secures their position in the industry. 'Added value' of tour operators includes expertise, time and effort spent, reduction of costs through bulk purchases and legal liabilities. The better the value provided the more secure a tour operator's position is within the holiday business.

Reve (1990) suggests several alterations to Porter's competitive positioning model, effectively creating a unified model of economic and strategic management theories:

- A contractual and transaction cost view of the firm is adopted.
- The positioning model is re-focused from one based on a core part of an industry to one based on a core part of a firm. Strategies of cost and quality leadership as well as product innovation are investigated at this level.
- Co-operative and collaborative strategies are incorporated, reflecting the large number of partnerships and alliances in some industries (such as the travel and tourism industry, as discussed in Chapter 5).
- The two industry forces of competitors and potential entrants are combined into one.

Reve identifies four types of economies that a firm can obtain, which are upstream or backward vertical integration, downstream or forward vertical integration, economies of scale (horizontal integration) and economies of scope (diversification). These four types of economies can be achieved either through integration, i.e. take-overs or mergers, or through co-operation, i.e. forging alliances. Reve proposes a contracting model of strategic management (1990, p. 155), which he then combines with Porter's positioning model into an integrated positioning model (Figure 3.3).

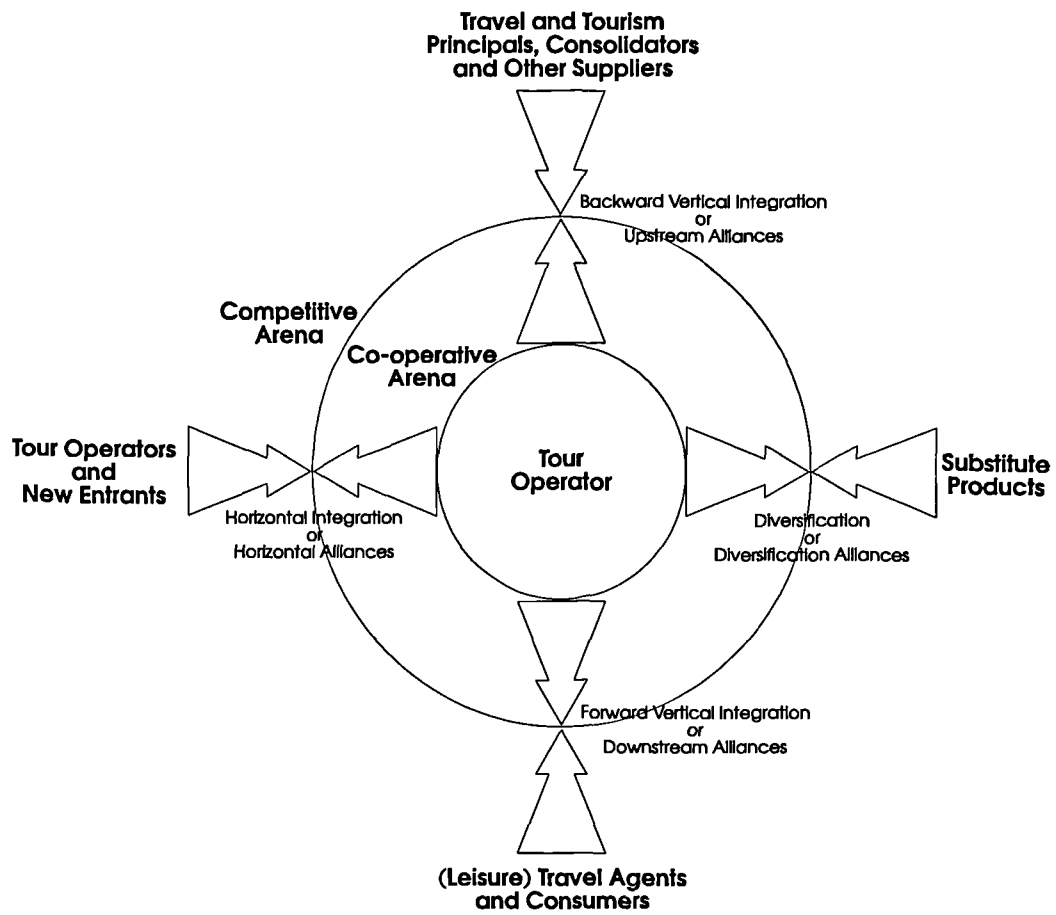




(Source: Reve, 1990, p. 157.)

**Figure 3.3**  
Reve's Integrated Positioning Model

Reve's integrated positioning model (Figure 3.3) can be applied to the tour operator business as shown in Figure 3.4. The incoming arrows indicate threats, while the outgoing arrows indicate strategies as responses to these threats.



(Adapted from Porter, 1980, p. 4, and Reve, 1990, p. 157. The term 'co-operative arena' is added here.)

**Figure 3.4**

An Integrated Positioning Model for the Tour Operator Business

### 3.3 Levels of Analysis and a Strategic Positioning Model for Tour Operators

The integrated positioning model (Figure 3.4) provides a basis for the proposed strategic positioning model for the tour operator business. Equally, a contractual (or relationship based) and transaction cost view of the firm is taken, interpreting a firm as a nexus of internal and external contracts (Reve, 1990). However, in addition to the three organisational levels of 'firm level', 'co-operative level' and 'competitive level' (Figure 3.4), two further levels of contractual relationships are distinguished here. As part of the theoretical framework, these five levels serve as levels of analysis, at which the contractual relationships of tour operators can be analysed. (Note that Best (1990, pp. 14 - 20) proposes similar levels, but only makes four distinctions.) The investigated contractual relationships are mainly trading relationships of tour operators, both internally between the individual subsidiaries of a tour operator group and externally with other travel and tourism companies and holiday makers.

At Level 1, core business, or intra-organisational, relationships within a company are investigated. At Level 2, ownership relationships within a group of companies are analysed, which are typically of hierarchical nature. At Level 3, co-operative trading relationships, being typically network-based, are investigated. At Level 4, competitive trading relationships are analysed, which are typically market-based. Finally, general trading relationships at an industrial level are studied at Level 5. These levels of analysis are summarised in Table 3.1.

Level of Analysis	Type of Relationships	Corresponding Industrial or Organisational Level
Level 1	Core business relationships	Tour operator
Level 2	Ownership relationships	Tour operator group
Level 3	Co-operative trading relationships	Tour operator partnership(s)
Level 4	Competitive trading relationships	Tour operator sector
Level 5	General trading relationships	Travel and tourism industry (and other industries)

**Table 3.1**

#### Levels of Analysis

At the lowest level, Level 1, the objects of analysis are individual tour operators. An individual tour operator, however, does not necessarily need to be a separate single company, but can also be a tour operator department or division of a travel and tourism company. At Level 2, the objects of analysis are tour operator groups, of which the Level 1 tour operators are a part. While at Level 1 and 2 internal relationships of tour operator groups are focused on, in Levels 3 to 5 external contracts are added to the analysis. At Level 3, the subjects of examination are tour operator partnerships. These co-operations can be horizontal, backward or forward vertical regarding the position of tour operators in their distribution chain. Consequently, at Level 4, competitive trading relationships of tour operators are studied, again horizontally and vertically.

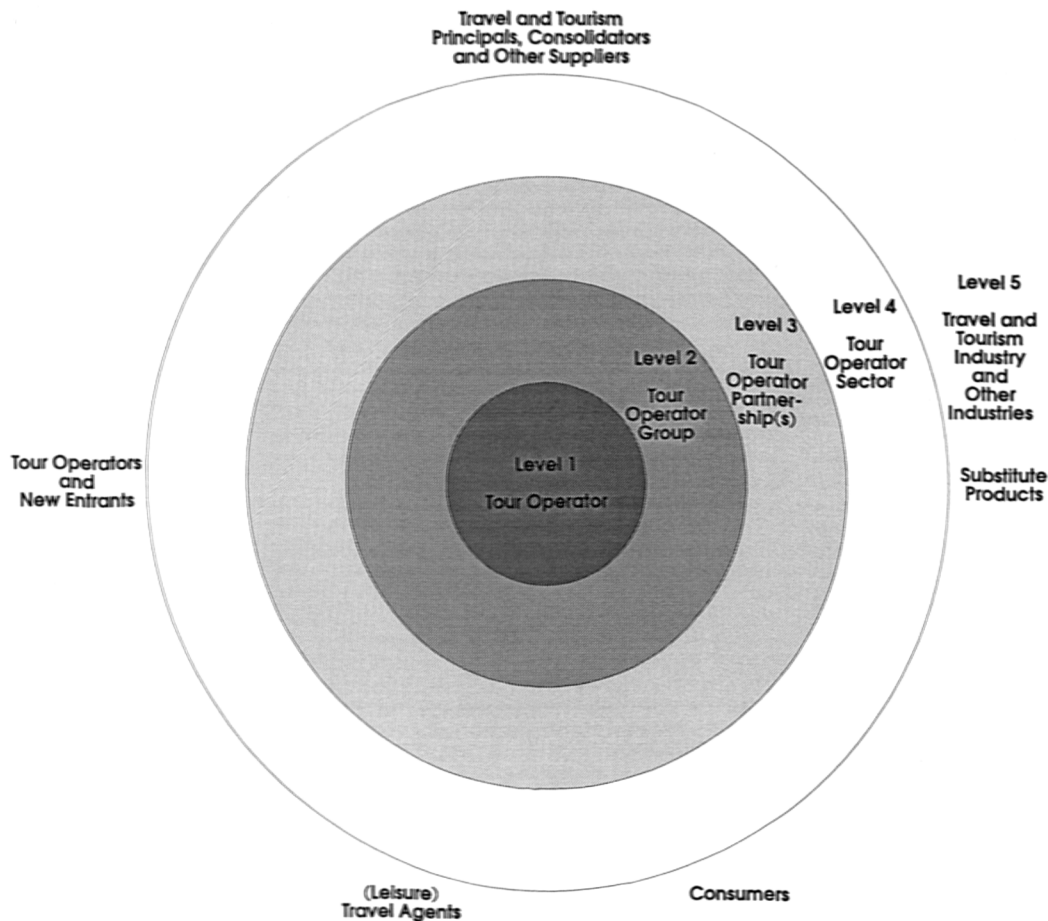
Relationships at Level 5 affect the trading of tour operators in a more general way than those at the other four levels, for example in the form of legislation or government investment in technologies promoting national or regional tourism. Industry political and legal decisions at Level 5 also especially impact on the other four levels by shaping, for example, the infrastructure and (most of all human) resources available. Thus, an analysis at Level 4 is a sectorial analysis, while at Level 5 it is an industrial analysis.

Levels 1 to 5 are in order of decreasing control over the relationships from the perspective of a tour operator, that is, a tour operator has the greatest influence over its business or trading relationships at Level 1, for example on decisions regarding the adoption of technologies, and has the least influence at Level 5. Seeing an organisation as a group of individuals or firms, who or which have a common goal such as 'to conduct trading', each level can also be interpreted as to refer to a certain type of organisation. Thus it can be argued that the five levels are organisational layers of abstraction, since the organisations which are investigated at a lower level are part of the organisations at a higher level.

Accordingly, a co-ordination strategy on Level 1 consists of the decisions by a tour operator to co-ordinate its activities internally; while on Level 2, a co-ordination strategy refers to the decisions necessary for the co-ordination of the various subsidiaries of a tour operator group. On Level 3, a co-ordination strategy consists of co-operative decisions; on Level 4, it refers to competitive decisions in the tour operator sector; and on Level 5, it concerns more general decisions for the co-ordination of the various organisations in the travel and tourism industry. Consequently, system strategies and corresponding new ICT systems as part of a co-ordination strategy are also studied for each of the five levels. These five levels effectively combine a 'micro-level' study (Levels 1, 2 and, to some extent, 3) with a 'macro-level' study (Levels 4, 5 and, to some extent, 3) (Monk, 1993).

As mentioned in Section 1.4, Holland and Locket (1994; also Von Bornstaedt, 1992, p. 16) distinguish between business markets, i.e. markets between firms, and consumer markets, i.e. markets between firms and consumers. Klein and Williams (1995, p. 2) also argue that this distinction appears to be important when analysing inter-organisational relationships. This suggestion is taken up in the proposed model by treating travel agents and consumers as two separate forces. Therefore, relationships between tour operators and travel agents are referred to as forward vertical business relationships, while relationships between tour operators and consumers are forward vertical consumer relationships. (Note that Bloch et al. (1996) use a framework which corresponds to Level 2 to Level 4, and also distinguish between business and customer relationships.)

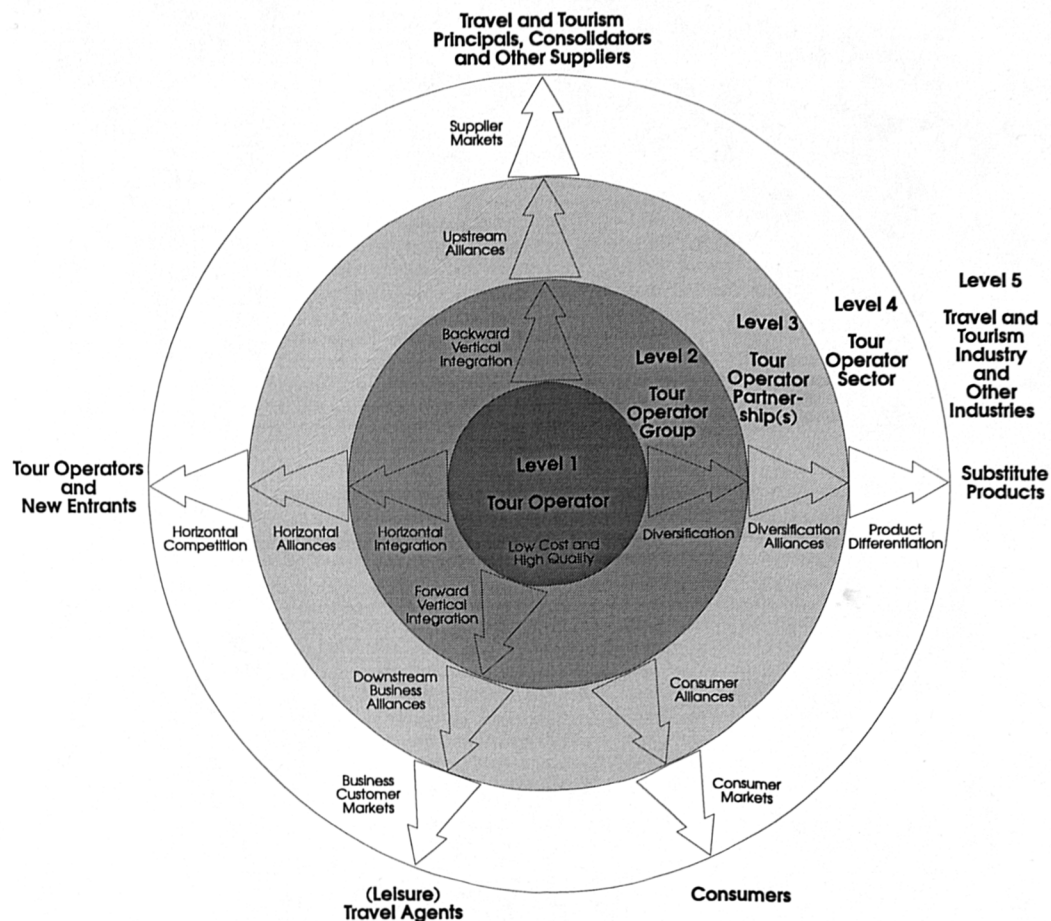
The strategic positioning model for the tour operator business proposed here is shown in its basic form in Figure 3.5, based on Porter's and Reve's models (Figure 3.2 and Figure 3.4, respectively), the suggested five levels of analysis (Table 3.1) and the distinction between business and consumer relationships. This basic model is expanded in the following when incorporating positioning strategies of tour operators (Figure 3.6) as well as threats imposed by the industry forces and disadvantages of positioning strategies of tour operators (Figure 3.7).



**Figure 3.5**

**Strategic Positioning Model for the Tour Operator Business**

Each of the arrows in Figure 3.6 represents the main strategies of tour operators, from which they can choose to position themselves against the five industry forces of competitors (and new entrants), substitute products, suppliers, travel agents and consumers. The strategies of economies of scale and scope result from strategies at Levels 1 to 3. Furthermore, strategies at Level 1 include those of product innovation and increased product range, which are here also referred to as ‘in-house diversification’ strategies.



**Figure 3.6**  
Main Positioning Strategies for Tour Operators

Horizontal integration strategies (Level 2), i.e. acquisitions / take-overs, mergers and organisational integration, include (external) diversification within the tour operator business. Conversely, (external) diversification strategies (Level 2) include integration outside the tour operator business. Strategies at Level 1 can be relevant to, or part of, Level 2 and Level 3 strategies. For example, a low cost strategy of a tour operator (Level 1) can lead to, or be part of, a low cost strategy of a tour operator group (Level 2) and/or a tour operator partnership (Level 3). Several tour operators' strategies are discussed in the literature. Kirstges (1992), for example, investigates

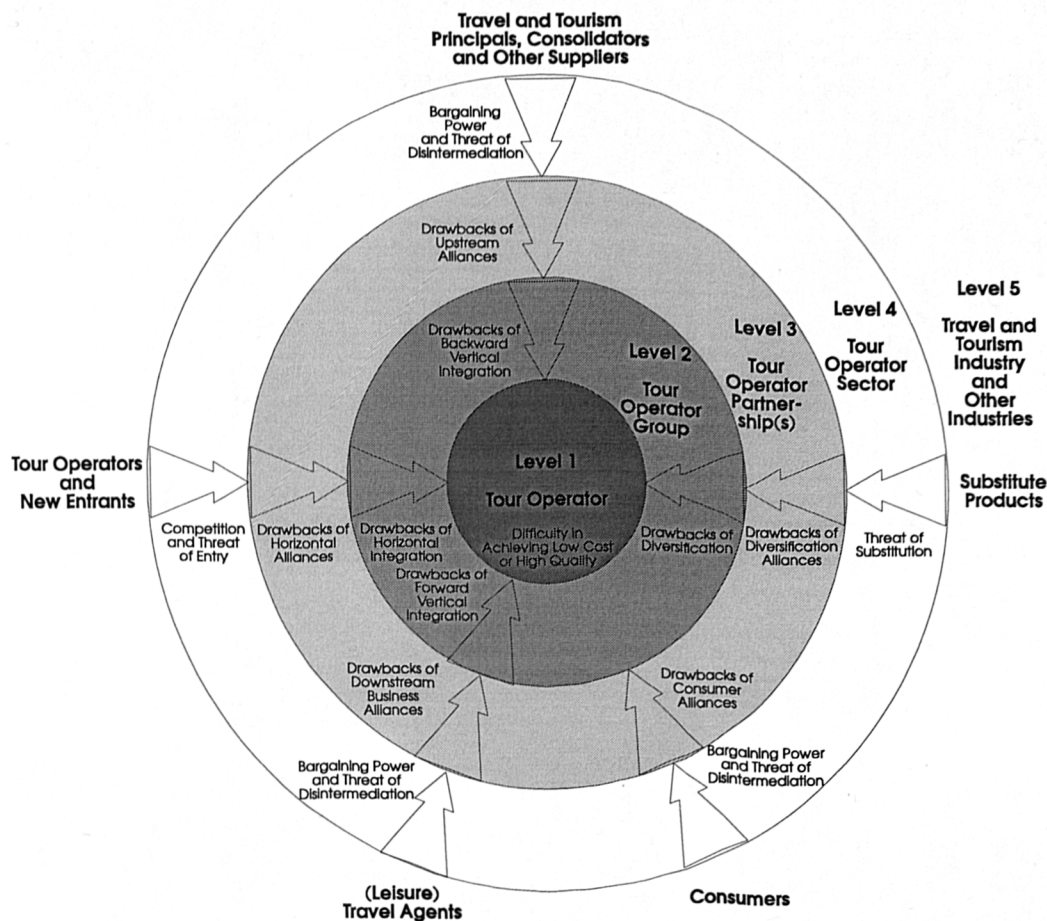
integration, diversification and other expansion strategies of tour operators; and Intat (1993) discusses general diversification strategies of tour operators.

Each of the industry forces imposes threats on tour operators, and each of the positioning strategies has disadvantages associated with them, of which some of the main ones are shown in Figure 3.7.

- The threats (and opportunities) at Level 4 are discussed by, for example, Arrow (1969), Porter (1980 and 1985) and Williamson (1975 and 1985).
- The disadvantages (and advantages) of co-operations (Level 3) are analysed by, among others, Hergert and Morris (1988), Johnston and Lawrence (1988), Macbeth and Ferguson (1994), Miles and Snow (1986 and 1992), Sydow (1992), Teece (1992) and Thorelli (1986) (for more general co-operative behaviour see Axelrod, 1990).
- The drawbacks (and benefits) of integration and expansion (Level 2) are discussed by, for example, Aoki et al. (1990), Chandler and Daems (1980), Williamson (1975 and 1985) and Williamson and Winter (1991).
- Internal strategies (Level 1) are outlined by, among others, Hall (1991b).

Advantages and disadvantages of corresponding information technology strategies are discussed by, for example, Antonelli (1988a and 1988b), Fornengo (1988), Gillespie and Williams (1988 and 1990), Griffiths (1986), Kubicek (1991), McFarlan (1984), Morton (1991), Rockart and Short (1989), Schumann and Hohe (1988), Szyperski and Klein (1993) and Ward (1986).





(The arrows at Level 4 refer to threats by the various industry forces, while all other arrows indicate disadvantages of positioning strategies.)

**Figure 3.7**  
**Main Threats to Tour Operators**  
**and Disadvantages of Positioning Strategies**

As shown in the subsequent chapters, this proposed positioning model enables a systematic and structured analysis of the relationships in the tour operator business, similar to Porter's and Reve's models, thus maintaining the benefits of those models. Moreover, however, it allows a more detailed study of the tour operator business and, at the same time, more of the complexity, wealth and multiplexity of the tour operator business is reflected and preserved in this model when compared to those of Porter and Reve due to the five levels of analysis.

### 3.4 Application of the Theoretical Framework

As stated in Section 1.1 and Section 1.2, this study aims to fulfil three main sub-objectives, with each of the Chapters 5 to 7 focusing on one of these. Chapter 5 is devoted to the identification and exploration of main reasons for tour operators reinventing their business activities, in particular by enhancing their systems and installing new ones. The positioning model with threats and disadvantages of positioning strategies (Figure 3.7) is applied to this analysis of the main factors which are impacting on the development of new co-ordination strategies, and especially on new system strategies, of tour operators. This exploration is equivalent to the first step of Klein's (1995a and 1996) analysis of co-ordination strategies, referred to as 'contingencies'.

In Chapter 6, new system strategies of tour operators are documented. The basic positioning model (Figure 3.5) is used to analyse new system strategies that tour operators are implementing. In Chapter 7, the main consequences of these new systems for the strategic position of tour operators that implement them and for the structure of the package holiday business in general are identified and explored. The model with positioning strategies (Figure 3.6) is adopted for this analysis of the key consequences these new system strategies and corresponding new co-ordination strategies have on the package holiday business and the travel and tourism industry in general. This exploration is equivalent to the second step of Klein's (1995a and 1996) analysis of co-ordination strategies, referred to as 'impacts'.

What is elsewhere referred to as the 'structure - conduct - performance' principle (for example Needham, 1978), is, to some extent, reflected and incorporated into this analysis. The analysis of the reasons for and impacts on the system strategies of tour operators in Chapter 5 includes an analysis of 'structure'. The analysis of the system strategies of tour operators in Chapter 6 refers to the 'conduct' of tour operators. Finally, the analysis of the consequences of the new system strategies in Chapter 7 investigates the 'performance' of tour operators.

The third step of Klein's (1995a and 1996) analysis, i.e. the analysis of configurations, is not conducted. Configurations are options including their advantages and disadvantages that the management of an organisation should consider in establishing a preferred inter-organisational arrangement. These configurations are basically advice on which strategic choices are available for managers of an inter-organisational arrangement, including most likely benefits and drawbacks to be gained from these options. This third step is not taken here, since the aim of this study is not to present choices for managers given the large number of IOSs and organisations studied, each with their own aims and preferences, but rather to explore most likely consequences of the new tour operator systems on the structure of the tour operator business and the travel and tourism industry as a whole.

In Chapter 5, a 'top-down analysis' is conducted, i.e. from Level 5 down to Level 1. This sequence was chosen because tour operators have typically least control over Level 5 impacts on their strategies, and have most control over Level 1 impacts. In contrast, in Chapters 6 and 7, a 'bottom-up analysis' is applied, that is, tour operators are analysed first (Levels 1 and 2), followed by their inter-organisational relationships (Levels 3 to 5). This sequence was chosen since system strategies (Chapter 6) and positioning strategies (Chapter 7) of tour operators are analysed over which they have most control at Level 1 and least control at Level 5. Interdependencies between the different levels are investigated only to the extent that lower levels are part of (or embedded in) higher levels. Given the complexity of the analysed developments and the restrictions of this thesis, few other interdependencies between the various levels are explored.

The basic positioning model (Figure 3.5) is used to analyse the new system strategies of tour operators (Chapter 6). For this purpose, the positioning model is re-presented in table-form (Table 3.2) to indicate how the model is applied as a sequential analysis of the system strategies in Chapter 6.

Level of Analysis According to Type of Trading Relationships	Equivalent Industrial and Organisational Level	Sub-Levels of Analysis
Level 1 Intra-Organisational Core Business Relationships	Tour Operator	<ul style="list-style-type: none"> <li>core tour operator(s)</li> </ul>
Level 2 Ownership Relationships	Tour Operator Group <sup>1</sup>	<ul style="list-style-type: none"> <li>tour operator subsidiaries (horizontal)</li> <li>principal, consolidator and other supplier subsidiaries (backward vertical)</li> <li>travel agent subsidiaries (forward vertical)</li> <li>other subsidiaries (diversification)</li> </ul>
Level 3 Inter-Organisational Co-operative Trading Relationships	Tour Operator Partnership(s)	<ul style="list-style-type: none"> <li>co-operations with tour operators (horizontal)</li> <li>co-operations with suppliers (backward vertical)</li> <li>co-operations with travel agents (forward vertical)</li> <li>co-operations with consumers (forward vertical)</li> <li>diversification co-operations</li> </ul>
Level 4 Inter-Organisational Competitive Trading Relationships	Tour Operator Sector	<ul style="list-style-type: none"> <li>competition with tour operators (horizontal)</li> <li>market-based relationships with suppliers (backward vertical)</li> <li>market-based relationships with travel agents (forward vertical)</li> <li>market-based relationships with consumers (forward vertical)</li> <li>competition with other companies (diversification)<sup>2</sup></li> </ul>
Level 5 General Trading Relationships	Travel and Tourism Industry (and other industries)	<ul style="list-style-type: none"> <li>relationships to companies outside the tour operator sector</li> <li>general relationships with, for example, associations, regulators and government bodies</li> </ul>

<sup>1</sup> Wholly- and partly-owned subsidiaries; only if of relevance, otherwise discussed under Level 5.

<sup>2</sup> These relationships overlap with Level 5 relationships.

**Table 3.2**

**Strategic Positioning Model for Tour Operators in Table-Form**

The model with positioning strategies (Figure 3.6) and the model with threats and disadvantages (Figure 3.7) can equally be expressed in table form. These tables are very similar to Table 3.2 and are, therefore, not explicitly stated. Both the basic positioning model (Figure 3.5 and Table 3.2) and the model with positioning strategies (Figure 3.6) are applied directly to the study of new system strategies and their consequences in Chapter 6 and Chapter 7, respectively. An extended framework is, however, suggested for the study of the main factors that have led to the development and adoption of the new system strategies (Chapter 5), given the complexity of these factors.

### **3.5 An Extended Theoretical Framework**

Klein's research framework can be interpreted as a methodological framework into which other theories and models can be incorporated (Section 2.5.2). In that sense, the positioning model proposed here can be used as part of Klein's research framework to study one of four main elements of Klein's framework, namely the 'structure' of an inter-organisational arrangement. On the other hand, Klein's research framework can be interpreted as a practical framework itself, which can be used as a guide to study inter-organisational arrangements. It is this latter approach which is taken here, using Klein's research framework as part of an extended theoretical framework for the study of the tour operator business.

A broad and extensive theoretical framework is necessary for this analysis given the obvious lack of literature on the tour operator business and the use of new ICTs by tour operators in particular (Section 2.2). Especially for the analysis of reasons for and impacts on the system strategies of tour operators (Chapter 5), the theoretical framework needs to assist in structuring multiple, complex and often qualitative factors. Given few publications on systems in the package holiday business, a more general view has to be taken here to fulfil the research objectives, whereas more

specific studies can be conducted once more is known about the package holiday business.

Not only can co-ordination strategies and corresponding systems be investigated for each of the five levels of analysis proposed here, but in addition all four main elements of Klein's research framework can be analysed for each of the five levels separately. The distinction between the environment of an organisation and the organisation itself, as shown in the double-layer framework (Figure 2.3), is reflected in the distinction between the five levels of analysis, with a higher level always referring to the environment of an organisation at a lower level. Hence, an extended multiple-layer theoretical framework is proposed here, which combines the Level 1 to 5 analysis with Klein's single-layer research methodology and its concept of four main elements and co-ordination strategies (Table 3.3).

Level of Analysis for which Co-ordination Strategy is Applied	Structure of Organisation	Governance Forms of Organisation	Transaction and Relationship Attributes of Organisation	Resource Base of Organisation
<b>Level 1</b> <b>Tour Operator</b>	company structure of tour operator, e.g. departments, functions, products	hierarchical, ranging from centralised to more loosely controlled such as profit centres	internal standard, e.g. decision making procedures; transaction costs of hierarchies	own or core resources, e.g. educated tour operator workforce (e.g. telephone reservation staff), information technology or systems department, tour operator systems, slides / pictures, destination and market information
<b>Level 2</b> <b>Tour Operator Group</b>	structure of tour operator group, e.g. number and type of subsidiaries, group products	hierarchical, ranging from centralised to more loosely controlled such as profit centres	group standards; transaction costs of hierarchies	group resources, i.e. resources shared with subsidiaries, e.g. educated group workforce (e.g. tour representatives, pilots, aircraft maintenance, technical staff), planes, landing slots, cruise ships, buses, hotels, apartments, clubs, travel agent outlets, corporate tour operator systems
<b>Level 3</b> <b>Tour Operator Partnership(s)</b>	structure of co-operations, e.g. number and type of partner organisations, products of partnerships	network-based; centralised versus decentralised; high enforcement versus low enforcement	partnerships' standards; transaction costs of co-operations	co-operation's resources, i.e. resources shared with partners, e.g. workforce, systems
<b>Level 4</b> <b>Tour Operator Sector</b>	structure of sectorial competition, e.g. concentration, supply of and demand for holiday products, especially number and type of principals, consolidators, tour operators, travel agents, supporting services providers and holiday consumers	market-based; regulated versus unregulated	sectorial standards, e.g. for contracts; transaction costs of markets; institutional perspective: types of contracts, e.g. formal and informal, written and unwritten, legal contracts, length of contract (short-term, long-term, open-ended), frequency of contract making, standardisation of contracts	external or licensed resources, e.g. workforce

Level of Analysis for which Co-ordination Strategy is Applied	Structure of Organisation	Governance Forms of Organisation	Transaction and Relationship Attributes of Organisation	Resource Base of Organisation
Level 5 Travel and Tourism Industry (and other industries)	structure of industry, e.g. travel and tourism products	regulated versus unregulated	legislation; industrial standards; industry-wide accepted qualifications and degrees	educated industrial workforce; airports, harbours

**Table 3.3**  
Main Elements of the Proposed Extended Theoretical Framework  
and Examples of Analysis

However, not all of these factors are relevant to this study, as discussed in Chapter 5. Interdependencies between the factors of the extended theoretical framework are also only described if they are relevant to the analysis, as outlined in Chapter 5. Klein (1996, pp. 199 - 203) suggests moreover an investigation of transaction and relationship attributes on three levels, institutional, operational and technical. Instead, a distinction between institutional, organisational (strategic and operational), individual and physical levels is suggested here, which can be applied not only to the investigation of transaction and relationship attributes, but also to the other three main elements of the framework. Physical factors include technical, such as new information and communication technologies and IOSs, but in a more general form comprise the physical environment individuals live, work, communicate and interact in. In contrast to institutions and organisations which are entirely a human creation, physical factors are both shaped by humans as well as given by nature. Examples of institutional, organisational, individual and physical factors for each of the four main elements of the theoretical framework are listed in Table 3.4.



Perspective	Organisational Structure	Governance Forms	Transaction and Relationship Attributes	Resources
<b>Institutional</b>	number of institutions, e.g. laws and regulations	control mechanism and price mechanism; centrally versus decentrally enforced	transaction cost aspects of control mechanism and price mechanism, of laws and regulations	laws, regulations, decision-making procedures
<b>Organisational</b>	number of organisations	market-based, network-based and hierarchical governance forms	transaction costs of organisational governance forms; ownership, power	'group thinking'
<b>Individual</b>	number of individuals	human personality	asset specificity of human competencies	individual human competencies, e.g. entrepreneurial behaviour, skills, knowledge
<b>Physical (Technical)</b>	information and communication infrastructure	centrally versus decentrally controlled	asset specificity of physical resources	physical resources

**Table 3.4**

**Perspectives for the Main Elements of the Extended Theoretical Framework and Corresponding Examples**

Only some of these perspectives are relevant to the analysis of the main factors that have led to the adoption of new co-ordination strategies and corresponding system strategies by tour operators. The main perspective taken is organisational due to the aims of this research. Some institutional, individual and physical factors are, however, studied in as far as they were relevant to the research, as outlined in later chapters.

Continuous or regular, rather than sporadic or initial, trading relationships are the main focus of the study. Similarly, the functional, rather than the technical, aspects of tour operator systems were concentrated upon in the study. The functional aspects are of more long-term and strategic importance to the organisations studied, whereas the technical aspects are rather short-term since they change more quickly and thus lose relevance over time (also Section 1.6).

## Chapter 4. Methodology

### 4.1 Introduction to the Scientific Enquiry

Science can be viewed as a 'body of facts', indeed organised knowledge, while at the same time also being a means of explaining phenomena (Kerlinger, 1986, pp. 7 - 8). A more dynamic, essentially heuristic view regards science as a problem solving activity rather than emphasising the collection, organisation and interpretation of factual information alone. Furthermore,

"the function of science ... is to establish general laws covering the behaviors of the empirical events or objects with which the science ... is concerned, and thereby to enable us to connect together our knowledge of the separately known events, and to make reliable predictions of events as yet unknown" (Braithwaite, 1955, p. 1).

Consequently, the nature and basic intent of scientific research can be defined as the

"... systematic, controlled, empirical, and critical investigation of natural phenomena guided by theory and hypotheses about the presumed relations among such phenomena" (Kerlinger, 1986, p. 10).

By understanding the fundamental relationships between phenomena, outcomes related to stated variables can be predicted.

Kerlinger (1986, p. vii) maintains that science appears to compel more interest, enthusiasm and even 'passionate commitments' than do many other activities. Kerlinger believes that there is no unequivocal answer to why science should produce this effect. However, it is contended here that overwhelming commitment to science is not unexpected if one considers that science, and with it scientific research, fulfils one of man's needs for the exploration, understanding and communication of his ideas. Science as a discipline is aimed at making progress and its function should be to advance knowledge both individually, but more importantly, collectively. Communication, inherent in numerous media such as this thesis, is essential for the development of new ideas and to allow capitalisation on, and to avoid inadvertent duplication of, work already done.

In Section 4.2, influential philosophies of science are outlined, most of all positivism and phenomenology. However, it is argued that a pluralist approach is most appropriate for this study of the tour operator business. Methodological approaches, or methods, are discussed in Section 4.3, in particular with regards to the main advantages and disadvantages of those drawn from purely quantitative and qualitative methodologies. The use of a cross-boundary approach is justified since a strict adoption of either methodology would not have fulfilled the aims of this research study. The application of the theoretical framework in the context of a pluralist approach is outlined in Section 4.4. In Section 4.5, the structure of the tour operator business in Britain and Germany is analysed, thus giving background information for sampling as well as the analysis of the data gained. Finally, in Section 4.6, sampling, survey methods and the bounding of the data collection is discussed.

## **4.2 Philosophies of Science**

A variety of philosophies, or views, of science exist, each of which adopts a different way of studying phenomena. Easterby-Smith et al. (1991, pp. 21 - 43) distinguish between two main opposing philosophies of the nature of science, positivism and phenomenology. A distinction between positivists and phenomenologists simplifies, however, to some extent the wealth of philosophical theories that have evolved, such as empiricism, logical positivism, reductionism and relativism. Some of these theories, in as far as they are relevant to the distinction between quantitative and qualitative methods and to the adoption of a pluralistic approach, are described as they have evolved.

Empiricism is based on the belief that knowledge rests on human (or sense) experience and that anything which cannot be humanly experienced or observed is rejected (Sayer, 1984, pp. 1 - 9). Hence, empiricists are anti-theoretical since they

regard theories as being metaphysical and, therefore, cannot be sensed or experienced. According to empiricists, explanation can be little more than a summary of actual observations, as links between two or more events can rarely be experienced and thus require a theory. One of the empiricists' major doctrines is a total separation of fact from value since values cannot be empirically verified.

The ideas of positivism were derived from those of empiricism, but further explored the philosophy of scientific discovery. The tradition of positivism was influential in the latter half of the nineteenth century through philosophers such as Comte (Easterby-Smith et al., 1991, pp. 22 - 23). Positivists believed that knowledge is only significant if it is based on external, observed and objectively collected facts. They denied the validity of any metaphysical speculation and argued that a scientific approach is the only valid means to the creation of a legitimate science (and truth).

The Vienna Circle of the 1920's and 1930's, also referred to as the logical positivists, combined some of the tenets of both empiricism and positivism (Sayer, 1984, pp. 3 - 6). In particular, they rejected philosophies that did not stress scientific rigour and emphasised that data could be raw, i.e. was independent of observer and interpretation, and thus could be regarded as a fixed standard. Therefore, they were also referred to as idealists as what could not be humanly observed, was in their definition not real, as they limited reality to what could be experienced. The mind was regarded as a passive receptacle for 'sense-data' and, by their own definition, they were anthropocentric. They also insisted that empirically collected data should be subjected to logical analysis.

Wittgenstein, despite being an affiliate of the Vienna Circle, contradicted the argument that data could be value-free through his 'duck-rabbit drawing', showing that what is observed can be altered by interpretation (Sayer, 1984, pp. 5 - 6). Wittgenstein showed that data can, in fact, be dependent on and 'contaminated' by perceptions, and the description of facts can be governed by an observer's interests and purposes. Hence, while a scientist should achieve as much objectivity as is

humanly possible in conducting research, a clear statement of any biases that may influence results should be made. Wittgenstein also argued in his early work that all propositions can be reduced into simpler and independent constituents, thus allowing problems to be more easily understood, which is referred to as reductionism. However, this may result in the loss of the original meaning of the whole situation (Easterby-Smith et al., 1991, p. 29) and was also challenged by Wittgenstein himself in his later work.

Hempel developed the idea that scientific explanation involves the inclusion of individual phenomena into a pattern, termed 'deductive-nomological explanation' (Sayer, 1984, pp. 7 - 9). He also advised the use of 'counter-factuals' to assist in differentiating between casual associations and genuine links between phenomena. This essentially involves testing the proposed explanation by altering some of the factors involved, and observing whether or not the relationships between phenomena are maintained. For empiricists, explanation could only be a summary of actual and possible observations since the reason linking events could not be explored. Therefore, Hempel's notion of a theory underlying observations was a substantial move away from the empiricists' view of 'raw data' and their anti-theoreticism.

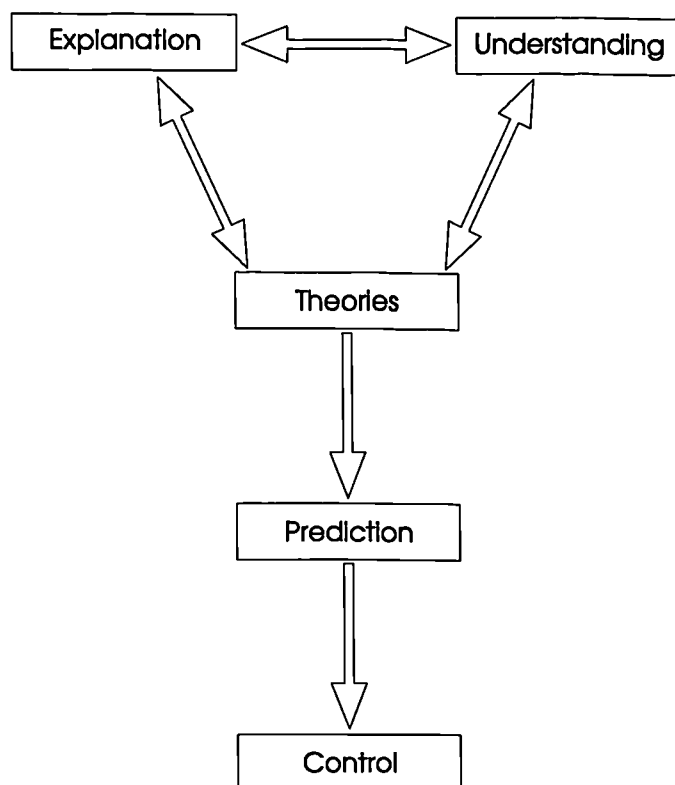
Increasingly, philosophers have emphasised the importance of theories, dismissing the idea of raw, value-free data and the possibility of a neutral experience (Sayer, 1984, pp. 9 - 10). Even Quine, who attended Vienna Circle meetings and in whom

“the ghost of empiricism lives on ...“ (Sayer, 1984, p. 10),

has illustrated how 'ordinary', everyday experiences are subjected to an element of interpretation. Hence, the formal description and adoption of a theory as a valid research method is legitimised.

“A theory is a set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena“ (Kerlinger, 1986, p. 9).

One of the basic purposes of science is explaining phenomena, thus the creation of theories can be argued as being of central importance to science and scientific research. Indeed, theories, the explanation and understanding of phenomena with their consequent prediction and control, can be regarded as the central aims of science. It is contended here that these aims, and the relationships between them, can be graphically expressed as in Figure 4.1.



(Arrows indicate sequence.)

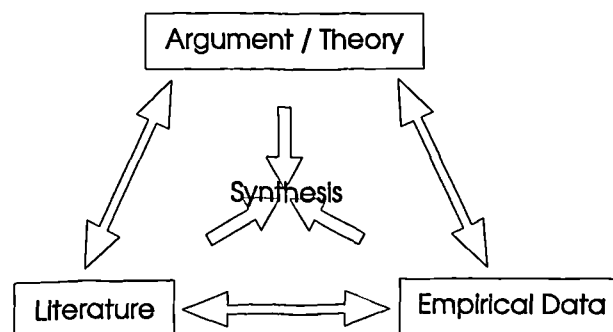
**Figure 4.1**  
Main Scientific Aims

These main aims of science can also be seen more specifically in the context of management studies:

“Organization theory seeks to substitute a coherent set of conceptual frameworks for ... collections of assumptions. These concepts properly used and understood, should help one to explain the past which in turn helps one to understand the present and thus to predict the future which leads to more influence over future events and less disturbance from the unexpected“ (Handy, 1993, p. 16).

According to Dewey, scientific research involves the sequence of ‘problem’, ‘obstacle’ and then ‘inchoate idea’, leading to a tentative ‘hypothesis’ (Kerlinger, 1986, pp. 11 - 13). The next stages of scientific research are ‘reasoning deduction’ and ‘observation / test / experiment’. A hypothesis is generated from an idea developed after expressing a problem and consists of a statement about the presumed relationship between phenomena or variables. Reasoning deduction occurs when a scientist deduces the implications of a hypothesis so that the proposed relationships between variables can be subjected to trial. Results of the subsequent research are fed back to the problem and hypothesis and, eventually, to the proposed theory. The experimental findings thus result in the refinement of the initial hypothesis and theory. In fact, theory, literature and empirical data continuously ‘feed’ each other with input (Figure 4.2).

“Science has a cyclical aspect“ (Kerlinger, 1986, p. 13).



**Figure 4.2**

Triangulation of the Research Theses

A continuing debate within the philosophies of science concerns whether a theory should be tested or generated during research. Independent of this, however, Popper (1960) argues that it is irrelevant from the point of view of science how theories have been obtained, i.e. by intuition or an inductive procedure. However, what is important is the testing of theories to confirm their validity or applicability. All testing of hypotheses can be interpreted as attempts to remove false theories. Popper contends that to ensure only the 'fittest' theories survive, theories should be subjected to stringent tests that attempt to eliminate them (Easterby-Smith et al., 1991, pp. 39 - 40).

Kuhn introduced the concept of a 'scientific paradigm' (Sayer, 1984, pp. 12 - 19). According to Kuhn, a paradigm alters as a consequence of a discovery, which cannot be explained by existing theories (i.e. 'anomalies' according to the existing theories). The resulting change in scientific thinking leads to a new paradigm which is capable of incorporating and explaining both this new and previously made observations. According to Kuhn, a new theory enables a scientist to adopt or develop new research instruments and explore new research areas, and also to investigate familiar research areas from new perspectives. He therefore argues, like Wittgenstein, that a theory influences what is observed. Hence, Kuhn's views were a substantial move away from empiricism and its insistence on an external reality against which theories can be measured.

Feyerabend further develops the concept that there is no extra-theoretical reality (Sayer, 1984, pp. 16 - 19).

"... As a result, everything is valid only within the confines of a particular theory" (Sayer, 1984, p. 19),

the concept of relativism. Feyerabend also implies that no individual view or reason is more valid than any other. It is argued moreover here that any paradigm functions to explain the present state of knowledge and, thus, should be regarded as a 'working framework'.



Phenomenology is a philosophy that has evolved over the past fifty years as a response to the application of positivist methodologies to the social sciences (Easterby-Smith et al., 1991, p. 24 - 26). Different variants became associated with the epistemology of phenomenology, including interpretative sociology, naturalistic enquiry, social constructionism, qualitative methodology, new paradigm enquiry, action research, and grounded theory. Each of these attempts to define its position as a distinct entity and objects to certain tenets associated with positivism. In general, the principal objection linking these standpoints within the philosophy of phenomenology is to the positivists' emphasis on measurements of event frequencies and on searching for external causes and fundamental laws to explain events, rather than attempting to discover why they occur. The emphasis in phenomenological philosophies is on the premise that reality is 'socially constructed', as opposed to 'objectively determined'. As a result of these contentions, it is logical that some of the main objections among phenomenologists are to the following central tenets of positivism (Easterby-Smith et al., 1991, pp. 25 - 26):

- 'Scientism' which maintains that only knowledge derived from objective measures is significant.
- Science should be based only on directly observed and measured data.
- Science is 'value-free'.

"Arguments, criticisms and debates are central to the progress of philosophy" (Easterby-Smith et al., 1991, p. 21).

As described, the philosophical standpoints of positivism and phenomenology contain a variety of distinct views about the nature of science and the conduct of scientific research, which are translated into practical applications in quantitative and qualitative methodologies, respectively. Contained within each discipline is a myriad of differing views on certain aspects, although each identifies itself as belonging more to one epistemology than to the other. However, researchers are increasingly moving between the two viewpoints, and examples, cited as relatively pure examples of either positivist or phenomenologist approaches, in practice are a combination of

both (Easterby-Smith et al., 1991, pp. 26 - 31). The world is increasingly viewed with more 'ecumenical eyes' (Miles and Huberman, 1984, p. 20). Indeed,

"refusal to be bound by a rigid methodology may itself be the last of all methodologies" (Sayer, 1984, p. 19).

"The strength of almost every measure is flawed in some way or other, and therefore research designs and strategies can be offset by counterbalancing strengths from one to another" (Easterby-Smith et al., 1991, p. 133).

Hence, it can be of value to 'triangulate', which involves using a combination of positivist (quantitative) and phenomenologist (qualitative) methods, referred to as a pluralist approach. In a pluralist approach, individual methods of data collection and analysis from the two opposing paradigms can be mixed, providing different perspectives on the subject studied. Methodological triangulation can result in a maximisation of the amount of data collected and, hence, the results obtained.

### 4.3 Methodological Approaches and Methods

“The term methodology ... implies that concrete studies are being scrutinized as to the procedures they use, the underlying assumptions they make, [and] the modes of explanation they consider as satisfactory. ... The methodologist codifies ongoing research practices to bring out what is consistent about them ...“ (Lazarsfeld and Rosenberg, 1955, p. 3).

The two main opposing philosophies of positivism and phenomenology can be practically applied through the corresponding methodological approaches of quantitative and qualitative methods, respectively.

“Methodology can make a direct contribution to the advancement of our knowledge of human affairs, inasmuch as it provides organizing principles by which such knowledge can be integrated and codified“ (Lazarsfeld and Rosenberg, 1955, p. 5).

Quantitative and qualitative methods can, to this extent, foster knowledge by guiding research. In their purest form, quantitative and qualitative methods are completely contrary to each other.

Quantitative methods imply that the researcher is independent, objective, unbiased and does not influence the subjects or situations under investigation (Hart, 1987, pp. 29 - 30). A conceptual framework is developed prior to data collection and hypotheses are tested (as opposed to generated) during the research process. The approach is, therefore, deductive. The samples studied are controlled so that they are random and representative of the population. Quantitative methods allow extensive data collection and typically involve the use of questionnaires. As a result, quantitative methods permit relatively rapid and financially economical data collection. Even if the whole population is not studied, the large sample investigated can lead to increased reliability and generalisability of the results obtained. The data collected is in, or can be converted to, a numerical form making comparisons relatively easy, while the standardisation inherent in the methods employed render the data amenable to standard statistical tests and allow the assessment of validity and scientific rigour.

Qualitative methods, in contrast, imply that the researcher becomes ‘involved’ and may even be the research instrument. Therefore, qualitative methods are subjective and observer bias may occur. The aim of the research is to determine why particular events are evident rather than record their occurrence. Qualitative methods can be defined as

“an array of interpretative techniques which seek to describe, decode, translate and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world“ (Van Maanen, 1983, p. 9).

Qualitative research is intensive, rather than extensive. Collection of qualitative data is often financially expensive, time-consuming and labour-intensive, producing large volumes of data. The amount of data is further increased by the deliberate lack of a conceptual framework to guide the research, since qualitative research is inductive, i.e. generates theories. After gathering the data, one of the difficulties is a lack of well formulated methods of analysis. Once the data has been analysed and assessed, the hypothesis generated is tested for validity within the conceptual framework constructed on the basis of data collected. The literature review is conducted at the end of the research process to confirm the findings, although this may reveal that nothing new has been discovered.

Qualitative data is attractive to the researcher because it offers a potentially greater understanding of the phenomena under study than quantitative data. It is

“...a source of well-grounded, rich descriptions and explanations of processes ...“ (Miles and Huberman, 1984, p. 15).

Qualitative research can also provide an understanding of complex decisions or phenomena. The Market Research Society’s Research and Development Sub-Committee on Qualitative Research, for example, stated that

“... information sought by ... managers is of a complex and subtle nature amenable to investigation by qualitative techniques“ (Hart, 1987, p. 28).

On the other hand, the analysis of qualitative data is largely generated and controlled by the researcher, so

“how can we be sure that an ‘earthy’, ‘undeniable’, ‘serendipitous’ finding is not, in fact, wrong?“ (Miles, 1979, quoted in Miles and Huberman, 1984, p. 16)

In contrast, quantitative data can be useful as an independent record of events and can allow the generalisation of findings as it is subject to statistical tests and scientific rigour. Moreover, the lack of a conceptual framework in the purist qualitative research method results in a lack of focus in data collection leading to time consuming and labour intensive data collection. However, too rigid a conceptual framework will prevent exploration of avenues which could potentially yield valuable information.

There are obviously problems at a philosophical level of combining quantitative and qualitative methods; however, a pluralist approach is justified as a means of investigating different aspects of the same problem. It is important that the methodologies are combined in such a way that the general direction and meaning is mutually compatible (Easterby-Smith et al., 1991, p. 31). Correspondingly, the use of each research method in this thesis, whether taken from quantitative or qualitative methodologies, is justified in terms of the research aim. After all,

“... the same goal can be reached by alternative roads, and ... instruments should be adapted to their function ...“ (Lazarsfeld and Rosenberg, 1955, p. 4),

providing it is apparent how the research goal has been achieved and is open to critical evaluation.

#### 4.4 Theoretical Framework

A theoretical framework was developed and proposed for the study of the tour operator business (Chapter 3). The framework was used to determine the boundaries of the study and limit the extent of investigation, to identify key factors, to generate research questions and to prepare and structure the empirical study. Moreover, the theoretical framework was used in the analysis of the collected data, by systematising and structuring them, thus fitting events into a pattern and enabling a degree of order. A theoretical framework can, thus, also be regarded as a 'visual catalogue' (Miles and Huberman, 1984, p. 29). The theoretical framework itself and its application to the tour operator business already in itself adds to the research literature, given a lack of application of methodologies to the study of travel and tourism (Wanhill, 1992). Although the framework was chosen to structure information prior to the research, flexibility was retained to ensure that potentially useful data was not neglected or 'filtered out'.

The use of a conceptual, or theoretical, framework is a deductivist approach. A literature review (i.e. 'desk' research) was conducted at the outset (Chapter 2) and served to identify an area in the present body of work where research would be of value in adding to the current state of knowledge. Research questions arose as a result of this literature survey. A conceptual framework was then created (Chapter 3) to provide a structure for the conduct of the research and the subsequent analysis of results generated. Further research questions were formulated after its construction. These questions allowed the movement from the theoretical framework to

“... considerations about sampling, instrumentation, and eventual analysis; they operationalize the conceptual framework“ (Miles and Huberman, 1984, p. 34).

Moreover, the flexibility of this pluralist approach enabled research questions as well as the framework itself to be refined and modified during fieldwork as a consequence of the data collected. This qualitative approach enabled the incorporation of new ideas generated from the analysis of in-depth interviews. The interviews served both

to test and to adapt the conceptual framework. Therefore, during the course of the research the researcher altered the conceptual framework from an exploratory one to a confirmatory one.

“Conceptual frameworks are simply the current version of the researcher’s map of the territory being investigated“ (Miles and Huberman, 1984, p. 33).

In fact, in the approach adopted here, the conceptual framework, the research questions and the data collection and bounding formed a ‘cyclical process’. The data collected was tested against the framework to confirm, refute or modify the framework, which was thus (to some extent) in a state of continual motion. It is contended here that where one has arrived may be essential for progression to the next stage, i.e. today’s knowledge may be a pre-requisite for what can be found out tomorrow.

This procedure counters, to some extent, the criticism of inductivists that

“... the wrong concepts, the wrong questions, and the wrong methodology for studying the phenomena ...“ (Miles and Huberman, 1984, p. 34)

have been applied, as the process was under continuous revision based mainly on the data collected. Moreover, in a pluralist approach, the conceptual framework should be flexible enough to cope with an unexpected discovery while at the same time being focused, relevant and practical.

Before the theoretical framework can be applied to prepare and structure the empirical survey and the collection of data, the tour operator business in Britain and Germany needs to be analysed to gain information on the population to be studied and to allow decisions on the sample size to be made. This information on the structure of the tour operator business in both countries is presented in the next section (Section 4.5). (This information is moreover used in later chapters as background information on the tour operator business.) In the subsequent section, Section 4.6, a sample is determined and survey methods used to collect the data are discussed.

#### 4.5 The Structure of the Tour Operator Business in Britain and Germany

British and German tour operators are commonly classified into large, medium and small-sized according to turnover and number of customers (or 'PAX handled') (Freyer, 1993, pp. 167 - 178; FVW International, 1994e and 1995e). These are neither formal nor strict classifications but rather rough groupings of the players in the tour operator business, and are used here as such.

No exact numbers of tour operators in Britain and Germany are published given that some travel agents and non travel and tourism organisations occasionally operate as tour operators without the need to hold a licence by organising, for example, a few coach trips during a year. An estimated 800 to 1,100 tour operators in total operated both in Britain and in Germany during the most recent years (Freyer, 1993, p. 168; Jordans, 1990, p. 31; Key Note Report, 1994b, p. 4). Approximately half to two-thirds of these were registered with the major tour operator associations The Association of British Travel Agents Limited (ABTA) in Britain (Table A8.1; also Key Note Report, 1993, p. 54; Mintel, 1994a, p. 16) and Deutscher Reisebüro-Verband e. V. (DRV) in Germany (Table A8.2). However, when excluding individual tour operator subsidiaries of larger groups, approximately only 50 tour operators in both Britain and Germany held significant market shares according to turnover, or number of customers, during the most recent years (FVW International, 1994b, 1994e, 1995b, 1995e and 1996a; Noakes, 1995a, 1995c, 1996a and 1996c).

Table 4.1 and Table 4.2 show the estimated market shares of tour operators in Germany and Britain, respectively, as at approximately the times of the interviews. (For more recent market shares see FVW International, 1995e, for Germany; and Noakes, 1996a and 1996c, for Britain. For market shares during previous years see FVW International, 1986, 1987, 1988, 1989, 1990, 1991, 1992 and 1993, for Germany; and EIU, 1993, Jordans, 1979, 1984 and 1990, Key Note Report, 1990, 1991, 1993, 1994a and 1994b, Mintel, 1987, MSI Databrief, 1989a, Plant, 1988, for Britain.)



In Germany, 46 tour operator groups controlled an estimated 77% of the total tour operator market according to turnover (Table 4.1), with the largest five tour operator groups controlling in excess of 51% alone. Since these figures also include domestic and incoming tourism figures in Germany, and given that especially the large German tour operator groups have relatively small market shares in these sectors, the market share of the outgoing package holiday business controlled by these 46 tour operators is even greater than 77%. Therefore, these figures reflect a high concentration of market share in the German tour operator business, and in the German outgoing tour operator business in particular.

Tour Operator / Tour Operator Group	Market Shares <sup>1</sup>
Touristik Union International GmbH & Co. KG (TUI)	19.9%
NUR Touristic GmbH	12.0%
The LTU Group	10.2%
Deutsches Reisebüro GmbH (DER)	5.3%
International Tourist Services Länderreisedienste GmbH (ITS)	3.7%
<b>Large tour operators' total (5 tour operator groups)</b>	<b>51.1%</b>
Largest medium-sized tour operator Alltours Flugreisen GmbH	2.8%
<b>Medium-sized tour operators' total (41 tour operators / groups)</b>	<b>25.9%</b>
<b>Small-sized and other medium-sized tour operators' total</b>	<b>23.0%</b>
<b>Total</b>	<b>100.0%</b>

<sup>1</sup> Source: FVW International, 1994e, pp. 1 - 4. Market shares are according to turnover during November 1993 to November 1994 (i.e. winter and summer season), assuming that the 45 (56 when counting the subsidiaries separately) tour operators surveyed by FVW International had a total package holiday market share of 77% in Germany. Kuoni Fernreisen GmbH was included (for reasons discussed below) as a medium-sized tour operator with a market share of 0% in 1993/1994.

**Table 4.1**

**Estimated German Market Shares of Tour Operators in 1994**

Similarly, the British outgoing tour operator business is highly concentrated. Compared to Germany, less comprehensive and detailed data was available for the total British market. Table 4.2 shows the estimated market shares, according to numbers of passengers carried, with regards to the (outgoing) air inclusive tour (AIT) market, i.e. the key package holiday market, which were held by the British tour

operators. Approximately 80% of the AIT market was controlled by 34 tour operators, with the largest four tour operator groups controlling 60% alone. In addition, the British domestic and incoming package holiday market is also becoming increasingly concentrated, with The Thomson Travel Group having acquired the largest three cottage and self-catering enterprises and a number of smaller companies in Britain during 1994 and 1995.

Tour Operator / Tour Operator Group	Market Shares <sup>1</sup>
The Thomson Travel Group	23%
Airtours PLC	16%
First Choice Holidays PLC	13%
The Globus Group (Cosmos)	8%
<b>Large tour operators' total (4 tour operator groups)</b>	<b>60%</b>
Largest medium-sized tour operator Iberotravel Limited	4%
<b>Medium-sized tour operators' total (30 tour operators / groups)</b>	<b>&gt; 20%</b>
<b>Small-sized and other medium-sized tour operators' total</b>	<b>&lt; 20%</b>
<b>Total</b>	<b>100%</b>

<sup>1</sup> Source: Noakes, 1995c; also Key Note Report, 1994a, p. 80. Market shares are according to number of passengers carried under the air travel organisers' licence (ATOL) during March 1994 to March 1995 (i.e. summer and winter season).

**Table 4.2**  
Estimated British Market Shares of Tour Operators in 1994

More formally, concentration ratios (CR) can be calculated as a simple measurement of concentration within an industry or sector (Bamberg and Baur, 1987, pp. 24 - 29). The concentration ratio of the largest  $g$  companies,  $CR_g$ , out of a population of  $n$  companies, is calculated as shown in Figure 4.3, with  $x_i$  denoting the values measured (such as market shares).

$$CR_g = \frac{\sum_{i=1}^g x_i}{\sum_{i=1}^n x_i} \quad ; x_1 \geq \dots \geq x_{n-1} \geq x_n \geq 0; \quad \sum_{i=1}^n x_i > 0$$

**Figure 4.3**  
Concentration Ratio (CR) Formula

Therefore, the concentration ratio of the largest five German and the largest four British tour operators, with n being the total number of tour operators in a country and  $x_i$  an individual tour operator's market share in percent as stated above, is:

$$CR_5 = \frac{51.1}{100} = 0.511 \text{ in Germany} \quad \text{and} \quad CR_4 = \frac{60}{100} = 0.6 \text{ in Britain.}$$

These high concentration ratios reflect the domination of the tour operator business, and the outgoing tour operator business in particular, in Britain and Germany by a few large tour operators (also Allard, 1994; Bywater, 1992; Devas, 1991, pp. 8-4 - 8-5; Renshaw, 1994). (The concentration of the tour operator business is, in fact, not a recent phenomenon, but started in the mid 1960's, in parallel with the trend towards specialisation of smaller tour operators in particular (Robinson, 1976, p. 91).) More detailed data for all large and most medium-sized tour operators in Britain and Germany is presented in Table 4.3 and Table 4.4, respectively. In Britain in 1994, the four largest tour operator groups had a combined turnover of over DM 7.5 billion (£3.1 billion) and over 11 million customers (Table 4.3). In Germany in the same year, the five largest tour operator groups had a combined turnover of almost DM 13.2 billion (£5.5 billion) and over 12 million customers (Table 4.4).

Rank 1	Tour Operator (Group) in Britain <sup>2</sup>	Turnover in 1994 (DM millions) <sup>3</sup>	Customers in 1994 (thousands) <sup>4</sup>
1	<b>The Thomson Travel Group</b>	<b>3,125.0</b>	<b>4,100.0</b>
2	<b>Airtours PLC</b>	<b>2,116.9</b>	<b>3,500.0</b>
3	<b>First Choice Holidays PLC</b>	<b>1,392.7</b>	<b>2,046.0</b>
4	The Globus Group (Cosmos)	868.0	1,600.0
<b>Large Tour Operators' Total</b>		<b>7,502.6</b>	<b>11,246.0</b>
5	Kuoni Travel Limited (Kuoni Reisen Holding AG, Switzerland)	570.4	(183.8)
6	<b>Iberotravel Limited / Beach Villas (Holidays) Limited</b> (Grupo Viajes Iberia (GVI), Spain)	<b>&gt; 496.0</b>	<b>(731.5)</b>
7	<b>Unijet Travel Limited</b> (Unijet Group PLC)	<b>297.6</b>	<b>500.0</b>
8	<b>Bridge Travel Group / Cresta Holidays Limited</b> (Sun International N.V., Belgium)	<b>262.7</b>	<b>427.0</b>
9	<b>Virgin Holidays Limited</b> (Virgin Travel Group)	<b>*235.6</b>	<b>(166.1)</b>
10	Eurocamp Travel Limited	174.1	*500.0
11	<b>Hotelplan International Travel Organisation Limited (Inghams Travel)</b> (Hotelplan Internationale Reiseorganisation AG, Switzerland)	<b>*162.7</b>	<b>(120.0)</b>
12	Wallace Arnold Tours Limited	*161.2	*390.0
13	<b>British Airways Holidays Limited</b> (British Airways PLC)	<b>*148.8</b>	<b>(141.2)</b>
14	<b>Inspirations PLC</b>	<b>147.1</b>	<b>193.4</b>
15	Sunset Holidays PLC / Elvington Limited (Club 18-30) (Flying Colours Leisure Group)	> *124.2	(321.8)
16	<b>Thomas Cook Holidays</b> (The Thomas Cook Group Limited)	<b>N. A.</b>	<b>(165.5)</b>
17	<b>Jetsave Travel Limited / Crystal Holidays Limited</b> (Dial Corporation, USA)	<b>N. A.</b>	<b>(112.9)</b>
18	<b>The Air Travel Group Holidays Limited</b> (Granada Group PLC)	<b>N. A.</b>	<b>(102.5)</b>
19	<b>Manos (UK) Limited</b>	<b>N. A.</b>	<b>(98.8)</b>
20	A. T. Mays Holidays (A. T. Mays Group)	N. A.	(90.4)
21	The Globespan Group PLC	N. A.	(77.6)
22	Balkan Holidays	N. A.	(63.9)
23	Saga Holidays Limited	N. A.	(61.9)
24	<b>Panorama Holiday Group Limited</b>	<b>N. A.</b>	<b>(59.1)</b>
25	Hayes & Jarvis Travel Limited	N. A.	(54.2)
26	SkiBound Holidays	N. A.	(54.1)
27	Direct Holidays PLC	N. A.	(52.6)
28	Kosmar Villa Holidays	N. A.	(49.8)
29	HCCT Holidays	N. A.	(46.1)
30	American Express Services Europe Limited	N. A.	(43.9)
31	Travelscene Limited	N. A.	(40.0)
32	RCI Europe Limited (Resort Condominiums International)	N. A.	(39.8)
33	Cunard PLC	N. A.	((39.6))
34	Channel Islands Travel Service	N. A.	((37.1))
35	<b>Meon Travel Limited</b> (Meon Travel Group)	<b>37.0</b>	<b>30.0</b>
<b>Medium-Sized Tour Operators' Total</b>		<b>&gt; 2,817.4</b>	<b>4,994.6</b>
<b>Total</b>		<b>&gt; 10,320.0</b>	<b>16,240.6</b>
<b>Surveyed Tour Operators' Total (and Percentage of Total)</b>		<b>&gt; 8,422.1 (approx. 80%)</b>	<b>12,494.0 (76.9%)</b>

Interviewed tour operators and their corresponding figures are highlighted.

<sup>1</sup> 1 - 15 in decreasing order in terms of turnover, including that of national subsidiaries; 16 - 34 in decreasing order in terms of customers.

<sup>2</sup> Corresponding tour operator or travel and tourism groups are stated in brackets.

<sup>3</sup> Figures marked with an asterisk are from 1993.

<sup>4</sup> Figures marked with an asterisk are from 1993; figures in brackets are CAA figures in 1994/1995 (Noakes, 1995c), and figures in double brackets are CAA figures in 1993/1994 (Noakes, 1995a).

**Table 4.3**  
**The Leading British Tour Operators in Late 1994**

Rank 1	Tour Operator (Group) in Germany <sup>2</sup>	Turnover in 1994 (DM millions)	Customers in 1994 (thousands)
1	Touristik Union International GmbH & Co. KG (TUI)	5,122.5	4,414.0
2	NUR Touristic GmbH	3,094.7	2,887.4
3	The LTU Group	2,643.0	1,933.9
4	Deutsches Reisebüro GmbH (DER)	1,360.1	1,903.8
5	International Tourist Services Länderreisedienste GmbH (ITS)	961.6	1,067.3
<b>Large Tour Operators' Total</b>		<b>13,181.9</b>	<b>12,206.4</b>
6	Alltours Flugreisen GmbH	731.0	620.0
7	Kreutzer Touristik GmbH	554.8	401.9
8	Öger Holding GmbH	538.2	529.5
9	Fischer Reisen GmbH (Deutsche Lufthansa AG)	438.0	407.9
10	Hetzl-Reisen GmbH & Co. KG	401.5	285.7
11	Air Marin Flugreisen GmbH (Alpha Holding GmbH)	382.0	300.9
12	Frosch Touristik GmbH	325.8	324.8
13	ADAC Reise GmbH	319.0	276.0
14	Studiosus Reisen München GmbH	282.1	88.6
15	Ameropa-Reisen GmbH (Deutsche Bahn AG)	224.9	534.6
16	Phoenix Reisen GmbH	182.6	65.6
17	Olimar Flugreisen GmbH	165.4	156.2
18	Unger Flugreisen GmbH	137.7	131.7
18	Nazar Holiday Reiseveranstaltung GmbH (Ten Tur Holding, Turkey)	121.1	122.9
20	Club Méditerranée Deutschland GmbH	111.0	67.1
21	Feria Internationale Reisen GmbH	110.0	51.0
22	Gesellschaft für internationale Begegnung und Cooperation mbH (GeBeCo)	110.0	32.5
23	Berliner Flug Ring GmbH (BFR)	91.4	84.8
24	Inter Chalet Ferienhaus-Gesellschaft mbH	91.0	316.2
25	Attika Reisen AG	90.8	71.0
26	Transocean Tours Touristik GmbH	89.0	21.0
27	Bucher Reisen GmbH	78.0	71.8
28	Ikarus Tours GmbH	70.4	14.9
29	Nordisk Ferie Novasol Ferienhausvermittlung GmbH	70.0	340.0
30	Hapag-Lloyd Tours GmbH (Hapag-Lloyd AG)	68.0	26.0
31	Klingenstein & Partner Studienreisen	61.3	13.4
32	Schauinsland-Reisen GmbH	61.2	60.4
33	Dr. Wulf GmbH, (Hotelplan Internationale Reiseorganisation AG, Switzerland)	55.7	130.7
34	Nova Reisen GmbH & Co.	52.1	33.8
35	Marco Polo Reisen GmbH	46.5	9.7
36	Delphin Seereisen GmbH	39.0	7.8
37	Wikinger Reisen GmbH	37.1	15.2

Rank 1	Tour Operator (Group) in Germany <sup>2</sup>	Turnover in 1994 (DM millions)	Customers in 1994 (thousands)
38	TRD-Reisen Fritz Fischer GmbH & Co. KG	35.0	60.0
39	Anton Graf GmbH	30.0	126.5
40	Hafermann-Reisen GmbH & Co. KG	28.9	72.1
41	Hirsch-Reisen GmbH	26.8	30.9
42	Isaria Nord Süd Reisen GmbH & Co. KG (INS-Reisen)	14.6	30.8
43	<b>Reisebüro Jäger GmbH</b>	<b>11.8</b>	<b>18.8</b>
44	RUF-Reisen Trend Touristik GmbH	10.6	13.5
45	Tropicana Touristik GmbH	2.7	2.5
46	<b>Kuoni Fernreisen GmbH</b> <sup>3</sup> (Kuoni Reisen Holding AG, Switzerland)	/	/
Medium-Sized Tour Operators' Total		6,297.0	5,968.7
Total		19,478.9	18,175.1
Surveyed Tour Operators' Total (and Percentage of Total)		17,383.9 (89.2%)	15,274.6 (84.0%)

Interviewed tour operators and their corresponding figures are highlighted.

<sup>1</sup> In decreasing order in terms of turnover, including that of national subsidiaries.

<sup>2</sup> Corresponding tour operator or travel and tourism groups are stated in brackets.

<sup>3</sup> Started trading on 1 August 1994.

Source: FVW International, 1994e, pp. 15 - 20.

**Table 4.4**  
**The Leading German Tour Operators in Late 1994**

In 1994, 35 British tour operators produced a combined turnover of over DM 10 billion (£4.2 billion), having served over 16 million customers (Table 4.3); and 46 German tour operators produced a combined turnover of almost DM 19.5 billion (£8.1 billion), having served over 18 million customers (Table 4.4). Information regarding the interviews is included in Table 4.3 and Table 4.4, but is discussed in the next section.

## 4.6 Sampling and Survey Methods

In this research, bounding the collection of data involved, among others, decisions on the type and number of operators in the package holiday business to be studied, i.e. sampling. The purpose of sampling is to take parts out of a population (Miles and Huberman, 1984, p. 38). The level of aggregation and detailed information on all interviewed tour operators and tour operator associations, as well as reasons for not interviewing other tour operators and tour operator associations, are stated in Appendix 5. (The main tour operator associations are described in Appendix 8, and the main tour operators in Britain and Germany are outlined in Appendix 9 and Appendix 10, respectively.) The samples surveyed in Britain and Germany had the following statistics.

The tour operators interviewed in Britain controlled an estimated 72% of the outgoing tour operator business (Table 4.5). They had a combined turnover of over DM 8.4 billion (£3.5 billion) in 1994 (approximately 80% of the combined turnover of the tour operators listed in Table 4.3), and carried almost 12.5 million customers (almost 77% of the customer base of the tour operators listed in Table 4.3).

Tour Operators and Tour Operator Groups	Market Shares <sup>1</sup>
Surveyed large tour operators' total (largest 3 out of 4 interviewed)	52%
Surveyed medium-sized tour operators' total (13 interviewed)	approx. 15%
AITO's total (representing 150 tour operators)	approx. 5%
Surveyed tour operators' total	72%

<sup>1</sup> According to Table 4.2 and AITO figures (Table A8.4).

**Table 4.5**

Estimated Market Shares of Interviewed British Tour Operators

The tour operators interviewed in Germany controlled an estimated 67.5% of the total tour operator business (Table 4.6) and an even larger share of the outgoing tour operator business. They had a combined turnover of almost DM 17.4 billion (£7.3 billion) in 1994 (almost 90% of the combined turnover of the tour operators listed in Table 4.4), and carried almost 15.3 million customers (84% of the total customer base of the tour operators listed in Table 4.4).

Tour Operators and Tour Operator Groups	Market Shares <sup>1</sup>
Surveyed large tour operators' total (all 5 interviewed)	51.1%
Surveyed medium-sized tour operators' total (23 interviewed)	16.4%
Surveyed tour operators' total	67.5%

<sup>1</sup> According to Table 4.1.

**Table 4.6**  
Estimated Market Shares of Interviewed German Tour Operators

Therefore, generalisability of results obtained applies to the extent that the British and German tour operators surveyed accounted for relatively high market shares, according to both turnover and number of customers, in their respective countries.

With regards to the suppliers of tour operators, particular emphasis was given to the study of airlines. As expressed by the tour operators in the interviews, airline seats are among their most crucial supplies in terms of financial value and number. In the UK in 1994, the method of transport for outgoing holidays was by air in 74% of the cases, and by sea in all other cases (Intel, 1994b, p. 8; also BTA, 1993, p. 76; note that rail travel directly between Britain and Europe has also been available since 1994 due to the opening of the Channel Tunnel). Air transportation has also increased in importance in Germany during recent years (Mundt, 1990), though compared to the UK the percentage was lower (for example, Statistisches Bundesamt, 1991, p. 269) due to Germany's geographical location as a non-island state. However, although the majority of outgoing holidays in Germany was



conducted by car as well as by train, coach, ship and other transportation methods, most of these holidays were unpackaged, thus underlining the importance of air travel to the outgoing package holiday business in Germany. Therefore, several major charter airlines, which were not subsidiaries of the interviewed tour operators, were interviewed separately (Appendix 5).

A cross-sectional study was carried out because it fulfilled the study objectives by producing a 'state of the art' survey for one point in time. In addition, it satisfied the aim of the research to emphasise regularities and irregularities by making comparisons across a sample (Easterby-Smith et al., 1991, p. 23). Cross-sectional studies tend to be more financially and time economical than longitudinal studies. Their use is associated with the positivist paradigm, as inductivists argue that this approach does not explain why the observed findings have occurred as these have not been followed over time as in a longitudinal study. However, questions about past and future strategies were incorporated into the survey resulting in some information on developments over time and, consequently, in data of longer term value. Literature (primary sources, such as company reports, as well as secondary sources, such as academic and trade publications) was also used, where stated, to incorporate information on past developments and to up-date the data obtained.

Interviews are both a qualitative and quantitative technique, and, indeed, in-depth interviewing is regarded as

“the most fundamental of all qualitative methods ...” (Easterby-Smith et al., 1991, p. 71).

Given that the data to be gathered was of both a qualitative as well as a quantitative nature, interviews were chosen as the most appropriate means of collecting it. More specifically, it was decided to conduct personal interviews, either face-to-face or by telephone. The possibility of obtaining the information sought from a mail survey was dismissed on the basis that many of the questions and responses were of a complex nature and often needed to be explained and clarified. Personal interviews also reduced problems of ambiguity. In addition, the opportunity was given to explore responses and discuss open-ended questions to a greater extent. There was,

moreover, increased assurance that persons with the knowledge and experience necessary to answer the questions were interviewed, and that tact could be altered, if necessary. It was also assumed that the response rate would be higher in personal interviews. The main drawbacks of the personal interviews were, however, higher costs (involving, for example, national and international travelling, accommodation and telephone expenses) and time consumption (especially in gaining access, setting up the interviews and conducting them). (For a general discussion of survey data collection methods see Hart, 1987, especially p. 35.)

Further benefits, which are generally regarded as resulting from face-to-face interviews as opposed to other means of survey techniques, and which were thought to have also applied in this research, include:

- The building of a rapport and trust relationship between interviewer and interviewee. Related to this was the reluctance of the interviewee to discuss commercially sensitive information outwith a face-to-face setting. (Senior management of larger tour operators, for example, were only willing to be interviewed face-to-face.) The author felt in particular that interviewees were more inclined to give information when questioned on a personal basis after being assured that the research was to be used for academic and not for commercial purposes, given that, as one German interviewee put it,

“information and computer systems are at the heart of the business of tour operators; thus giving information about these away, would be giving the company’s competencies away“  
(free translation by the author).

Both in face-to-face and telephone interviews, the researcher assisted in establishing a trust relationship through intensive research on the companies involved, for example through annual reports and other industry sources, and tailoring the questions to the characteristics of that company. It is argued that this insured that relevant topics were discussed and also assisted in gaining the respect and trust of the respondent (Diesing, 1972, p. 142; Easterby-Smith et al., 1991, p. 77).

- The opportunity to study facial expressions and non-verbal communication which assisted in determining what the interviewee regarded as priorities.
- The chance to view computer systems and to obtain additional data such as print-outs, which the author believes would not have been obtained otherwise.

Face-to-face, in-depth (or ‘clinical’) interviews were conducted with all large tour operators in Britain (Table 4.2) and Germany (Table 4.1) (with the exception of the failed interview with Cosmos; Appendix 5). These tour operators had been identified by the literature as being intensive and innovative users of new ICTs. (In addition, these tour operators can be regarded as the main players in the tour operator business in terms of turnover, number of customers as well as number of employees, and can be regarded, to some extent, as ‘trend setters’.) Moreover, it was hypothesised that these tour operators would use relatively more technology because of their company size, thus would require a longer interview to cover the technologies used. Correspondingly, it was hypothesised that medium and small-sized tour operators used less technologies, thus requiring less interview time. In general, these hypotheses proved correct.

In addition, Kuoni Reisen Holding AG (Kuoni Fernreisen GmbH in Germany and Kuoni Travel Limited in Britain) and The Thomas Cook Group Limited (Thomas Cook Holidays in Britain and Thomas Cook Reisebüro GmbH in Germany) were chosen for face-to-face, in-depth interviewing for the following reasons:

- Both groups of companies were identified from the literature as being innovative in using information and communication technologies.
- Both groups of companies were major European (and indeed global) travel and tourism groups. Moreover, Kuoni Reisen Holding AG and ITS, and The Thomas Cook Group Limited and the LTU Group (via WestLB), were linked through ownership, thus forming even larger travel and tourism groups.

Both groups of companies also operated in Britain as well as in Germany, although this turned out to be of minimal importance to the research, as discussed in later chapters.

The theoretical framework was applied to plan and structure the empirical survey. Each interview was individually prepared by specifically adapting the theoretical framework to a tour operator's circumstances, for example with regards to its individual charter airline, accommodation and travel agent subsidiaries. All interviews were conducted according to a semi-structured (or focused) format. A structured format was considered too rigid given the complexity of the developments studied; and an unstructured format was considered too open, producing copious amounts of data, which would have been difficult to analyse and especially difficult to compare.

A document was used as the basic structure, incorporating specific as well as general questions, with questions containing purely descriptive elements as well as those exploring reasons behind certain phenomena. Conversation outside this structure, however, was encouraged using open-ended questions. Open-ended questions were asked in all interviews to determine possible areas of importance not initially considered in the conceptual framework, while the other questions ensured that certain core issues were covered. A semi-structured interview format was obviously necessary to allow for both open-ended as well as closed questions. Most questions asked were 'questions of fact' rather than 'questions of opinion' (Easterby-Smith et al., 1991, p. 119). Although interviewer bias is somewhat reduced as a consequence of in-depth interviewing (Easterby-Smith et al., 1991, pp. 79 - 80), non-leading probes were used when useful or necessary. This type of interview can also be described as 'interviewer-guided' or 'interviewer-led'. (The general formats for the face-to-face in-depth interviews in Britain and Germany are listed in Appendix 6 and Appendix 7, respectively. The telephone interviews were scaled down versions of these.)

The face-to-face, in-depth interviews were conducted first, resulting in increased clarity about the research area and provided confirmation that the initial theoretical framework provided a valid structure for the research. Afterwards, all other tour operators were interviewed by telephone, using a shortened version of the semi-

structured face-to-face interview format. Nevertheless, given that the lengths of the telephone interviews were very flexible, and due to a lower use of new ICTs by the medium and small-sized tour operators, these interviews were conducted to a relatively great depth. Telephone interviews were conducted for financial reasons and because this enabled a larger number of organisations to be interviewed within a limited time frame.

The theoretical framework was applied not only in the preparation and conduction of the empirical survey, but also in the analysis of the data gained. Data was analysed both during and after its collection.

*“Analysis during data collection lets the fieldworker cycle back and forth between thinking about the existing data and generating strategies for collecting new - often better quality - data; ... So the ideal model for data collection and analysis is one that interweaves them from the beginning“ (Miles and Huberman, 1984, p. 49).*

Data analysis conducted during data collection thus allowed continual reworking of the research questions and the theoretical framework. On the one hand, the use of a theoretical framework counters the positivists’ concern that analysis of most qualitative research is non-systematic and non-rigorous (Hart, 1987, p. 28). On the other hand, the flexibility of the framework counters the inductivists’ concern of a too rigorous research structure.

Effectively, a mixture of ‘content analysis’ and ‘grounded theory’ (Easterby-Smith et al., 1991, pp. 105 - 112) was carried out. Content analysis was conducted to the extent that hypotheses were tested (i.e. a deductive approach) and the ‘frequency’ of certain system changes were determined. Grounded theory was conducted to the extent that some non standard data was collected, certain themes were ‘teased out’ and patterns were developed (i.e. an inductive approach). With respect to non standard data, the grounded theory steps of familiarisation, reflection, conceptualisation, cataloguing concepts, re-coding, linking, and re-evaluation were applied to various degrees.

Whereas the analysis in Chapter 5 and Chapter 6 mainly investigates past and present developments, present and future trends are analysed in Chapter 7. While this involves difficulties in predicting future events, analysing future developments is possible to an extent when assumed that:

- “Most of the variables remain constant most of the time.
- Most individuals do not override the influencing factors most of the time.
- Most interpretations will be valid for the future as well as the past.
- Prediction tends to improve as the object of study turns from individuals to collections of individuals“ (Handy, 1993, p. 14).

“Organizational phenomena ... should be explained by the kind of contextual interpretation used by an historian. Such interpretation would allow us to predict ‘trends’ with some degree of confidence. To add precise quantities to those trends, as in the physical sciences, would, however, be inappropriate and unrealistic“ (Handy, 1993, p. 13).

Finally, it should be noted that the development and discussion of the theoretical framework as an empirical and analytical tool avoids possible ambiguity and contributes to research in itself.

“Analysis methods are rarely reported in detail in published case studies or in cross-site synthesis reports“ (Miles and Huberman, 1984, p. 16).

Therefore, the presentation and application of the theoretical framework adopted here allows not only greater insights into its actual use, but also close external scrutiny and criticism.

## **Chapter 5. Reasons for the Development of New System Strategies**

A key assumption of the argumentation presented in Chapters 5 to 7 is that the new system strategies (and corresponding co-ordination strategies) of tour operators are (with minor exceptions) not a consequence of the availability of new technologies to tour operators. Instead, the new strategies are a result of other developments in the package holiday business (and the travel and tourism industry). This assumption is based on the observation that core technologies which tour operators are adopting as part of their new system strategies have been available to them for a number of years. Relational databases, electronic data interchange (EDI), and (intra- and inter-organisational) computer integration existed during the 1980's (Alt and Zbornik, 1993; Bar et al., 1989; Morgan and Davis, 1989; Niketic and Mules, 1993, p. 11; Stahlknecht, 1990; Wieland, 1989), as did fully transparent links to GDSs (Ellis, 1992). Despite the availability of these technologies (and sufficient capital), most tour operators did not see the need to implement these technologies. Therefore, it is argued that the new decisions of tour operators are a consequence of other developments, most of all those described in this chapter.

Some technological developments have taken place recently, such as the adoption of the World Wide Web (Appendix 1) and in multimedia (Bly et al., 1993; Ivanitzki, 1993). In Chapter 6, however, it is shown that these technologies are mainly used to assist in, or replace, some established activities especially in marketing and distribution, rather than to challenge common working practices and create completely new activities for tour operators. Instead, it is especially other developments in the package holiday business and the travel and tourism industry which are leading to, or in fact making it necessary for, tour operators to re-invent and re-engineer their business practices.

## 5.1 Introduction

Main consequences of the four elements ‘structure’, ‘governance forms’, ‘transaction and relationship attributes’, and ‘resource base’ on the co-ordination strategies of tour operators, and new system strategies in particular, are investigated in this chapter with regards to each of the five levels of analysis. The proposed theoretical framework for the study of threats of industry forces (Levels 4 and 5) and drawbacks of positioning strategies (Levels 1 to 3) (Figure 3.7) is especially used in this analysis. This research identifies and presents key developments and impacts that appear to have led (or are leading) to tour operators adopting new co-ordination strategies. The aim is not to provide a ‘complete’ and detailed listing of such impacts.

“... The study of ... organizations is not to do with predictive certainty - for two very good reasons:

- The multiplicity of variables impinging on any one organizational situation is so great ... that data on all of them sufficient to predict the precise outcome of that multiple inter-relationship would never in practice be forthcoming.
- What seems to be the inherent ability of the human being to override many of the influences on his behaviour“ (Handy, 1993, p. 13).

Instead, a structured overview of major developments is created, giving the main reasons for the development of new co-ordination and system strategies by tour operators, thus putting those developments into a wider perspective. Moreover, this research provides a systematic insight into the British and German package holiday business, which appears not to have been conducted to such an extent before. Key areas investigated in this chapter are outlined in Table 5.1. Some areas were not covered since developments in these were typically of general nature, as discussed below, and, thus, were less relevant to the analysed co-operation strategies. Apart from some key developments, interdependencies between factors at different levels are also not described given their complexities and little relevance.



Level of Analysis to which Co-ordination Strategy is Applied	Structure of Organisation	Governance Forms of Organisation	Transaction and Relationship Attributes of Organisation	Resource Base of Organisation
Level 5 Travel and Tourism Industry (and other industries)	structure of industry, potential entrants, substitute products		legislative / institutional developments on a national, European and worldwide level	
Level 4 Tour Operator Sector	structure of tour operator sector, supply of and demand for holiday packages	market-based relationships	transaction and relationship attributes in tour operator sector	
Level 3 Tour Operator Partnership(s)	structure of tour operator partnership(s)	network-based relationships	transaction and relationship attributes in tour operator partnership(s)	
Level 2 Tour Operator Group	structure of tour operator group		transaction and relationship attributes in tour operator group	resources of tour operator group
Level 1 Tour Operator			transaction and relationship attributes in tour operator company	resources of tour operator

**Table 5.1**  
**Key Areas Studied**

All information presented in this chapter was gained from the literature, where stated, and from the (mostly in-depth) interviews. It is discussed how developments and threats in the tour operator sector and the travel and tourism industry are impacting on the co-ordination strategies of tour operators. After each discussion of a main development, it is briefly mentioned how new co-ordination strategies and corresponding new system strategies assist tour operators in responding to these various developments and threats. These new strategies are then outlined in detail in Chapters 6 and 7.

## 5.2 Level 5 Impacts

*Structure of the travel and tourism industry (and other industries):* A continuous threat has been the entry of major travel and tourism outsiders, such as banks and other financial services providers, into the travel and tourism industry given their capital strength. More recently, information services providers such as Microsoft Corporation, media companies such as Bertelsmann AG, and telecommunications companies such as British Telecom PLC (BT) and Deutsche Telekom AG are entering, or threatening to enter, the travel and tourism industry (Fill, 1995). While these companies have relatively little initial knowledge of travel and tourism products, their strengths lie especially in the use of new ICTs. Given that new ICTs have gained central importance to the travel and tourism industry (Sections 1.6 and 2.2), the competitive advantage of these companies in the use of new ICTs may outweigh the competitive advantage of established travel and tourism companies. Therefore, travel and tourism companies, and tour operators in particular, have to increasingly adopt new ICTs to protect their position in the industry. By implementing new system strategies and gaining experience in the use of new ICTs, tour operators thus can especially reduce the threat of entry by these companies into the business.

Threats posed by substitute products from outside the travel and tourism industry are relatively insignificant. Consumer spending on travel and tourism products in developed nations is comparatively high as a consequence of stable income and long leisure time. In contrast, various products threaten to substitute each other within the travel and tourism industry. For tour operators, the main threat is the substitution of packaged holidays with unpackaged holidays or leisure and entertainment products. Independent travel, timeshare holidays (Evans, 1994; Haylock, 1994; National Westminster Bank, 1988, p. 2) and leisure products which encourage consumers to stay at home are threats to packaged holidays. Given an increased demand for these products (Section 1.1), tour operators have to respond to these threats of substitution. The new co-ordination strategies, and especially the new system strategies, of tour

operators are particularly aimed at dealing with this threat of substitution by enabling tour operators to provide tailor-made and wide ranging holiday (including entertainment) products.

A further impact on tour operators' strategies is the dominance of transnational tourism corporations (TTCs) in many sectors of the global travel and tourism industry (Ascher, 1985; UN, 1982). The continuing trends of globalisation, integration and concentration (Jordans, 1990, pp. 34 - 35) foremost led to threats of bargaining power. Tour operators can respond to these threats with new system strategies, and international (horizontal and vertical) integration supported by new system strategies.

*Governance forms, and resource base:* Developments with regards to governance forms and resources at an industry level, such as the emergence of global electronic market and hierarchy systems, are relatively general and rather long-term developments. While these impacts are too broad to investigate within the given resources of this study, it can be briefly argued that these emerging systems are further increasing the need for tour operators to implement new system strategies to prepare for, and cope with, these developments.

*Transaction and relationship attributes:* Key issues are the liberalisation and deregulation (including privatisation and denationalisation) of many sectors of the travel and tourism industry, especially the air travel sector (Jordans, 1990, pp. 34 - 35; Kleit, 1991; Tomkins, 1994a). Preceded by deregulation moves in the United States in 1978, the airline industry in the European Union has been going through a phase of liberalisation since the mid 1980's (Jim Fitzpatrick and Associates, 1989, pp. 36 - 38; Jordans, 1990, p. 21), with a wider 'open skies' policy to take effect on 1 April 1997 (Barber, 1994; Barber et al., 1994; Economist, 1992/93; Gardner, 1994). These trends are supported by harmonisation of taxation and legislation (or 're-

regulation'; Costello et al., 1989, pp. 59 - 73), for example as part of GATT or European Union initiatives, and the establishment of standards (Geuther, 1996), such as those for electronic information exchange (for example ISO/OSI, UN/EDIFACT (Steven, 1992)) and quality (such as EN (European Norm) ISO 9000, implemented both as BS (British Standard) and DIN (Deutsche Industrienorm / German industrial standard), and BS 5750). These developments are in particular removing barriers for travel and tourism enterprises wanting to trade internationally or even operate as global corporations. This fosters the trend towards internationalisation and globalisation of suppliers, buyers and competitors of tour operators, thus changing relationship attributes and making it necessary for them to adopt new co-ordination strategies themselves.

A more specific development affecting relationship attributes within the European package holiday business has been recent European Union legislation. This legislation is discussed both at Level 5 and Level 4. At Level 4, consequences of this legislation specific to the tour operator sector are outlined, while here at Level 5, more general consequences are described. These more general issues form part of a wider range of legislation passed by the European Union to protect consumers and guarantee a minimum level of quality for consumers.

The main legislation concerning British and German tour operators is the 'EC Directive (90/314/EEC) on Package Travel, Package Holidays and Package Tours' (Bywater, 1992, pp. 48 - 49; Hodiernne and Botterill, 1993; Jim Fitzpatrick and Associates, 1989, p. 39; Stewart, 1993). This directive was proposed in 1988 and passed on 13 June 1990. In Britain, it was implemented in the 'Package Travel, Package Holidays and Package Tours Regulations 1992', which came into effect in April 1994 (LACOTS, 1994). In Germany, the directive ('Pauschalreise-Richtlinie') was implemented in the Bürgerliches Gesetzbuch (BGB), especially §§ 651a - n, which came into effect on 1 November 1994 (ASR, 1994a and 1994b). In particular concerning tour operators, the directive regulates aspects of contract formulation, payment, service provision, liability and information provision (Isken, 1993). It also

limits price rises for package holidays; and it imposes insurance and bonding schemes on tour operators to ensure the repatriation and refunding of customers in the event of a tour operator ceasing trading.

With regards to bonding and insurance schemes, the directive had relatively little impact on large and medium-sized tour operators in Britain and Germany, since most were already previously bonded either compulsorily or voluntarily. In fact, comparatively strict laws have been in operation in Germany since 1979 (Freyer, 1993, p. 183; Jim Fitzpatrick and Associates, 1989, p. 40). With the announcement and implementation of the EC Directive, most smaller tour operators in Britain and Germany have also joined bonding schemes. In Germany, insurance and bonding schemes were provided by a large variety of insurance companies (Chierek, 1994). In Britain, a distinction has been made between licensable and non-licensable activities, the former needing bonding while all other bonding schemes are voluntary. Seven bonding schemes for tour operators, which were approved by the Department of Trade and Industry (DTI), existed in Britain in 1994:

- Air Travel Trust (ATOL)
- ABTA Trust
- AITO Trust
- FTO Trust
- ABTOT (Association of Bonded Travel Organisers Trust)
- CPT Trust (Confederation of Passenger Transport UK; formerly Bus and Coach Council / BCC)
- PSA Trust (Passenger Shipping Association).

In the case of licensable activities, ATOL applied (Table A12.1). In the case of non-licensable activities, British tour operators could voluntarily join, depending on their market specialisation, any one or more of the other six bonding schemes. Apart from ATOL, the three schemes of ABTA, AITO and FTO were of key relevance to the outgoing tour operator business in Britain (Table A12.2).

On the one hand, it can be argued that compulsory and voluntary licensing (like classification and grading schemes in the accommodation sector) can function as barriers to entry (NEDC, 1992, p. 31). On the other hand, however, prior to the introduction of the EC Directive, data suggested that if holiday packages were advertised by tour operators not displaying licensing numbers or other bonding information, customers may have avoided booking a holiday with those tour operators (Treloar, 1994). In any case, the implementation of the EC Directive, being an institution (Section 2.3), has set a minimum quality level for holiday packages. A likely consequence of this is that brand loyalty diminishes even further (Krämer, 1994) and flexibility in customer demand increases, with customers changing more frequently between different tour operators. To avert (or reverse) this trend, tour operators have to provide 'added value' to distinguish their own products from those of competitors and to attract consumers. New co-ordination strategies, and new system strategies to support these, enable tour operators to provide 'added value', for example in tailoring their products to customers' needs, thus helping them to keep (and win) customers.

One of the 'added values' provided by tour operators is their legal responsibility towards consumers (Barbor, 1995; Skuse, 1996). In the case of legal disputes as a result of a ruined or failed holiday, tour operators act as a single contact for consumers. As a consequence of public and self-regulation in almost every sector of the travel and tourism industry, such as through classification or grading schemes, this 'added value' of tour operators is reduced and tour operators have to increasingly look for other ways in adding value, such as those brought about by the development and implementation of new systems.

### 5.3 Level 4 Impacts

The World Tourism Organisation (WTO) stated in 1991 that the travel and tourism industry (and the package holiday business in particular)

“... is entering an age of:

- constantly increasing travel and tourism movements and expenditure
- more competition among destination regions and countries
- more awareness of, and attention paid to, the growing impacts of tourism - economic, socio-cultural and environmental
- a consumer who is both more knowledgeable about tourism destinations and travel options, and more demanding about the travel and tourism products ... chosen
- a technology-driven marketplace, particularly in respect of computerised information and reservations system“ (WTO, 1991, p. 32).

Indeed, it can be argued that these developments have gained pace during the 1990's, increasingly impacting on the co-ordination strategies of tour operators.

*Structure of the tour operator sector:* Given the complexity of the factors involved in shaping the structure of the tour operator sector, these developments are classified using the proposed positioning model (especially Figure 3.7).

- *Impacts of horizontal structures:* Integration, concentration and competition are among the main threats imposed by competitors on tour operators (Section 4.5). Not only were the British and Germany tour operator markets highly concentrated in 1995/1996, but so also were a number of other European countries, such as Belgium (concentration ratio  $CR_1 = 0.5$ ), Scandinavia (i.e. Denmark, Finland, Norway and Sweden, with  $CR_1 = 0.43$ ), The Netherlands ( $CR_1 = 0.3$ ), Ireland ( $CR_2 \approx 0.4$ ), and France ( $CR_2 = 0.25$ ) (Cordes, 1996a).

- *Impacts of backward vertical structures:* In the past, the (package holiday) accommodation sector has been relatively fragmented (Beaver, 1992, p. 16; Wood, 1990). Increasingly, however, the accommodation sector, like the airline sector (Economist, 1996; Westlake, 1990), is characterised by internationalisation and concentration (BHA, 1994; Economist, 1994a; Littlejohn and Beattie, 1992). Table 5.2 lists the largest 20 hotel chains in the world in August 1995, reflecting the trend towards globalisation and concentration in the accommodation sector. Figures on TUI, being the largest German hotel group, and NUR Touristic GmbH were added.

Rank <sup>1</sup>	Hotel Chain	Number of Bedrooms <sup>2</sup>	Number of Properties <sup>2</sup>
1	Hospitality Franchise System Inc. (HFS), USA	424,352	4,291
2	Holiday Inn Worldwide, USA	356,000	1,930
3	Best Western International Inc., USA	280,144	3,409
4	Accor S.A., France (→ Carlson Wagonlit Travel)	256,607	2,265
5	Choice Hotels International, USA	247,069	2,827
6	Marriott International, USA	180,500	851
7	ITT Sheraton Corporation, USA	132,477	425
8	Hilton Hotels Corporation (HHC), USA	92,452	226
9	Forte PLC, England	88,153	888
10	Radisson SAS Hotels Worldwide, USA (→ Carlson Wagonlit Travel)	79,482	349
11	The Promus Companies, USA	78,690	570
12	Hyatt Hotels and Resorts, USA	77,882	170
13	Club Méditerranée S.A. (Club Med), France	65,128	262
14	Inter-Continental Hotels and Resorts, USA	53,092	141
15	Hilton International Company, USA	53,052	162
16	New World / Renaissance Hotels International, USA	47,139	140
17	Grupo Sol Meliá, Spain	46,500	175
18	Westin Hotels & Resorts	39,470	76
19	La Quinta Inns	29,276	227
20	Société du Louvre, France	29,120	468
N. A.	Touristik Union International GmbH & Co. KG (TUI), Germany	<sup>3</sup> ~30,000	112
N. A.	NUR Touristic GmbH, Germany	<sup>4</sup> ~14,000	70

Interviewed tour operators are highlighted.

<sup>1</sup> According to number of bedrooms.

<sup>2</sup> Source (except for TUI and NUR Touristic GmbH): BTW Briefing, 1995a. Company sources for TUI and NUR Touristic GmbH.

<sup>3</sup> ~60,000 beds divided by 2; figure on number of rooms not available.

<sup>4</sup> 27,660 beds divided by 2; figure on number of rooms not available.

**Table 5.2**  
The Largest Hotel Chains in the World in August 1995



- *Impacts of forward vertical business structures:* Similarly, the travel agency sector in Britain and Germany has become increasingly concentrated (Bennett, 1990; Hildebrandt, 1994b, p. 13; Jordans, 1979, 1984 and 1990; Renshaw, 1992, pp. 69 - 74; Riecke, 1996). Although it is relatively easy to set-up a travel agency with little capital, qualifications and bonding / licenses needed (Pfeiffer, 1992, p. 45), a major barrier to entry for travel agents are business contracts with tour operators. (Leisure) travel agents in Britain, for example, typically gain between 50% - 60% of their turnover from the sale of package holidays (Key Note Report, 1991, p. 16; National Westminster Bank, 1988, p. 1). Since tour operators have only a limited number of travel agents under contract, competition in the travel agency sector is somewhat impeded, thus leading (among other reasons) to concentration in the travel agent sector.

Vertical and horizontal integration and concentration in the package holiday business (Gómez and Sinclair, 1991; Yacoumis, 1973) typically leads to increased bargaining power of the involved parties, which can squeeze the profit margins of suppliers, buyers and competitors. Moreover, travel and tourism principals and travel agents are threatening to disintermediate tour operators by selling and buying their products directly especially using emerging electronic market systems (Kärcher, 1995a). Concentration and competition in the package holiday business, together with the threat of disintermediation, have been among the main reasons for tour operators having relatively small profit margins. In Germany, for example, the average price of a packaged holiday increased from DM 1,010 to DM 1,110 between 1984 and 1994 (Hildebrandt, 1994b, p. 12). In contrast, the average tour operator income per holiday package decreased from DM 115 to DM 89 during the same period. New system strategies, and positioning strategies fostered by new ICTs such as low cost and integration, enable tour operators to reduce these threats of bargaining power and disintermediation. Moreover, new system strategies assist tour operators in, for example, by-passing travel agents and selling directly (Sambrook, 1991).

- *Forward vertical consumer structures*: Empirical data suggests that consumers demand low price, safety and convenience from a package holiday (Zucker-Stenger, 1995). One of the main aims of tour operators is, therefore, to provide low cost holiday packages. During the 1990's, however, a decline in the 'traditional' package holiday market can be observed (Middleton, 1991), with a trend away from mass-market holidays towards more individual holidays (Steinbach, 1991). Poon (1993, in particular pp. 113 - 152, and 1994) argues that 'standardised mass tourism' is superseded by a 'new tourism' driven by advances in consumer technology, greater sensitivity in consumer tastes, and deregulation and concentration in the industry.

"The manifold changes and developments predicted in the demographics, economic performance, awareness, interests and values of society, allied to technological advances in computer reservation systems and transport, and to the globalisation of the travel trade, will together lead to an increase in market segmentation in travel and tourism in the 1990s - particularly related to demographics, lifestyles and interest groups" (WTO, 1991, p. 16).

Consumers have arguably become more knowledgeable, experienced and sophisticated with regards to both the experience of travelling and destinations, as well as in the use of technologies to conduct bookings (Jordans, 1990, p. 27; Key Note Report, 1991, pp. 21, 26). Subject to especially end-user acceptance of new booking systems (Schertler et al., 1995b), consumers can book holidays directly, thus by-passing tour operators in the distribution chain. Tour operators can respond to these threats by implementing new strategies to provide more individual holidays (Jordans, 1990, p. 27), thus catering for the demands of more experienced consumers, while, at the same time, keeping costs low and, overall, reducing the threat of disintermediation.

*Governance forms:* Both in Britain and Germany, by law holiday packages could not be sold at a higher than published price ('Preisbindung'), making truly 'fluid pricing' illegal. However, a ruling by the Monopolies and Mergers Commission (MMC) in Britain in 1986 allowed travel agents to relatively freely offer discounts on holidays (National Westminster Bank, 1988, p. 2). Similarly, the 'Rabattgesetz' (law on discounts) in Germany allowed holiday packages to be (temporarily) discounted (Pfeiffer, 1992, pp. 48 - 50). Especially in Britain, discounting has led to a 'price war', which resulted in ABTA (Table A8.1) issuing a code of conduct advising that the frequency and magnitude of price changes should be limited. However, any of the restrictive practices are increasingly undermined both in Britain and Germany as a consequence of emerging electronic market systems (EMs) in the travel and tourism industry and the package holiday business in particular (Kärcher, 1995a), internationalisation and provision of individually assembled (and thus individually priced) holiday packages. A flexibilisation in pricing and a move towards market-based trading is both a threat as well as an opportunity for tour operators. New co-ordination strategies, and new system strategies in particular, assist tour operators in preparing for a more market-based and flexible environment.

*Transaction and relationship attributes:* In Germany, the EC Directive on package holidays had a further important consequence in that it led to a phase of travel agent liberalisation. Prior to 1 November 1994 (i.e. the implementation of the directive in German law), travel agencies selling TUI packages were contractually prohibited (with few exceptions) from selling NUR Touristic and ITS packages. Similarly, travel agencies selling NUR Touristic packages were not allowed to sell TUI and ITS packages. On 1 November 1994, this discriminating racking procedure was declared illegal ('Aufhebung der Vertriebsbindung'). This liberalisation phase had two major complimentary consequences with regards to the structure of the tour operator sector in Germany:

- A large increase in forward vertical integration of tour operators into travel agency (and, to a lesser extent, backward vertical integration of travel agents into tour operating) (Chierek, 1996; Spielberger, 1994; also Appendix 10). (The benefits of this strategy for tour operators are discussed at Level 2.)
- An increase in direct sale by especially larger German tour operators. Prior to the phase of travel agent liberalisation, direct sale was less important to large tour operators given their exclusive distribution networks. In contrast, direct sale, which is more profitable for tour operators, has gained in importance since travel agent liberalisation due to an increased competition in distribution.

New ICTs can support both strategies in allowing tour operators to distribute their products electronically (for example TTG, 1994c), thus leading to the development and adoption of new system strategies by tour operators.

EU competition law (in particular Article 85 of the Treaty of Rome) has also led to further trade liberalisation, especially in Germany where the Article 85 was implemented in national law (Robinson, 1995).

“Legislation is ... highly influential in determining the framework for competition both at the national level and in such wider groupings as the European Community“ (Sinclair and Stabler, 1991, p. 6).

As a consequence of Article 85, the Bundeskartellamt (German federal cartel office / antitrust authority) in Berlin declared illegal the practice of TUI and NUR Touristic having exclusive contracts with 15 hotels on the Balearics and Canaries, excluding other tour operators such as Alltours Flugreisen GmbH and Tjaereborg Allkauf Reisen GmbH (part of the LTU Group). Increased competition, however, implies that tour operators have to adapt their positioning strategies to this changed environment to secure their market position. New system strategies, and positioning strategies supported by new system strategies, are key strategies tour operators can implement to adjust to the changed trading conditions.

*Resource base:* It appears that the new system strategies of tour operators are impacting on sectorial resources, such as sector-wide booking systems, rather than vice versa. Therefore, developments with regards to technical resources in the tour operator business are discussed at Level 4 in Chapter 6.

## 5.4 Level 3 Impacts

*Structures of tour operator partnerships:* While co-operations have been relatively common in the package holiday business in the past (for example, Sall, 1995), it appears that co-operations especially among smaller companies have increased in importance as a consequence of integration and concentration in the business.

- *Horizontal structures:* On an individual basis, co-operations between tour operators existed relatively frequently. NUR Touristic GmbH, for example, used to acquire and over-brand Florida holidays of Meier's Weltreisen GmbH (part of the LTU Group) until 1995, when it started to co-operate with DER-Tour by over-branding some of its America programmes. Thomas Cook Holidays (being mainly a long-haul operator) has been over-branding (mainly short-haul) packages of First Choice Holidays PLC since 1993. In turn, First Choice Holidays' premium brand 'Sovereign' was partly supplied by Thomas Cook. In January 1995, however, this alliance was dissolved. Instead, Thomas Cook Holidays has been over-branding Sunworld brochures of Iberotravel Limited since August 1995. In addition, Thomas Cook also over-branded brochures of Virgin Holidays Limited and American Airlines Inc. Other co-operations in Britain and Germany included Lufthansa Partner Tours GmbH and Klingenstein & Partner Studienreisen. On a wider basis, especially smaller tour operators have formed associations in Britain and Germany. Kärcher and Williams (1994 and 1995) argue that as a response to increased market concentration and both vertical and horizontal integration in the package holiday business, smaller tour operators have joined together and formed co-operations such as the Association of Independent Tour Operators (AITO) in Britain (Table A8.4) and the Bundesverband Mittelständischer Reiseunternehmen e. V. (asr) in Germany (Table A8.5). The advantages of these co-operations included a common image, joint marketing, a minimum level and control of quality, government lobbying (Pfeiffer, 1992, p. 47), and financial insurance, bonding and dispute settlement schemes.

- *Backward vertical structures:* A variety of co-operations existed with regards to backward vertical relationships. For example, TUI, NUR Touristic and ITS have regularly purchased airline seats together in the past to exercise purchasing power and, thus, to reduce prices or achieve other conditions. Some tour operators also treated certain airlines and car rental companies as preferred suppliers. In the case of Lufthansa Partner Tours GmbH, the airline Lufthansa co-operated with a number of specialist tour operators in Germany. Co-operations existed also especially between tour operators and accommodation suppliers. Both British and German tour operators sought hotel exclusivity with regards to other tour operators from their own country. Accommodation exclusivity avoided the possibility that tourists staying in the same hotels could compare their holiday prices; it also gave tour operators supply security, since non-exclusive hotels commonly over-booked their rooms.
- *Forward vertical business structures:* Travel agents only sold packages of a tour operator if they had a business contract with that tour operator. Therefore, generally speaking, every tour operator co-operated with all those travel agents it had distribution contracts with. More specifically, especially larger tour operator groups and tour operator associations operated co-operative (or rather incentive) schemes with travel agents, which, among others, guaranteed the racking of tour operators' brochures. Thomson, for example, created the 'Key Accounts' and 'Club 1,000' schemes in early 1995, whose members operated around 3,000 travel agent outlets in total. The 'Key Accounts' consisted of 36 so-called 'major accounts', i.e. travel agents selling most of Thomson's packages. These were 7 multiple and 19 'miniple' travel agent chains and covered approximately 75% of Thomson's sales. The 'Club 1,000' had 70 members providing approximately 18% of Thomson's sales. Travel agent members of Thomson's 'Key Accounts' and 'Club 1,000' received various bonuses as an incentive to sell Thomson's holidays. Similarly, as a response to the forward vertical integration and dominance of major tour operators in Britain, AITO launched the 'AITO 100 Club' in June 1994 (Ockwell, 1994; in early 1995 also referred to as the 'Campaign for Real Travel Agents' (Ockwell, 1995)). The 'AITO 100 Club'

consisted (despite its name) of around 500 'independent' travel agents, including the associations ARTAC WorldChoice (Appendix 11), AMTA, and South West Independent Federation of Travel Agents (SWIFTA). 'AITO 100 Club' members distributed packages of AITO members exclusively (most of which, in fact, were previously only sold directly to consumers). In addition, some travel agent consortia over-branded packages of tour operators (thus, indirectly, acting as tour operators themselves), such as Co-op Travel Limited (Appendix 11) over-branding holidays of Unijet Travel Limited and Carnival Cruise Lines, or Advantage Travel Centres (ATC) (Appendix 11) and A. T. Mays Limited over-branding holidays of Sunworld / Iberotravel Limited.

The (possibly increasing) number of new co-operations has several consequences for tour operators with regards to their new co-ordination and system strategies. For example, new system strategies may be needed to support a co-operation. More importantly, co-operations alter the structure of the industry and reduce the (relative) bargaining power of those tour operators which are not members of them. Therefore, tour operators have to respond to these changes, for example by integrating or 'adding new value', strategies both of which can be supported by new system strategies.

- *Forward vertical consumer structures:* In the past, some tour operators tried to 'lock-in' consumers (Petre, 1985) using loyalty schemes, for example those involving the newsletters 'Club Med Aktuell' (formerly 'Med International'), 'GeBeCo Partner News' and 'LTU Magazin', which provided consumers with information and special offers in return for their loyalty. More recently, tour operators are planning to implement more detailed and tailored schemes (Level 3 in Chapter 7), which, however, need new ICTs to support them, thus (among others) leading to the implementation of new systems.
- *Diversification:* Alliances with other companies appear to be a consequence of (rather than having an impact on) the new co-ordination and system strategies of tour operators and are, therefore, described in Chapter 6 (and Chapter 7).



*Governance forms, and transaction and relationship attributes:* Co-operations, or network-based relationships, enable partner companies to pool their strengths and gain competitive advantages (Tietz, 1992), but also may result in difficulties in reaching agreement on and co-ordinating members' activities, such as when developing joint new ICT strategies (Kubicek and Klein, 1994) or other positioning strategies (Carnegy and Rodger, 1993). Indeed, it appears that, although co-operations may have initiated and/or have impacted on new system strategies, few system strategies are actually implemented by co-operations (Chapter 6). Nevertheless, co-operations may well have a profound impact on new co-ordination and system strategies of tour operators by, for example, fostering discussion forums such as those of The Association of British Travel Agents (ABTA) (Table A8.1) and Deutscher Reisebüro-Verband e. V. (DRV) (Table A8.2).

*Resource base:* Co-operations were often set-up to share or pool resources and to create synergies. New ICT strategies can support these aims, but given the similarity of these developments to those at Level 2, impacts of the resource base are discussed there.

## 5.5 Level 2 Impacts

*Structures of tour operator groups:* (Detailed information on the main tour operators and tour operator groups in Britain and Germany is provided in Appendix 9 and Appendix 10, respectively.)

- *Horizontal structures:* Tour operators in Britain and Germany have extensively expanded and integrated horizontally both on a national and international level (Section 4.5; Table 1.3). Horizontal integration supports tour operators, among others, in creating economies of scale and scope.
- *Backward vertical structures:* Integration into the airline and accommodation sectors has a number of advantages for tour operators, such as reduced cost, priority assessing of seats / beds, and control of quality. Increasing the overall number of airline seats and hotel beds can be seen as creating economies of scale, while increasing the number of aircraft and hotel properties can be regarded as creating economies of scope. In Britain, almost all charter airlines were tied to a tour operator (O'Connell, 1995b). In contrast, while German tour operators were less vertically integrated into the charter airline sector in the past, more recently charter airlines such as Condor and Germania have integrated into the tour operator business. As a consequence of liberalisation and privatisation in Germany, more vertical backward integration is likely. Information on the British and German charter airline sectors is stated in Table 5.3 and Table 5.4, respectively. (For further information on British scheduled airlines see Key Note Report, 1994a, p. 106; and for further information on German charter and scheduled airlines see FVW International, 1995a.)

British Charter Airline(s) <sup>1</sup>	Number of Seats in Summer 1996 <sup>2</sup>	Market Share in Summer 1996 <sup>2</sup>	AIT Market Share in 1993 <sup>3</sup>	Market Share in 1993 <sup>4</sup>
<b>Britannia</b>	7,173	25%	27%	25.7%
<b>Monarch</b>	4,853	17%	14%	12.4%
<b>Airtours Intern.</b>	4,342	15%	13%	11.5%
<b>Air 2000</b>	3,749	13%	14%	13.9%
<b>Caledonian</b>	2,462	9%	8%	6.5%
<b>Total of top five</b>	<b>22,579</b>	<b>79%</b>	<b>76%</b>	<b>70.0%</b>
<b>Total of other</b>	<b>5,464</b>	<b>21%</b>	<b>24%</b>	<sup>5</sup> <b>30.0%</b>
<b>Total</b>	<b>28,043</b>	<b>100%</b>	<b>100%</b>	<b>100.0%</b>

<sup>1</sup> Full names (in alphabetical order):

- Air 2000 Limited, Crawley/West Sussex (→ First Choice Holidays PLC)
- Airtours International Airways Limited, Manchester (→ Airtours PLC)
- Britannia Airways Limited (BAL), Luton/Bedfordshire (→ The Thomson Travel Group)
- Caledonian Airways Limited, Gatwick (→ Inspirations PLC)
- Monarch Airlines Limited, Luton/Bedfordshire (→ The Globus Group)

Other in summer 1996:

- Airworld (→ Iberotravel Limited)
- All Leisure Airways (→ All Leisure Travel Holdings)
- British World Airlines Limited (BWA), Southend/Essex
- European Aviation Air Charter (EAAC), Bournemouth
- GB Airways (Holdings) Limited, Jersey (→ Bland Group)
- Leisure International Airways (LIA), Gatwick (formerly Air UK (Leisure) Limited; → Unijet Group PLC)
- Sabre Airways (→ Inspirations PLC)

<sup>2</sup> Source: O'Connell, 1996.

<sup>3</sup> Source: Key Note Report, 1994b, p. 26; share by volume of air inclusive tour (AIT) market.

<sup>4</sup> Source: Key Note Report, 1994a, p. 107; share by volume of total charter airline market.

<sup>5</sup> 3.2% Air UK (Leisure) Limited; 14.4% other UK charter airlines; 12.4% non UK charter airlines.

**Table 5.3**

### Major British Charter Airlines

These figures clearly show the high market concentration in the charter airline sector in Britain. The five largest charter airlines controlled almost 80% of the charter airline market (concentration ratio  $CR_5 = 0.79$ ) in summer 1996. Moreover, four of these five largest charter airlines were owned by the largest four tour operators in Britain.

German Charter Airline(s) <sup>1</sup>	No. of Passengers Carried in 1995 <sup>2</sup> (thousands)	No. of Passengers Carried in 1994 <sup>2</sup> (thousands)	Number of Seats in Summer 1995 <sup>3</sup>	Number of Seats in Summer 1994 <sup>3</sup>
LTU	6,093.8	5,221.8	7,768	7,559
Condor	5,652.6	5,354.6	8,317	7,342
Hapag-Lloyd	4,650.0	4,031.0	4,325	3,991
Aero Lloyd	2,674.0	2,571.0	3,210	3,049
Air Berlin	1,150.0	1,050.0	1,169	1,002
Germania	1,096.0	1,048.0	1,184	1,184
Hamburg Airlines	N. A.	0	294	0
Deutsche BA	N. A.	0	217	0
Eurowings	N. A.	0	94	0
<b>Total</b>	<b>&gt; 21,316.4</b>	<b>19,276.4</b>	<b>26,578</b>	<b>24,127</b>

<sup>1</sup> Full names (in alphabetical order):

- Aero Lloyd Flugreisen GmbH & Co. Luftverkehrs KG, Oberursel
- Air Berlin GmbH & Co. Luftverkehrs KG, Berlin
- Condor Flugdienst GmbH, Kelsterbach (→ Deutsche Lufthansa AG)
- Deutsche BA Luftfahrt GmbH, München (→ British Airways PLC)
- Eurowings Luftverkehrs AG, Nürnberg
- Germania Fluggesellschaft mbH, Köln
- Hamburg Airlines Luftfahrt GmbH (HAS), Hamburg
- Hapag-Lloyd Fluggesellschaft mbH, Langenhagen bei Hannover (→ Hapag-Lloyd AG)
- LTU International Airways Lufttransport-Unternehmen GmbH & Co. KG, Düsseldorf, including LTU Lufttransport-Unternehmen Süd GmbH & Co. Fluggesellschaft, München, and LTE International Airways S.A., Spain (→ The LTU Group)

<sup>2</sup> Source: FVW International, 1996, 7, 15 March, p. 5, Table.

<sup>3</sup> Source: FVW International, 1995, 5, 21 February, p. 124, Table.

**Table 5.4**  
**Major German Charter Airlines**

Similar to Britain, the charter airline business in Germany was highly concentrated, with six airlines controlling roughly 90% of the market ( $CR_6 \approx 0.9$ ). Moreover, the largest three charter airlines were (directly or indirectly) tied to tour operator groups.

The close trading relationships between in-house charter (and, to some extent, scheduled) airlines and the tour operator(s) within a group are further reflected in the figures listed in Table 5.5. This data, which was gained from the interviews, shows relatively high percentages of:

- Seats of the in-house airline(s) sold to the in-house tour operator(s) (compared to seats sold to other, i.e. external, tour operators)
- Seats purchased by tour operators from their in-house airline(s) (compared to seats purchased from other, i.e. external, airlines).

The close trading relationships between tour operators and in-house airlines have strong impacts on the new co-ordination and system strategies of tour operators, as tour operators are specifically aiming as part of their new system strategies to link their in-house airline and tour operator systems (Level 2 in Chapter 6).

Tour Operator in Britain <sup>1</sup>	In-House Airline(s)	Seats Sold to Tour Operator <sup>2</sup>	Seats Purchased by Tour Operator <sup>3</sup>
Airtours Holidays Limited (Airtours PLC)	• Airtours International Airways Limited including airline subsidiaries	very high percentage	69%
British Airways Holidays Limited (British Airways PLC)	• British Airways PLC (formerly also Caledonian Airways Limited)	0.5%	very high percentage (remainder mainly purchased from airline partners of BA such as Qantas Airways Limited and USAir Group Inc.)
First Choice Holidays & Flights Limited (First Choice Holidays PLC)	• Air 2000 Limited	70% (remaining 30% sold to ~24 tour operators including Canadian subsidiary Signature Vacations Inc.)	95%
Iberotravel Limited (Grupo Viajes Iberia (GVI), Spain)	• Airworld	64% (remaining 36% sold to, among others, Thomson, First Choice and Unijet)	5%
Inspirations PLC	• Caledonian Airways Limited • Sabre Airways	60% (until early 1995, British Airways Holidays Limited and Kuoni Travel Limited used to be the largest third-party customers of Caledonian Airways)	N. A.
Thomson Tour Operations Limited (The Thomson Travel Group)	• Britannia Airways Limited	> 90% (Kuoni Travel Limited has been the largest third-party contractor since July 1995)	90% - 95%

Tour Operator in Britain <sup>1</sup>	In-House Airline(s)	Seats Sold to Tour Operator <sup>2</sup>	Seats Purchased by Tour Operator <sup>3</sup>
Unijet Travel Limited (Unijet Group PLC)	<ul style="list-style-type: none"> <li>Leisure International Airways (LIA)</li> </ul>	N. A.	> 50%
Virgin Holidays Limited (Virgin Travel Group)	<ul style="list-style-type: none"> <li>Virgin Atlantic Airways Limited</li> </ul>	N. A.	98% (remaining 2% were internal flights in the United States)
Tour Operator in Germany <sup>1</sup>	In-House Airline(s)	Seats Sold to Tour Operator <sup>2</sup>	Seats Purchased by Tour Operator <sup>3</sup>
Berliner Flug Ring GmbH (BFR)	<ul style="list-style-type: none"> <li>Germania Fluggesellschaft mbH</li> </ul>	N. A.	very high percentage
DER-Tour (Deutsches Reisebüro GmbH / DER)	<ul style="list-style-type: none"> <li>Deutsche Lufthansa AG</li> </ul>	N. A.	N. A.
Fischer Reisen GmbH (Deutsche Lufthansa AG)	<ul style="list-style-type: none"> <li>Condor Flugdienst GmbH</li> </ul>	N. A. (acquired in November 1995)	> 50%
Hapag-Lloyd Tours GmbH (Hapag-Lloyd AG)	<ul style="list-style-type: none"> <li>Hapag-Lloyd Fluggesellschaft mbH</li> </ul>	N. A. (company policy not to state figures; see also TUI below)	N. A. (company policy not to state figures)
Hetzel-Reisen GmbH & Co. KG	<ul style="list-style-type: none"> <li>Germania Fluggesellschaft mbH</li> </ul>	0% (acquired in early 1995)	0% (for > 25 years, close trading relationship between Hetzel and Condor; in 1995 break-up of relationship)
Kreutzer Touristik GmbH	<ul style="list-style-type: none"> <li>Condor Flugdienst GmbH</li> </ul>	N. A. (acquired in March 1995; in 1994, > 80% sold to TUI, NUR Touristic, Alltours, Hetzel, ITS and Kreutzer)	N. A. (very high percentage likely)
Nazar Holiday Reiseveranstaltung GmbH (Ten Tur Holding, Turkey)	<ul style="list-style-type: none"> <li>Onur Air Nazar</li> </ul>	N. A.	80% (20% with Turkish Airlines Inc., Sun Express (→ Deutsche Lufthansa AG) and Air Alpha)
The LTU Group	<ul style="list-style-type: none"> <li>LTU International Airways Lufttransport-Unternehmen GmbH &amp; Co. KG including airline subsidiaries</li> </ul>	~60% (see also TUI below)	~60% of Meier's Weltreisen GmbH (otherwise mainly used Deutsche Lufthansa AG, British Airways PLC, Delta Air Lines Inc., United Airlines Inc. and Garuda Indonesia); ~90% of the other four LTU tour operators

Tour Operator in Germany <sup>1</sup>	In-House Airline(s)	Seats Sold to Tour Operator <sup>2</sup>	Seats Purchased by Tour Operator <sup>3</sup>
Touristik Union International GmbH & Co. KG (TUI)	<ul style="list-style-type: none"> <li>• Hapag-Lloyd Fluggesellschaft mbH</li> <li>• LTU International Airways Lufttransport-Unternehmen GmbH &amp; Co. KG including airline subsidiaries</li> <li>• Condor Flugdienst GmbH</li> </ul>	high percentage of Hapag-Lloyd (Hapag-Lloyd flew with few other tour operators such as NUR Touristic, ITS, Fischer Reisen and Olimar Flugreisen); others N. A.	40% - 50% with Hapag-Lloyd 15% - 20% with LTU 15% - 20% with Condor (also used Germania and a further ~15 charter airlines)

<sup>1</sup> Corresponding tour operator group, or travel and tourism group, is listed in brackets.

<sup>2</sup> Percentage of seats sold by in-house airline(s) to tour operator(s) in group (compared to sale to other tour operators).

<sup>3</sup> Percentage of seats purchased by tour operator(s) from in-house airline(s) (compared to purchase from other airlines).

Data on other major tour operators without in-house airlines:

- Alltours Flugreisen GmbH: 73% of Condor, 24% of Aero Lloyd, and 3% of other carriers.
- International Tourist Services Länderreisedienste GmbH (ITS): 60% - 65% of Hapag-Lloyd, Condor, Air Berlin, and LTU combined, and 35% - 40% of 14 other carriers.
- NUR Touristic GmbH: co-operated with Condor Flugdienst GmbH, which, in 1994, provided 45.8%, followed by Hapag-Lloyd (22%), Aero Lloyd (15%), Air Berlin (7%), LTU (1.2%), and foreign carriers (9%).

**Table 5.5**

**In-House Airline Seat Sales and Purchases in Britain and Germany**

With regards to backward vertical structures, the relationships between tour operators and in-house airlines were concentrated upon here given their significance to the tour operator business. Other backward vertical structures, such as between tour operators and accommodation suppliers and destination agencies, have similar impacts on the strategies of tour operators. These are described in more detail at Level 2 in Chapter 6.

- *Forward vertical business structures:* In 1993, there were 6,852 travel agent outlets in Britain (Table 5.7; down from ~7,900 in 1991 (Key Note Report, 1991, p. 15)) and 16,365 travel agent branches in Germany (DRV, 1994; 1,890 of which were located in the former East Germany). The largest travel agents and their corresponding market shares in Britain and Germany are listed in Table 5.6 and Table 5.7, respectively. (Past shares of travel agents in Britain and Germany are stated in FVW International, 1994c; Key Note Report, 1990, 1991 and 1994b; Marketline, 1994; MSI Databrief, 1989b.)

Rank <sup>1</sup>	Travel Agent (Corresponding Tour Operator Group)	Market Share in 1995 <sup>2</sup>	Market Share in 1994 <sup>2</sup>	Market Share in 1993 <sup>3</sup>	Number of Outlets in 1996 <sup>4</sup>	Number of Outlets in 1993 <sup>5</sup>
1	Lunn Poly Limited (The Thomson Travel Group)	23.5%	24.0%	23.0%	795	665
2	Going Places Leisure Travel Limited (Airtours PLC)	12.0%	11.0%	9.0%	711	591
3	Thomas Cook Holiday Shops (The Thomas Cook Group Limited)	10.5%	11.0%	10.0%	385	391
4	A. T. Mays Limited (A. T. Mays Group)	5.5%	5.0%	4.0%	417	301
5	Co-op Travelcare	4.0%	3.5%	3.5%	240	178
Total of largest five travel agents		55.5%	54.5%	49.5%	2,548	2,126
Co-op Travel Limited (including Co-op Travelcare)		N. A.	N. A.	/	430	/
Total of other travel agents		44.5%	45.5%	50.5%	N. A.	4,726
Total		100.0%	100.0%	100.0%	N. A.	6,852

Market shares are according to volume (i.e. numbers) of air inclusive tours (AITs) sold.

<sup>1</sup> According to market share in 1995.

<sup>2</sup> Sources: Thomson Travel Group, Annual Report and Accounts 1995 and 1994 (respectively), p. 15.

<sup>3</sup> Sources: Key Note Report, 1994a, p. 75, and 1994b, p. 21.

<sup>4</sup> Sources: Various industry reports, mid 1996.

<sup>5</sup> Source: Mintel, 1994a, p. 33.

**Table 5.6**  
**Major British Travel Agents**



These figures indicate the trend towards integration and concentration in the leisure travel agent sector in Britain. The largest five travel agents accounted for an estimated 55.5% of the holiday market ( $CR_5 \approx 0.56$ ) in 1995, up from 49.5% ( $CR_5 \approx 0.50$ ) in 1993. According to another industry source, the top five multiples accounted for 60% of all 1995 summer holiday packages sold, and 54% of all 1994/1995 winter holiday packages sold (TTG, 1995f). In mid 1996, the largest five travel agents operated 2,548 branches in total, compared to 2,126 in 1993. Moreover, the largest two travel agents were owned by the largest two tour operators in Britain.

Historically, the travel agent sector in Germany has been more complex and fragmented than in Britain. However, mainly as a consequence of the phase of travel agent liberalisation in Germany in November 1994, tour operators have increasingly integrated or expanded into the travel agent sector. For example:

- Alltours Flugreisen GmbH founded Alltours Reisecenter in November 1995
- Frosch Touristik GmbH acquired Flugbörse D+S Reisen GmbH in August 1995
- Hetzel-Reisen GmbH & Co. KG launched the Hetzel Tandem Partner franchise at the end of 1994
- Nazar Holiday Reiseveranstaltung GmbH expanded its Holiday Express Reisebüro GmbH extensively during 1995
- Wikinger Reisen GmbH founded Wikinger Reisebüro GmbH in August 1995.

Similarly, the major tour operator or travel and tourism groups DER, Deutsche Lufthansa, Hapag-Lloyd, ITS / Atlas Reisen, the LTU Group, NUR Touristic, and TUI, among others, have extensively expanded and integrated into the travel agent sector during the last few years (Table 5.7). Overall, the largest 32 travel agent chains in Germany increased their total number of outlets by over 1,300 during 1995 (Table 5.7). (As a result of the sector's complexity, figures of market shares were not available, and business travel agents are included in the statistics.)

Rank <sup>1</sup>	Travel Agent (Corresponding Tour Operator or Travel and Tourism Group)	Number of Branches in 1995 <sup>2</sup>	Number of Branches in 1994 <sup>3</sup>
1	<b>DER</b> • DER-Part Reisevertrieb GmbH • Deutsches Reisebüro GmbH (DER)	889 • 501 • 388	852 • 518 • 334
2	<b>Raiffeisen-Tours-Kooperation (RTK)</b> (including Arbeitsgemeinschaft Europäischer Reiseunternehmen e. V. (AER), Last Minute Tours Zentrum GmbH (Lamis), and Terraplan Reisebüro Verwaltungs GmbH & Co. KG)	630	480
3	<b>NUR</b> • Euro Lloyd Reisebüro GmbH • Holiday Land Franchise Management (Holiday Land Reisebüro GmbH i. Gr.) • Karstadt Reisebüros (including Hertie) • Neckermann KatalogWelt + Reisebüro • Neckermann Reisebüros • Reisebüro Blum GmbH	618 • 104 • 56 • 189 • 99 • 153 • N. A.	> 477 • 92 • 18 • 130 • 97 • 140 • N. A.
4	<b>ITS</b> • Atlas Reisen GmbH • Brewo Reiseagentur GmbH, Europäisches Reisebüro GmbH, Kaufhof Reisebüros, Reisebüro Horten GmbH	589	547 • 248 • 299
5	<b>RZE GmbH</b> (Reisebüro-Zentraleinkauf Einkaufsverband)	506	502
6	<b>First Reisebüro Management GmbH / First Reisebüro GmbH &amp; Co. KG</b>	423	357
7	<b>Hapag-Lloyd Reisebüro GmbH</b> (Hapag-Lloyd AG)	366	306
8	<b>The LTU Group</b> • LTU Reisebüro-Beteiligungs GmbH & Co. KG, including Atlantis Reisestudio Reisebüro- und Touristik GmbH • Thomas Cook Reisebüro GmbH • Tjaereborg Allkauf Reisen GmbH	> 320 • > 130 • 157 • 33	N. A. • N. A. • 64 • N. A.
9	<b>Lufthansa City Center Reisebüropartner GmbH (LCC)</b> (Deutsche Lufthansa AG)	300	250
10	<b>Reisebüro-Kooperation Pro Tours Verwaltungs GmbH</b>	272	168
11	<b>TUI</b> • TUI Urlaub Center GmbH (TUC) • various smaller travel agents	> 233 • 233 • N. A.	> 178 • 178 • N. A.
12	<b>Schmetterling Reisebüro Verwaltungsgesellschaft</b> (Schmetterling Reisen Müller)	203	127
13	<b>Touristik Service System GmbH (TSS)</b>	198	95
14	<b>Reise Quelle Reisebüro GmbH &amp; Co. KG</b>	179	173
15	<b>Weltweit Individuell Reisen GmbH (WIR)</b>	165	57
16	<b>Tour Contact Reisebüro Cooperation GmbH &amp; Co. KG</b>	151	156
17	<b>Best Reisen GmbH &amp; Co. Touristik KG</b>	132	85
18	<b>Carlson Wagonlit Travel Direktion für Deutschland</b>	118	109
19	<b>American Express International Inc.</b> (American Express Company)	115	123
20	<b>Reiseland GmbH</b> (Otto Freizeit und Touristik GmbH (OFT))	109	91
21	<b>Reisecenter Alltours</b> (Alltours Flugreisen GmbH)	89	36
22	<b>Flugbörse D+S Reisen GmbH</b> (Frosch Touristik GmbH)	82	75
23	<b>Complan Reisen GmbH</b> (including Tourplan)	65	173
24	<b>Deutscher Reising e. V.</b>	54	31
25	<b>Reisebüro Management GmbH (RMG)</b>	49	49
26	<b>CSH Touristik GmbH</b> (Cooperation Schleswig-Holstein)	44	41
27	<b>Hetzel Tandem Partner</b> (Hetzel-Reisen GmbH & Co. KG)	~ 40	/
28	<b>Alpha Reisebüro GmbH</b> (Alpha Holding GmbH)	26	21
29	<b>Ferienwelt</b> (TRD Fritz Fischer)	26	24

Rank <sup>1</sup>	Travel Agent (Corresponding Tour Operator / Travel and Tourism Group)	Number of Branches in 1995 <sup>2</sup>	Number of Branches in 1994 <sup>3</sup>
30	Holiday Express Reisebüro GmbH (Nazar Holiday Reiseveranstaltung GmbH / Ten Tour Holding, Turkey)	26	/
31	STA Travel	17	13
32	Wikinger Reisebüro GmbH (Wikinger Reisen GmbH)	~ 14	/
<b>Total</b>		<b>&gt; 7,048</b>	<b>&gt; 5,660</b>

<sup>1</sup> According to number of outlets in 1995.

<sup>2</sup> Sources: FVW International, 1996b (and company sources).

<sup>3</sup> Sources: FVW International, 1995c (and FVW International, 1996b).

**Table 5.7**

**Major German Travel Agents**

The close trading relationships between tour operators and their in-house travel agents are further reflected in the figures listed in Table 5.8. This data, which was gained from the interviews, shows comparatively high percentages of tour operator packages sold via in-house travel agents (compared to sales via other, i.e. external, travel agents). Similar to the relationships with in-house airlines, the close trading relationships between tour operators and in-house travel agents have strong impacts on the new co-ordination and system strategies of tour operators, as tour operators are specifically aiming to link their in-house travel agent and tour operator systems as part of their new system strategies (Level 2 in Chapter 6).

Tour Operator in Britain <sup>1</sup>	In-House Travel Agent Chain(s)	Percentage of Sale via In-House Travel Agent Chain(s) Compared to Sale via Other Travel Agents
Airtours Holidays Limited (Airtours PLC)	• Going Places Leisure Travel Limited	20% - 40%
First Choice Holidays & Flights Limited (First Choice Holidays PLC)	• Thomas Cook Holiday Shops	20%
Thomas Cook Holidays (The Thomas Cook Group Limited)	• Thomas Cook Holiday Shops	very high percentage
Thomson Tour Operations Limited (The Thomson Travel Group)	• Lunn Poly Limited	35%
Tour Operator in Germany <sup>1</sup>	In-House Travel Agent Chain(s)	Percentage of Sale via In-House Travel Agent Chain(s) Compared to Sale via Other Travel Agents
Hapag-Lloyd Tours GmbH (Hapag-Lloyd AG)	• Hapag-Lloyd Reisebüro GmbH	< 30%
International Tourist Services Länderreisedienste GmbH (ITS)	• various (see Appendix 10)	40% - 45% (further 15% via co-operating Toto / Lotto branches)
NUR Touristic GmbH	• various (see Appendix 10)	30% - 40% (to decrease in 1995 following contracts with former TUI agencies)
Wikinger Reisen GmbH	• Wikinger Reisebüro GmbH	~ 12%

<sup>1</sup> Corresponding tour operator group, or travel and tourism group, is listed in brackets.  
All other tour operators did not provide information given the sensitivity of this information.

**Table 5.8**  
**In-House Travel Agent Sales in Britain and Germany**

Integration, whether horizontal, backward vertical or forward vertical, typically increases the flow of information and communication within a group of companies, thus lending itself to the adoption and diffusion of new ICTs. In fact, the new system strategies of tour operators especially include the linking of their various departments and subsidiaries worldwide and the support of their information and communication exchange (Chapter 6).

- *Diversification*: Several tour operators are diversifying in particular into the information technology sector. However, these strategies are mainly part of the new system strategies and are, therefore, described in Chapter 6.

*Governance forms*: Internal group-wide governance forms, which are predominantly hierarchy-based but also include other forms such as profit-centres and internal markets, are impacting on the new co-ordination strategies of tour operators (also Galal and Nolan, 1996). However, the in-depth interviews revealed that other factors have a greater impact on the new strategies, which led to the decision not to study group-wide governance forms further given limited interview time.

*Transaction and relationship attributes:* The German travel and tourism industry is characterised by particularly complex cross-ownership (Loppow, 1994), most of all involving the wholly or partly state-owned Deutsche Bahn AG, Deutsche Lufthansa AG, and WestLB (Appendix 10). The major tour operator groups DER, the LTU Group, and TUI, for example (as well as The Thomas Cook Group Limited), were partly or even wholly controlled by these organisations. Ownership, apart from exclusive contracts (which are increasingly being declared illegal), has been one of the most basic ways for tour operators in Germany (as well as in Britain) to exercise market power and control.

Intasun Holidays Limited (part of The International Leisure Group Limited / ILG), for example, tried to enter the German package holiday market in 1986, but failed to find or establish a distribution network through travel agents and subsequently pulled out of the market in 1988 (Jim Fitzpatrick and Associates, 1989, p. 38). Similarly, Thomas Cook and Kuoni did not operate as tour operators in Germany due to the relatively closed market. While Thomas Cook in Germany has been integrated into the LTU Group recently, Kuoni operated as a tour operator in Germany (i.e. as Kuoni Fernreisen GmbH) only during its alliance with ITS in 1994 and 1995. Complex cross-shareholdings typifying German ownership structure have also deterred especially Airtours PLC from entering the German market (Cordes, 1996b).

The Bundeskartellamt (federal cartel office) in Germany, and the Office of Fair Trading (OFT) together with the Monopolies and Mergers Commission (MMC) in Britain, have repeatedly investigated integration strategies of tour operators. NUR Touristic and ITS, for example, planned to merge in February 1985 due to financial difficulties, but were prohibited from doing so by the Bundeskartellamt. Similarly, an investigation by the Bundeskartellamt during early 1995 contributed to TUI failing to acquire ITS. In Britain, the OFT launched enquiries in June 1993 (Skapinker, 1993, 1994b and 1994d) and during late 1995 (Murrie, 1995), investigating potentially unfair links and alliances between tour operators and travel agents, allegedly restricting consumer choice and increasing prices.

However, despite these investigations and government restrictions, integration has been and continues to be one of the main positioning strategies of both British and German tour operators. Integration allows tour operators to realise economies of scale and scope, while, at the same time, may increase the relative transaction costs and/or reduce the bargaining power of competitors. On the other hand, integration may increase the relative transaction costs of the integrating tour operator, for example, when faced with an increased number of information and communication tasks necessary for the co-ordination of the various subsidiaries and units. New ICTs are useful in supporting these tasks, thus leading to new system strategies of in particular those tour operator groups with a relatively high degree of integration.

*Country Holidays Limited, England, is an example where integration led to new system strategies to support group-wide co-ordination. Country Holidays had already successfully used information technology internally to handle much greater volumes of customers, to erect barriers to entry, and to branch out into new business areas (Mutch, 1993). However, historically it sold only directly to customers and thus did not utilise external reservation and booking systems. In August 1994, Country Holidays was acquired by The Thomson Travel Group. After the take-over and integration by Thomson and since Thomson owned the largest travel agency in Britain, Country Holidays' systems were linked to external distribution systems and its sale via travel agents increased considerably.*

*Resource base:* Especially large tour operators aim (through integration and expansion) to secure resources (including their quality and availability / supply security) along the whole holiday distribution chain. Travel agencies, for example, are key resources in that they allow forward integrated tour operators to influence the product presentation and 'image' of their products. Special features or quality can be highlighted by travel agent subsidiaries, whereas a price-based 'best-buy principle' is implemented in many external travel agent branches. Moreover, resources are often limited, such as racking space in travel agent outlets, seats in aircraft, and beds in

hotels, and/or have high asset specificity, giving an integrated tour operator priority access to these resources. Examples of key resources, tour operators are trying to secure, are listed in Table 5.9. Examples of non-physical and non-human resources include capital and information.

Type of Travel and Tourism Companies	Examples of Human Resources (competencies, skills, knowledge, experience)	Examples of Physical Resources
Travel and Tourism Principals (including additional service providers)	<ul style="list-style-type: none"> <li>• pilots, aircraft maintenance staff</li> <li>• hotel and catering staff</li> <li>• entertainers</li> <li>• technical and financial experts</li> </ul>	<ul style="list-style-type: none"> <li>• for transportation, e.g. planes, cruise ships, trains, cars</li> <li>• for accommodation, e.g. hotels, apartments, resorts</li> <li>• for catering, e.g. restaurants, bars</li> <li>• for entertainment, e.g. complexes, halls</li> </ul>
Destination Agencies	<ul style="list-style-type: none"> <li>• tour representatives, resort staff</li> </ul>	<ul style="list-style-type: none"> <li>• offices</li> </ul>
Tour Operators	<ul style="list-style-type: none"> <li>• booking staff, destination experts</li> <li>• contractors</li> <li>• technical experts</li> </ul>	<ul style="list-style-type: none"> <li>• telephone booking centres</li> <li>• destination databases, pictures of destinations</li> <li>• tour operator systems</li> </ul>
Travel Agents	<ul style="list-style-type: none"> <li>• sales staff, travel 'consultants' or 'advisers'</li> </ul>	<ul style="list-style-type: none"> <li>• outlets</li> <li>• travel agent systems</li> </ul>

**Table 5.9**  
Examples of Resources in the Package Holiday Business

New ICTs are very useful in securing and co-ordinating resources, and can themselves be resources. Tour operators are, therefore, implementing new system strategies with the aim of creating, securing, controlling and/or co-ordinating resources within the entire tour operator group.



## 5.6 Level 1 Impacts

*Structures of tour operators, and governance forms:* Internal structures and governance forms of tour operators are, to some extent, impacting on the new co-ordination strategies of tour operators. These issues were briefly discussed in the interviews and it appeared that contingencies of this type had less impact on the tour operators' co-ordination strategies than other factors. Given limited interview time, these Level 1 factors were, therefore, not further discussed.

*Transaction and relationship attributes:* New ICTs have a number of transaction cost advantages for those firms which are adopting them (Dordick and Williams, 1986). For example, tour operators have achieved various transaction cost advantages through back-office systems, most of all through cost reductions in administration (Freyer, 1993, p. 169; Jordans, 1990, p. 28; Mutch, 1993). Given competitive pressures at Level 4 and other developments, as discussed above, new ICTs are becoming increasingly essential to tour operators, especially as front-office systems (Hemming, 1995), to conduct cost-effective production and distribution of holiday packages, thus leading to the implementation of new system strategies.

*Resource base:* Tour operator systems and information technology departments are concentrated upon here, being among the core Level 1 resources of tour operators as well as being of central importance to this study. While the main new system strategies and corresponding systems of interviewed tour operators are discussed at Level 1 in Chapter 6, all other systems and system strategies of the interviewed tour operators in Britain and Germany are listed in Table 5.10 and Table 5.11, respectively. Further information on off-the-shelf tour operator systems in Britain and Germany is published in Richer (1994 and 1996a) and Touristik Report Extra (1994/1995), respectively. Most of the systems used by the tour operators which are listed in Table 5.10 and Table 5.11 (and in Richer, 1994 and 1996a, and Touristik

Report Extra, 1994/1995) are off-the-shelf (and mainly stand-alone) systems. In fact, the systems' software can be referred to as 'sector software' (Mertens et al., 1995), being unique to the tour operator sector.

Tour Operator in Britain <sup>1</sup>	Name(s) of Main Tour Operator System(s) and System Developer(s)	System Strategy <sup>2</sup>
The Air Travel Group Holidays Limited (Granada Group PLC)	<p><b>ATOP</b> (Advanced Tour Operators Product) Cray Systems, Slough/Berkshire</p>	ATOP was installed in 1987 and tailored to individual needs such as booking switches. In May 1995, ATOP version 2.0 was in use. The data was held on machines at Cray Systems' premises, which were linked by leased kilostream lines to Digital Equipment Corporation DEC 50 servers at The Air Travel Group's headoffice.
Cosmosair PLC (Cosmos), England <sup>3</sup> (The Globus Group, Switzerland)	<p><b>TOURPARS</b> System Aid Technology Limited, West Drayton / Middlesex</p> <p><b>Taurus</b> (for Avro PLC) Astralologic Limited, Slough/Berkshire</p>	Cosmos started a programme of full computerisation in 1982, in particular supporting its late-booking seat-only Travjet product (later renamed Cosmos Flights), aimed at timeshare customers and sold between 1983 and 1987. Cosmos introduced its viewdata system in 1988 (see Hemming, 1995, p. 50).
Hotelplan International Travel Organisation Limited (Inghams Travel) (Hotelplan Internationale Reiseorganisation AG, Switzerland)	<p><b>ATOP</b> (Advanced Tour Operators Product) Cray Systems, Slough/Berkshire</p> <p><b>Unisys system</b> own development</p>	The Unisys system was developed in-house in Britain around 1978 and used only for non modular packaged holidays such as the Euro Ski and Euro Lakes & Mountains holidays. The off-the-shelf version of ATOP was introduced around 1990 due to the launch of new products, with the data being held at Inghams Travel's premises. The ATOP system was used for the more modular holidays such as city breaks and long-haul holidays. ATOP, however, was regarded as having only limited flexibility and being more product than supply driven.
Iberotravel Limited (Grupo Viajes Iberia (GVI), Spain)	<p><b>TOS</b> (Tour Operator System) The International Leisure Group Limited (ILG)</p> <p><b>TOPIC</b> TAS Services, Haywards Heath/West Sussex</p> <p><b>ATOP</b> (Advanced Tour Operators Product) Cray Systems, Slough/Berkshire</p>	TOS was developed in-house by ILG during the early 1980's and sold to Iberotravel in 1991, when ILG collapsed. The system was developed and maintained in-house by the Leisure Travel Management Services (LTMS) division and was not linked to any of the systems at Iberotravel's parent Grupo Viajes Iberia (GVI) in Spain. The system TOPIC was used for the brand Sky Choices. The subsidiary Beach Villas (Holidays) Limited, which was acquired in March 1995, used the ATOP system. In addition, the Leisure Travel Management Services (LTMS) division developed tour operator systems for other tour operators, including a system for Airtours PLC's former brand Sun Express. Although Iberotravel allowed the flexible combination of flights and accommodation since these components were held individually in the systems, it did not allow any flexibility in the length of the holidays, i.e. it only sold 7-nights and 14-nights standard holiday packages (and long-stay packages during the winter).

Tour Operator in Britain <sup>1</sup>	Name(s) of Main Tour Operator System(s) and System Developer(s)	System Strategy <sup>2</sup>
Inspirations PLC	<p><b>FATS</b> (Fast Access Travel System) JFA Systems Limited (Jim Fatah &amp; Associates), Haywards Heath/West Sussex</p>	<p>FATS was originally developed by Sunmed Holidays in 1979, which was acquired by Redwing Holidays Limited (part of British Airways PLC) at the end of the 1980's. When Redwing Holidays was itself acquired by the Owners Abroad Group PLC (later First Choice Holidays PLC) in 1990, staff of Redwing Holidays set-up JFA Systems Limited to further develop FATS as an off-the-shelf tour operator system, with Inspirations being one of its main users due to the managing directors of Inspirations and JFA Systems being brothers. Staff of JFA Systems also continued to develop and maintain the system at Inspirations. FATS, which ran on VAX stations, was originally written in Basic, but continually updated over the years, with various computer languages having been used. FATS was linked to an internal e-mail system at Inspirations, but not linked to the internal Microsoft Windows-based applications for administration functions. The systems were only loosely coupled for the brochure production.</p>
Jetsave Travel Limited (Dial Corporation, USA)	<p><b>ATOP</b> (Advanced Tour Operators Product) Cray Systems, Slough/Berkshire</p>	<p>ATOP was installed at around 1988, with all systems being located and all data being held at Jetsave Travel's premises. Cray Systems staff, however, continued to conduct the facilities management. Sister tour operator Crystal Holidays Limited used a different and separate system, FATS (Fast Access Travel System) by JFA Systems Limited (Jim Fatah &amp; Associates), Haywards Heath/West Sussex.</p>
Manos (UK) Limited	<p><b>ATOP</b> (Advanced Tour Operators Product) Cray Systems, Slough/Berkshire</p>	<p>Manos adopted a partly bespoke version of ATOP, with all computers being located at Manos' premises.</p>
Meon Travel Limited (Meon Travel Group)	<p><b>TOURS</b> Infocentre Travel Systems Limited, Petersfield / Hantfordshire</p> <p><b>FSS</b> FSS Travel &amp; Leisure Systems Limited, Bracknell / Berkshire</p>	<p>TOURS was developed for Meon Travel in 1980, based on a system developed in 1976 for a Canadian tour operator. TOURS was later also sold to other tour operators, with Meon Travel operating a partly bespoke version of the system. Infocentre Travel Systems continued to develop and maintain the system. The off-the-shelf system FSS was introduced in 1990 for the tailor-made brand Silk Cut Travel. In May 1995, it was planned to replace both TOURS and FSS before August 1995 by a single new system, which had not been decided upon. The systems allowed some flexibility regarding flight and car hire components, which were held as individual components and could be booked ad-hoc, if necessary. In contrast, there was little flexibility regarding accommodation components, since these were held in the database as blocks together with catering and tour representative service components.</p>
Panorama Holiday Group Limited	<p><b>FSS</b> FSS Travel &amp; Leisure Systems Limited, Bracknell / Berkshire</p>	<p>A bespoke version of the FSS system was introduced in 1991, replacing a system which was developed in-house.</p>
Unijet Travel Limited (Unijet Group PLC)	<p><b>ATOP</b> (Advanced Tour Operators Product) Cray Systems, Slough/Berkshire</p>	<p>A bespoke version of ATOP was installed in November 1992, with the data being held at Unijet Travel's premises, replacing an old IBM AS/400 and a Wang VS system.</p>

Tour Operator in Britain <sup>1</sup>	Name(s) of Main Tour Operator System(s) and System Developer(s)	System Strategy <sup>2</sup>
Virgin Holidays Limited (Virgin Travel Group)	<b>ATOP</b> (Advanced Tour Operators Product) Cray Systems, Slough/Berkshire	An off-the-shelf version of ATOP was introduced in 1990, with the inventory being held at Virgin Holidays' premises. While Microsoft Windows was used in-house for administration purposes, access to ATOP took place through terminal emulation. However, in mid 1995, ATOP was developing a full Windows interface which Virgin Holidays would adopt once released. An off-the-shelf version of TOPS by TAS Services, Haywards Heath/West Sussex, was used prior to ATOP, but was unsatisfactory. The ATOP system was chosen mainly because of Cray Systems' expertise and worldwide customer base, which enabled Cray Systems to set certain standards in the travel and tourism industry such as of system interfaces for host-to-host communication; in addition, developing an in-house system would have been very costly.

<sup>1</sup> Corresponding tour operator group, or travel and tourism group, is stated in brackets.

<sup>2</sup> Information on some system suppliers was added from Richer (1994).

<sup>3</sup> Cosmos was not interviewed.

**Table 5.10**  
**System Strategies of Tour Operators in Britain**

Tour Operator in Germany <sup>1</sup>	Name(s) of Main Tour Operator System(s) and System Developer(s)	System Strategy <sup>2</sup>
Alltours Flugreisen GmbH	<b>Blank</b> <sup>3</sup> W. Blank Software GmbH (WBS), Frankfurt am Main	The Blank system was acquired at the end of the 1980's. The standard SAP software was used in parallel for accounting purposes. The Blank system was regarded as a fairly inflexible database system.
Attika Reisen AG	N. A. own development	A UNIX system with an Informix database was developed in-house a number of years ago, with improvements having continuously been made to the system. In 1992, the system was altered so as to allow the flexible combination of individual components.
Berliner Flug Ring GmbH (BFR)	N. A. Air Conti Flugreisen GmbH & Co. KG, München (→ TUI)	The system was purchased from Air Conti Flugreisen in 1991, replacing an unstable and unreliable system developed in-house. The system was regarded as being moderately flexible, allowing the individual sale of components given demand, due to the data being held as separate entries.
Delphin Seereisen GmbH	N. A. own development	The bespoke system was developed in 1988 by an external programmer, who has since continued to maintain and enhance the system. The system allowed some flexibility regarding the combination of stored allocations, but allowed little flexibility regarding ad-hoc purchases.

Tour Operator in Germany <sup>1</sup>	Name(s) of Main Tour Operator System(s) and System Developer(s)	System Strategy <sup>2</sup>
Feria Internationale Reisen GmbH	N. A. own developments	All systems were developed in-house during the early 1980's, since at that time basically no off-the-shelf systems existed. The core systems were based on a UNIX computer and written in COBOL. It was planned to partly automate the catalogue production using desktop publishing (DTP) software. The system was regarded as being relatively flexible regarding the combination of components.
Fischer Reisen GmbH	<b>Blank</b> <sup>3</sup> W. Blank Software GmbH (WBS), Frankfurt am Main	The Blank system was installed in 1987 on a Bull DPS 6000 machine. Prior to that date, no system was used. PCs and some Macintoshes were used in addition for administration purposes.
Gesellschaft für internationale Begegnung und Cooperation mbH (GeBeCo)	<b>GBC</b> (GeBeCo) own development	GBC was developed in-house in 1993 using a PC-based Novell network and an XBase relational database, with a small server being attached for special system enquiries.
Hapag-Lloyd Tours GmbH (Hapag-Lloyd AG)	<b>ITOS</b> ISO GmbH, Nürnberg	ITOS (not the same ITOS as the one of Sun International N.V., Belgium) was acquired by Hapag-Lloyd Tours and Hapag-Lloyd Reisebüro GmbH. ITOS ran on an IBM RS6000 (RISC-machine) and was written in COBOL. All data was held in blocks and not as individual components, thus allowing very little flexibility.
Ikarus Tours GmbH	<b>Tourline</b> <sup>4</sup> DER-Data Informationsmanagement GmbH, Frankfurt am Main (→ DER)	A bespoke version of Tourline was developed by DER-Data for Ikarus Tours in 1992, replacing a word-processing software. Due to the comparatively small number of customers, relatively few allocations were held in the system, making the storage of individual components unnecessary and allowing the data to be held as blocks.
Klingenstein & Partner Studienreisen	<b>Logical-Reise</b> <sup>3</sup> Logical Tourismus Software GmbH, Köln	The PC-based Logical-Reise system was used by Klingenstein for booking and data storage purposes. It was supplemented by a word-processing software. The data was mainly held in blocks, in particular for group trips, but partly also held as separate components.
Nazar Holiday Reiseveranstaltung GmbH (Ten Tour Holding, Turkey)	<b>Blank</b> <sup>3</sup> W. Blank Software GmbH (WBS), Frankfurt am Main	The Blank system operated on a UNIX mainframe.
Olimar Flugreisen GmbH	<b>Blank</b> <sup>3</sup> W. Blank Software GmbH (WBS), Frankfurt am Main	
Phoenix Reisen GmbH	<b>Blank</b> <sup>3</sup> W. Blank Software GmbH (WBS), Frankfurt am Main	The Blank system was acquired during 1986/1987.
Reisebüro Jäger GmbH	N. A. Zartmann EDV GmbH, Neckarsulm	The IBM AS/400 based system was purchased from Zartmann EDV GmbH. A graphical interface was planned for the future. It was argued that the system allowed very flexible combinations of components.
Schauinsland-Reisen GmbH	<b>Blank</b> <sup>3</sup> W. Blank Software GmbH (WBS), Frankfurt am Main	The Blank system was acquired in 1992, replacing a Nixdorf system, which was installed during the early 1980's and which was very labour intensive regarding data input and did not offer ticketing facilities. The Blank system was thought of as allowing only medium flexibility.

Tour Operator in Germany <sup>1</sup>	Name(s) of Main Tour Operator System(s) and System Developer(s)	System Strategy <sup>2</sup>
Studiosus Reisen München GmbH	<b>Blank</b> <sup>3</sup> W. Blank Software GmbH (WBS), Frankfurt am Main  N. A. own developments	The Blank system was implemented during the mid 1980's on a Bull DPS 6000 computer. It had no database, but instead index-sequential data files. In addition, a PC-network was used with self-developed tour operator software. The Blank system was regarded as outmoded, for example not catering for flexible combinations of components, upgrades of hotel classes and hotel rooms and also not allowing the sale of cruises, which were more complex. Thus the company considered replacing the Blank system at some time in the future. The catalogue production was also not automated as yet.
Unger Flugreisen GmbH	<b>Phönix</b> Phönix GmbH, Berlin	The Phönix system was acquired from Phönix GmbH, but changed extensively in-house. It was based on an IBM AS/400 and relational databases. It was claimed that the system would enable relatively flexible combinations of components, but due to a lack of demand not much flexibility was needed as yet.
Wikinger Reisen GmbH	N. A. own development	The bespoke IBM AS/400-based system was developed externally a number of years ago and improved over the years, with components being held individually.

<sup>1</sup> Corresponding tour operator group, or travel and tourism group, is stated in brackets.

<sup>2</sup> Information on some system suppliers was added from Touristik Report (1994/1995).

<sup>3</sup> The Blank systems either ran on Bull DPS 6, DPS 6E or DPS 6000 computers, operating under GCOS 6 (General Comprehensive Operating System), or, since mid 1993, on Bull UNIX machines with RISC (reduced instruction set computer) and SMP (symmetrical multi processor) open architectures, operating under GCOS 6 HVX. Source: Bull (1995). *Bull Worldwide Information Systems*. Bull S.A., Louveciennes, France.

Further source: WBS (N. A.). *WBS Blank Software: Branchensoftwarepaket für Touristik-Unternehmen*. W. Blank Software GmbH (WBS), Frankfurt am Main, Germany.

<sup>4</sup> Further sources:

DER-Data (1994). *Tourline* (October). DER-Data Informationsmanagement GmbH, Frankfurt am Main, Germany.

DER-Data (N. A.). *Mehr veranstalten: Tourline - Die Software für Reiseprofis*. DER-Data Informationsmanagement GmbH, Frankfurt am Main, Germany.

<sup>5</sup> Further source: Logical (1995). *Logical-Reise (Veranstalter): Die Software für die Tourismusbranche*. Logical Tourismus Software GmbH, Köln, Germany.

**Table 5.11**

**System Strategies of Tour Operators in Germany**

Certain detailed aspects of tour operator systems such as response times and transaction (or data) volume were not studied for reasons of confidentiality, limited interview time and/or little relevance to this study. Instead, in particular functional aspects of the systems such the ability to automatically assemble tailor-made holidays and links to external systems were investigated. While external links are discussed in Chapter 6, Table 5.10 and Table 5.11 give an overview of (internal) tour

operator systems used by mainly medium-sized tour operators in Britain and Germany, respectively. Most of the systems listed have a limited capability for producing flexible holiday packages. Thus, combined with the data presented in Chapter 6, it can be argued that relatively few tour operator systems have been implemented in the past, or have been available off-the-shelf, which enable the automatic production of flexible and individual package holidays.

The listing of the tour operator systems in Table 5.10 and Table 5.11 allows a comparison of 'old' system strategies with 'new' system strategies of tour operators aimed at the production of flexible and tailor-made holidays (Chapter 6). In addition, the listing indicates that tour operators need to develop bespoke tour operator systems, since most tour operator systems available on the market provide only limited functions and allow only limited flexibility.

With the increasing importance of new ICTs for tour operators, tour operator systems together with information technology (or systems) departments, which develop, implement and/or maintain the systems, have become core resources of tour operators. Therefore, data was collected on the information technology departments of the interviewed tour operators in Britain (Table 5.12) and Germany (Table 5.13). Including partly-owned subsidiaries, all of the largest tour operators in Britain and Germany had also the largest number of information technology staff. (For reasons of confidentiality, no information technology cost figures were gained other than those included in Table 1.1 and those for TUI in Table 5.13. As a result of limited interview time, no other (detailed) information on human resources in information technology (Harding, 1994; Hinds, 1994) was gathered.)

Tour Operator in Britain <sup>1</sup> Comments <sup>3</sup>	Number of Staff <sup>2</sup>
Thomson Tour Operations Limited (The Thomson Travel Group) • working in operations and production control, database administration, applications support of existing systems, and development • further staff were at Britannia Airways and Lunn Poly	~ 150
Airtours Holidays Limited (Airtours PLC) • in Britain: 60 for tour operations, 60 for travel agent operations, and 40 for airline operations; the systems department was set-up in 1982 • in Scandinavia: 30 staff	~ 60 (~ 190)
British Airways Holidays Limited (British Airways PLC) • some information technology services were offered to British Airways PLC, but more were received in return	40
Manos (UK) Limited	30
First Choice Holidays & Flights Limited (First Choice Holidays PLC) • working in technical support, database team, and development group; the development group consisted mainly of business analysts working as project managers • further staff were at Air 2000	~ 20
Iberotravel Limited (Grupo Viajes Iberia (GVI), Spain)	20
The Air Travel Group Holidays Limited (Granada Group PLC)	6
Hotelplan International Travel Organisation Limited (Hotelplan Internationale Reiseorganisation AG, Switzerland)	5
Thomas Cook Holidays (The Thomas Cook Group Limited) • 1 for operations, 1 for maintenance of ATOP system, and 3 for various systems • further staff were at Thomas Cook Holiday Shops and Thomas Cook Direct	5
Bridge Travel Group (Sun International N.V., Belgium) • larger number of staff were at Sun International N.V., Belgium	4
Inspirations PLC • more staff were at Goldcrest and Caledonian Airways	4
Jetsave Travel Limited (Dial Corporation, USA)	4
Virgin Holidays Limited (Virgin Travel Group)	4
Unijet Travel Limited (Unijet Group PLC)	3
Panorama Holiday Group Limited	1
Meon Travel Limited (Meon Travel Group)	0

<sup>1</sup> In decreasing order of number of staff. Corresponding tour operator group, or travel and tourism group, is stated in brackets.

<sup>2</sup> Number of staff in systems department in Britain mainly used for tour operations. Total number of staff in systems department(s) in group in brackets.

<sup>3</sup> All figures, unless stated otherwise, are number of staff. Unless stated otherwise, the systems departments provided no services to companies outside the respective tour operator group.

**Table 5.12**  
**Systems Departments of Tour Operators in Britain**



Tour Operator in Germany <sup>1</sup> Comments <sup>3</sup>	Number of Staff <sup>2</sup>
<p>Touristik Union International GmbH &amp; Co. KG (TUI)</p> <ul style="list-style-type: none"> <li>150 in systems department, and 50 in computer centre</li> <li>the Bereich Informationssysteme (information systems department) was segregated in 1988 into the wholly-owned subsidiary TUI Software GmbH, providing mainly services for TUI, but also some applications to companies outside the group; in 1995, however, the subsidiary was dissolved and re-integrated due to TUI's decision to focus on its main business and not to provide IT services to companies outside the group, and to flatten TUI Software's hierarchical structure to make it more flexible and adaptable to change</li> <li>since the end of 1994, the IS department has been organised as six Fachgebiete (subject areas): Software Engineering, Datenverarbeitung (data processing), Produktplanung (product planning), Anwendungssysteme Vertrieb (application systems distribution), Abwicklung (internal accounting and statistics), and Informationssysteme(IS)-Planung und Einzelprojekte (information system planning and individual projects), some of which were further divided into groups responsible for individual projects</li> <li>when the IS department was founded in 1988, DM 3 - 4 million was spent in the first year on training</li> </ul>	~ 150 (> 200)
<p>NUR Touristic GmbH</p> <ul style="list-style-type: none"> <li>40 at Karstadt AG's computer centre, and all others working on various projects (about <math>\frac{2}{3}</math> on individual projects and <math>\frac{1}{3}</math> with co-ordinating or supervising functions)</li> <li>the Vertriebsdirektion Informationssysteme (information systems directorate) was set-up in 1988</li> </ul>	~ 115
<p>The LTU Group</p> <ul style="list-style-type: none"> <li>7 at Jahn Reisen GmbH, 8 at Meier's Weltreisen GmbH, 5 at THR Tours GmbH, 15 at Tjaereborg Allkauf Reisen GmbH, and 5 at Transair Flugreisen GmbH</li> <li>&gt; 100 at LTU for central tour operating activities and airline and travel agent operations</li> <li>the LTU Group also partly-owned the software company Travel Management Systems GmbH (TMS), Leverkusen, which developed systems mainly for the travel agencies of LTU Reisebüro-Beteiligungs GmbH &amp; Co. KG, Düsseldorf</li> </ul>	> 40 (> 140)
<p>International Tourist Services Länderreisedienste GmbH (ITS)</p> <ul style="list-style-type: none"> <li>~11 in computer group, and 3 in Organisation Department, acting as a co-ordinating interface between the computer group, the other departments of the company, and the computer centre at the subsidiary Sun International N.V., Belgium</li> <li>the main computer centre, being responsible for system operations and programming, was located at the partly-owned subsidiary Sun International N.V., Belgium</li> </ul>	~ 14
Kreutzer Touristik GmbH	12
<p>Frosch Touristik GmbH</p> <ul style="list-style-type: none"> <li>the wholly-owned subsidiary Frosch Software GmbH was founded in 1989 and offered services to other companies such as the charter airline Aero Lloyd Flugreisen GmbH &amp; Co. Luftverkehrs KG, Oberursel</li> </ul>	10
<p>Studiosus Reisen München GmbH</p> <ul style="list-style-type: none"> <li>included 3 programmers</li> </ul>	7
Phoenix Reisen GmbH	6
Olimar Flugreisen GmbH	5 - 6
Alltours Flugreisen GmbH	5
Unger Flugreisen GmbH	5
Wikinger Reisen GmbH	5
Fischer Reisen GmbH	4
Berliner Flug Ring GmbH (BFR)	3
Gesellschaft für internationale Begegnung und Cooperation mbH (GeBeCo)	3
Feria Internationale Reisen GmbH	2

Tour Operator in Germany <sup>1</sup>	Number of Staff <sup>2</sup>
Comments <sup>3</sup>	
Kuoni Fernreisen GmbH (International Tourist Services Länderreisedienste GmbH (ITS), Germany, and Kuoni Reisen Holding AG, Switzerland)	2
<ul style="list-style-type: none"> <li>• all in operations</li> <li>• all programming was done by sister tour operator Kuoni Travel Limited, England</li> </ul>	
Schauinsland-Reisen GmbH	2
Attika Reisen AG	1
DER-Tour (Deutsches Reisebüro GmbH / DER)	1
<ul style="list-style-type: none"> <li>• 1 project manager</li> <li>• all technical support and travel agent systems have always been handled by DER's partly-owned subsidiary DER-Data Informationsmanagement GmbH, which was founded in 1991 from a division created in 1962 and which also provided services (such as software development since 1984) to companies outside DER, especially in the travel agency sector</li> </ul>	
Ikarus Tours GmbH	1
Reisebüro Jäger GmbH	1
Club Méditerranée Deutschland GmbH (Club Méditerranée S.A., France)	0
<ul style="list-style-type: none"> <li>• all systems staff were located at Club Méditerranée S.A., France</li> </ul>	
Delphin Seereisen GmbH	0

<sup>1</sup> In decreasing order of number of staff. Corresponding tour operator group, or travel and tourism group, is stated in brackets.

<sup>2</sup> Number of staff in systems department in Britain mainly used for tour operations. Total number of staff in systems department(s) in group in brackets.

<sup>3</sup> All figures, unless stated otherwise, are number of staff. Unless stated otherwise, the systems departments provided no services to companies outside the respective tour operator group.

Hapag-Lloyd Tours GmbH, Hetzel-Reisen GmbH & Co. KG, Klingenstein & Partner Studienreisen, and Nazar Holiday Reiseveranstaltung GmbH did not provide any information.

**Table 5.13**  
**Systems Departments of Tour Operators in Germany**

For the last 10 - 20 years, Airtours, NUR Touristic, Thomson and TUI, i.e. the market leaders in both Britain and Germany, have been developing and operating bespoke systems. More recently, also DER-Tour, ITS, the LTU Group and First Choice Holidays, for example, have been developing and implementing new bespoke systems. While most of these tour operators have created large systems departments (within the company or within a (partly-owned) subsidiary), others have outsourced some of their information technology functions. This mixture of internal and external systems development is referred to as 'hardware / software co-design' (Hartenstein, 1995). On the one hand, outsourcing information technology, or facilities management (FM), has a number of advantages such as a fast acquisition of expertise. On the other hand, it can also have a number of drawbacks such as problems in co-ordinating functions or security risks, as highlighted for example in the Virgin Atlantic / British Airways incident (Dempsey, 1993), when British Airways misused data gained from storing Virgin Atlantic's data.

Information gained from the in-depth interviews on the use of external information technology staff is stated in Table 5.14. This information supplements the data presented in Table 5.12 and Table 5.13. (Given limited interview time and less relevance, this subject was not discussed with the tour operators interviewed by telephone.)

Tour Operator in Britain <sup>1</sup>	Use of External Information Technology Staff
Airtours Holidays Limited (Airtours PLC)	<ul style="list-style-type: none"> <li>• in Britain: in October 1993, for example, 20 contractors (mainly from consultancies) were used, and in January 1995, 6 contractors were used; until January 1995, the use of external staff has not been considered successful due to the unique specifications of Airtours' systems; Airtours aimed to have permanent staff for all 'static' jobs (i.e. technical support, operations, PC support, communications team and development team), and to use consultants or contract staff only for specific developments</li> <li>• in Scandinavia: SAS Data, Sweden, a subsidiary of SAS Scandinavian Airlines System, with 60 staff was used due to SLG having been a former SAS subsidiary</li> <li>• in September 1995, Electronic Data Systems Corporation (EDS), Dallas/Texas, USA, was contracted to completely 'overhaul' the group's systems (Davies, 1995), and in June 1996, a 10-year profit-sharing contract was signed (TTG, 1996d)</li> </ul>

Tour Operator in Britain <sup>1</sup>	Use of External Information Technology Staff
First Choice Holidays & Flights Limited (First Choice Holidays PLC)	<ul style="list-style-type: none"> <li>the OTO system was developed and has since been maintained and enhanced by the staff of Cray Systems, Slough/Berkshire, with the main computer centre also being located there</li> <li>the system Speake was developed by an external programmer</li> <li>the system Merlin was programmed on-site by a project manager and four programmers of the software firm Gatton Synthesis</li> </ul>
Thomas Cook Holidays (The Thomas Cook Group Limited)	<ul style="list-style-type: none"> <li>the staff of Cray Systems, Slough/Berkshire, conducted the main technology functions, with the computer centre and the core hardware also being located there</li> <li>the separate database system was developed and being maintained by an external database management company</li> </ul>
Thomson Tour Operations Limited (The Thomson Travel Group)	<ul style="list-style-type: none"> <li>external staff has continuously been employed for the purpose of updating technologies and to cope with periods of increased workloads</li> </ul>
Tour Operator in Germany <sup>1</sup>	Use of External Information Technology Staff
DER-Tour (Deutsches Reisebüro GmbH / DER)	<ul style="list-style-type: none"> <li>the system Phoenix was developed by Fourth Dimension Software, Redwood City, Silicon Valley/California, USA, based on a previously developed system</li> <li>some other projects were also handled by external contractors</li> </ul>
International Tourist Services Länderreisedienste GmbH (ITS)	<ul style="list-style-type: none"> <li>Andersen Consulting staff were extensively used for implementing the system ITOS by conducting the project management, installing the system at ITS, developing further technical concepts, transferring the data from the previous to the new system, and training ITS employees and travel agents on the use of the system (&gt; 1,000 travel agents were trained by ITS and Andersen Consulting in 1994)</li> <li>external support for the development of the internal information system (IS) was given by the German branch of SAS Data, a subsidiary of SAS Scandinavian Airlines System, Sweden</li> </ul>
Kuoni Fernreisen GmbH	<ul style="list-style-type: none"> <li>no external contractors have been used</li> </ul>
The LTU Group	<ul style="list-style-type: none"> <li>much of the programming was done by software companies in Riga, Latvia, and in India</li> <li>the LTU Group was also advised by the software companies Nexus and IPS</li> </ul>
NUR Touristic GmbH	<ul style="list-style-type: none"> <li>5 - 45 external staff usually worked on various projects, being paid per hour; for example in November 1994, 30 external staff were working on several projects, of whom 9 from IBM, 9 from the German software company Information, and the remaining from various smaller software companies</li> <li>since 1988, all tour operator specific systems have been developed predominantly in-house, while standard software has been purchased in particular for non-core activities such as e-mail communications (e.g. Memo), accounting (e.g. SAP) and hotel management (e.g. Fidelio)</li> </ul>
Touristik Union International GmbH & Co. KG (TUI)	<ul style="list-style-type: none"> <li>it has been company policy not to use external consultants, with rare exceptions, due to the systems being very company specific, which would involve too much time and cost in training people to get to know the systems and, in fact, to get to know the company itself; if external consultants had to be used, mainly small and previously known software companies were contracted</li> </ul>

<sup>1</sup> Corresponding tour operator group, or travel and tourism group, is stated in brackets.

**Table 5.14**  
**Use of External Information Technology Staff**  
**by Major British and German Tour Operator Groups**

Overall, this data revealed that independent of the degree of internal and external information technology staff use, all the in-depth interviewed tour operators developed bespoke systems, which were not available or marketed to other tour operators.

Apart from systems and information technology departments, other tour operator resources are also impacting on their new system strategies. While some, such as human resources are of rather general nature and thus not discussed here, a more specific example are slides (i.e. pictures) of destinations. When the Best Travel Group (part of Champion Holdings Group) ceased trading on 29 November 1994, Airtours acquired all slides of Best Travel Group's Cypriana (holidays to Cyprus) and Grecian (holidays to Greece) brands. This allowed Airtours to quickly launch additional Cyprus and Greece holiday brochures to cater for former Best Travel Group's customers. In contrast, according to Airtours, competitors had difficulties in issuing similar brochures with equal photographic quality at short notice, thus losing customers to Airtours. This and similar events, among others, have impacted on the new system strategies of tour operators by leading to the adoption of digital storage of pictures and the use of multimedia. For example, digital pictures can be quickly transmitted from destinations to a tour operator's headquarters and be immediately (and possibly automatically) incorporated into new brochures and other advertising and distribution media.

## **Chapter 6. New System Strategies of Tour Operators**

### **6.1 Introduction and Summary**

New system strategies of major European tour operators and the corresponding system developments are documented, and the systems' main functionalities are analysed, in particular when compared to the older systems which were enhanced or replaced. This description and analysis aims, therefore, to fulfil the second sub-objective as stated in Section 1.1.

It is hypothesised that major European tour operators are adopting new system strategies (and corresponding new co-ordination strategies) with the aim of a more flexible automated production and distribution of packaged holidays, which allow them to reinvent their business activities. A number of new tour operator systems, which were either enhanced during the most recent years or are being implemented as completely new systems by major European tour operators as part of their new system strategies, are listed in Table 1.1. In particular, the new system strategies aim to allow the automated production and distribution of more tailor-made holiday packages than was possible with the previous systems. These new packages are more tailor-made with regards to both depth and breadth of products offered, with existing products being more individually presented as well as new customer-tailored products being added.

The proposed positioning model (Figure 3.5) is employed to analyse the new system strategies of tour operators for each of the five levels. It is shown that proposed model is a useful methodology as well as analytical tool in organising and highlighting these developments in a structured and concise form, while preserving and reflecting much of the package holiday sector's complexity. All information in this chapter was gained from interviews, as outlined in Chapter 4, with some information, where indicated, having been added from academic and trade

publications, which, if it is pre-interview dated, was used to prepare the interviews, or, if it is post-interview dated, is used to update the information presented.

The new system strategies at each level are summarised next, followed by detailed data in the subsequent sections.

At *Level 1*, it is hypothesised that tour operators are developing and implementing more flexible tour operator systems with regards to data storage, retrieval and processing, either by enhancing their previous systems or even completely replacing them (see Table 1.1). In particular, developments of the following kind were found which support this hypothesis:

- **Data model / storage:** The data stored in tour operator systems, which was previously held in blocks, is split into individual data entries (also Schmidt, 1994a; Weber, 1995). For example, the single data entry 'return flights from Manchester to Palma de Mallorca, bus transfers between airport and hotel, 14 nights accommodation in Hotel X' is split into the individual data entries 'flight Manchester to Palma de Mallorca', 'flight Palma de Mallorca to Manchester', 'bus transfer from airport to hotel', 'bus transfer from hotel to airport' and 14 single entries of '1 night accommodation in Hotel X'. When relational databases are being used, this development is reflected in an increase in the number of tables used to organise the data. Moreover, additional data is being entered into the systems, both for previously stored travel and tourism components as well as for new components. Accommodation, for example, was a previously stored component, but while only few entries such as the main type of accommodation (i.e. hotel, villa, apartment, etc.) and the number of beds were held on the previous systems, further details are being entered on the new systems such as size of room, size of bed, type of washing facilities, smoking/non-smoking, balcony, sea-view, pets-allowed, facilities for children/elderly/disabled, flowers and/or champagne on arrival, distance to restaurants and pubs, etc. Examples of data on additional components are digital pictures and maps of locations, detailing for example historical and cultural sights as well as the location of restaurants and pubs.

- **Data retrieval (and storage):** Hierarchical (and network) databases are being replaced by relational databases. Relational databases, compared to hierarchical ones, in general reduce the time and effort needed to combine or link various data entries (Economist, 1988; Engesser, 1988, pp. 143 - 144; Schlingmann, 1986), thus making the assembly of complex holiday packages more cost effective. Relational databases are also more easily adapted than hierarchical ones when novel types of data are entered and consequently new search strategies are necessary for retrieval.
- **Data processing:** New system architectures and applications are being implemented, in particular client/server structures and internal booking masks. Client/server applications create open systems by combining various hardware and software such as mainframes, UNIX systems, personal computers (PCs), local area networks (LANs), Microsoft (MS) Windows applications, IBM OS/2 applications and IBM DB2 databases, leading to a number of benefits regarding flexibility, as detailed in Doh (1995), Doll and Doll (1993), Hegering et al. (1995), Jaccottet (1995), Kohlhammer (1995) and Sager (1995). Client/server applications also provide the basis for flexible data retrieval as part of system architectures with distributed databases (Wismans, 1995) or as part of those architectures operating as 'Data Warehouses' (Buck, 1995; Kühner, 1995; Mucksch et al., 1996). Internal booking masks allow more flexible access and processing of stored data, avoiding the restrictions of external booking masks such as START's TOMA (Touristik Maske / tourism mask) in Germany (Figure 6.12).

Each of these developments, i.e. the increase in the amount and the modularisation (or segmentation) of the stored data, data retrieval through relational databases and data processing within new system architectures as well as combinations of these, are all key indicators of increased flexibility in new tour operator systems. This increased flexibility in data storage, retrieval and processing allows tour operators to automatically assemble more individual holiday packages by combining various travel and tourism components more flexibly than was previously possible with their previous systems.



Also as part of Level 1 system strategies, as well as of all other levels, monochrome screens are being replaced by colour screens, or even multimedia display equipment, thus increasing flexibility in data presentation enabling the data stored to be presented, both within and outside the organisation, in more effective ways. Software applications such as internal booking masks are consequently being implemented to support this change in data display, avoiding the display restrictions imposed by external booking masks such as START's TOMA. Moreover, these Level 1 developments combined provide the basis for fully electronic and (semi-)automated production of brochures (or catalogues), replacing any manual data transfer, the storage of pictures in hardcopy form and some stages of the layout process. MISs (management information systems) (Keen, 1986, pp. 83 - 85), including executive information systems (EISs), are also being implemented.

At *Level 2*, it is argued that tour operator groups develop and implement corporate tour operator networks, connecting their offices and subsidiaries worldwide. A corporate network is an ICT network, which in its most basic form is a customer premises network, i.e. a local network that links customer premises equipment. In a more complex form, a corporate network links several customer premises networks and/or remote customer premises equipment (Stahlknecht and Schäffer, 1994). A corporate network can consist of a mixture of public switched telephone networks (PSTNs), virtual private networks (VPNs), leased fixed lines, fully private networks and outsourced private networks (also Heywood, 1990). One of the main advantages of a corporate network, compared to public networks, is that it can be individually tailored to the needs of a corporation. For the corporation, this can result in increased performance, reduced costs for example through higher data transmission rates, increased quality of data transfer, increased data security, and common standards in communication procedures and equipment used. As part of this new system strategy, some tour operators implement distributed databases, allowing data to be held almost anywhere in the world without the need to store all data in one central location (Wismans, 1995).

ISDNs (integrated services digital networks), a type of digital network used for a variety of voice and non-voice communication services (Bublely, 1994, pp. 9 - 10; Economist, 1995a; Teunissen, 1995), are in particular adopted. E-mail (electronic mail) and electronic data interchange (EDI) are especially used for communication via the corporate networks. E-mail is the electronic equivalent of traditional paper-based mail, operating as asynchronous communication using the store-and-forward principle and thus allowing separation in space as well as in time of sender and receiver (Hall, 1991a; Weber, 1994, p. 222; White, 1994a). EDI is a term for a certain type of electronic communication or exchange of data between trading partners (Ali, 1992, p. 45; Collier and Spaul, 1992, p. 1; Klein, 1995b, pp. 148 - 149; Mansell and Jenkins, 1992, p. 2; Reekers, 1993 and 1994; Reekers and Smithson, 1994a, pp. 169 - 171, 1994b and 1995b; Taylor, 1993a; Wakeling, 1991).

Corporate networks enable group-wide electronic communication and exchange of information with the following particular impacts on tour operators and the other companies in their group:

- Backward vertical links with airline subsidiaries allow the exchange of booking and passenger information, replacing paper notes sent by standard mail, telex or fax and data sent on floppy disks.
- Backward vertical links with owned hotels and other suppliers allow the exchange of booking and customer information, replacing paper lists carried as co-mail (company-mail) by tour representatives as well as all telephone, fax and telex messages and floppy disks.
- Backward vertical links with destination agencies allow the exchange of customer information, replacing paper lists carried as co-mail, telephone, fax and telex messages and floppy disks; moreover, as a second step, destination agencies can get direct access to tour operator's databases, enabling them to operate as tour operators themselves without requiring major investments in their own systems and without having to conduct airline seat and other contracting themselves.
- Horizontal links with sister tour operators allow data sharing.

- Forward vertical links with travel agent subsidiaries, airport offices and other booking offices give these outlets direct access to tour operator's databases, thus avoiding restrictions imposed by external booking systems and replacing any telephone, fax and telex messages. In addition, travel documents have no longer to be posted by standard mail.

To this extent, tour operator groups are becoming 'networked firms' (Antonelli, 1988b; Taylor and Williams, 1991), containing separate, market-orientated business units, which, however, are integrated or linked together by tight (technology and non-technology based) information and communications networks, a strong supervisory control structure co-ordinating and enforcing the strategic aspects of the groups, and (usually) *common ownership*.

One of the main consequences of all these links for tour operators is an increased ability to automatically produce individually tailored holiday packages in the following ways:

- Backward vertical links with owned airlines, hotels and other suppliers as well as destination agencies allow the automatic exchange of single passenger information and the reservation of additional components, which is necessary for the production of individual travel itineraries, while at the same time reducing the relative administration costs of and shortening the time needed for this information exchange, which moreover enables tour operators to be more flexible regarding late-minute bookings, re-bookings and cancellations.
- Horizontal links with sister tour operators give access to each other's products, such as those aimed at more specific customer segments, for example families, sports enthusiasts or young people, which can then be automatically combined with their own products, allowing a wider product range to be offered.
- Forward vertical links with owned travel agencies and other booking offices allow staff in those branches to book single holiday components electronically, thus reducing time and effort in comparison to the previous methods of manual bookings by telephone, fax and standard mail, while at the same time avoiding the

restrictions imposed by external booking systems such as viewdata or START, which typically are fairly limited regarding booking of individual components; in addition, the reduction in time taken by the booking process and the delivery of the travel documents enables tour operators to cater for the individual needs of customers with last-minute requests.

At *Level 3*, it is argued that tour operator groups are co-operating with other organisations to establish sector-wide (and to some extent industry-wide) electronic communication standards. These standards such as the new Standard-Datensatz Touristik (SDS-T) in Germany and other technology initiatives are likely to foster the uptake of electronic links between various organisations involved in the travel and tourism industry and the tour operator sector in particular, especially those links which are discussed at Levels 2, 4 and 5. Finally, regarding Level 3, while small tour operators have often formed alliances or associations such as The Association of Independent Tour Operators (AITO) in Britain, mainly as a response to the increasing concentration and dominance of large tour operators (Kärcher and Williams, 1994 and 1995), little evidence was found that these co-operations are developing new joint system strategies.

At *Level 4*, it is argued that on-line program-to-program links are being developed and implemented, linking tour operator systems and other information, communication, reservation and booking systems in the tour operator sector. In other words, a trend towards 'open interconnectivity' between major travel and tourism systems in the package holiday business can be observed. The main links being established are:

- Backward vertical links between global distribution systems (GDSs), i.e. Amadeus, Galileo International, SABRE and Worldspan, and tour operator systems for automated transportation and accommodation reservations and bookings (Kärcher, 1995b). The main examples of these links are Worldspan's Tour Connect, Worldspan's WorldSolutions (launched in 1993) and Galileo International's Inside Access (launched in 1994 for tour operators).

- Backward vertical direct links between principals' systems and tour operator systems, in particular of charter airlines and hotels, for automated reservations and bookings.
- Forward vertical direct links between tour operator systems and travel agent systems for automated selling of holiday packages.
- Forward vertical links between tour operator systems and national reservation systems such as viewdata in Britain and START and Dillon Communication Systems GmbH's (DCS) Merlin in Germany for more flexible automated selling of holiday packages.
- Forward vertical links between tour operator systems and global distribution systems (GDSs) for automated selling of holiday packages in particular internationally (Kärcher, 1995b). The main examples of these links are Galileo International's TourMaster (launched in 1991 for German tour operators), Galileo International's Leisure Shopper (launched in the USA in February 1993 and in central Europe in early 1995) and SABRE's Tourlink / Tourguide (launched in Europe in November 1993).
- Forward vertical links between tour operator systems and electronic consumer trading platforms such as the Internet's World Wide Web (WWW), CompuServe, Microsoft Network (MSN) and Datex-J / T-Online (formerly Bildschirmtext / Btx), and forward vertical links between tour operator systems and other on-line direct booking systems such as self-service booking kiosks and interactive home shopping systems, for automated selling of holiday packages directly to consumers.

Automated electronic links between tour operator systems and principals, typically indirectly via GDSs but also directly, have similar impacts as the Level 2 links of tour operator systems with the systems of their own principals and destination agencies. In the same way, direct links between tour operator systems and travel agent systems have similar impacts as the Level 2 links of tour operator systems with the systems of their travel agent subsidiaries. As a response to the establishment of direct links between tour operators and travel agents, and tour operators and direct

booking systems, which thus by-pass national reservation systems, the operators of these national systems are adding further flexible features such as multiple booking masks and colour display to their systems to allow reservations for individual holiday packages, thus trying to keep old customers as well as encourage new ones to use their systems. The new links between tour operator systems and GDSs and, to some extent, consumer trading platforms allow tour operators to sell their products internationally and indeed globally, and also enable customers to change their travel itineraries while abroad, thus also catering for these individual demands. Links to consumer trading platforms and other direct booking systems moreover add flexibility to the distribution of package holidays, enabling customers to book directly and alter on-line holiday packages without having to contact a travel agent. Combined with modern telecommunications technologies such as mobile communication, customers are even able to conduct these bookings and make alterations anywhere in the world; however, so far, restrictions, such as that imposed by cross-border ticketing, remain which impede the flexibility of international travel.

At *Level 5*, it is argued that on-line program-to-program links are being developed and implemented, linking tour operator systems and new destination information, reservation and booking systems in the travel and tourism industry, which are predominantly aimed at the independent travellers' market, such as GermanSoft, CitySoft, Euro-START (formerly EuroSoft) and SAM (formerly TIM). These links allow tour operator groups to sell any unsold holiday packages as parts, or even as individual components, automatically via these systems, thus effectively entering the markets of independent and business travel which tour operators previously little catered for.

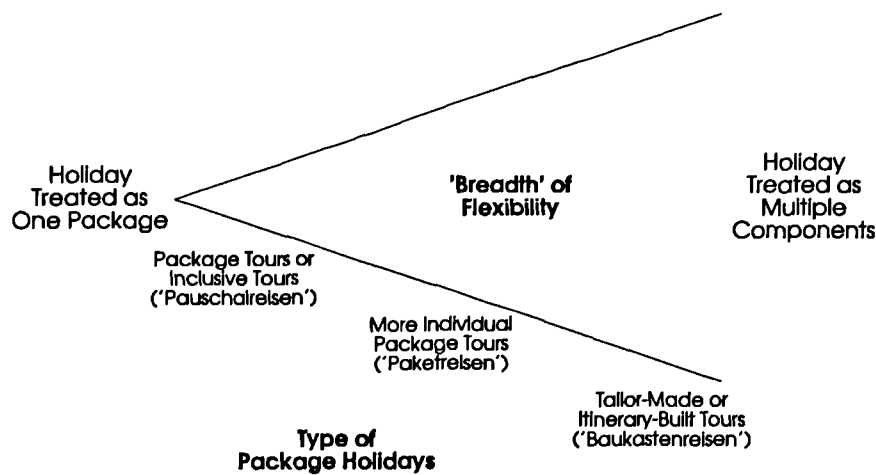
These new system strategies of tour operators at each of the five levels are summarised in Table 6.1 (also Kärcher, 1996).

Level of Analysis	Corresponding Industrial or Organisational Level	Main New System Strategies of Tour Operators at Each Level
Level 1 Core Business Relationships	Tour Operator	development and implementation of more flexible tour operator systems with regards to data storage, retrieval and processing
Level 2 Ownership Relationships	Tour Operator Group	development and implementation of corporate tour operator networks, linking offices and subsidiaries worldwide as well as development and implementation of improved in-house data display
Level 3 Co-operative Trading Relationships	Tour Operator Partnership(s)	joint initiatives for the creation of sector-wide (and industry-wide) electronic communication standards
Level 4 Competitive Trading Relationships	Tour Operator Sector	development and implementation of on-line program-to-program links between tour operator systems and other information, communication, reservation and booking systems within the sector as well as development and implementation of improved external data display
Level 5 General Trading Relationships	Travel and Tourism Industry (and other industries)	development and implementation of on-line program-to-program links between tour operator systems and new destination information, reservation and booking systems within the industry

**Table 6.1**

**Summary of New System Strategies**

The development and implementation of new tour operator systems (Level 1) allows the automatic and flexible assembly of stored holiday components. The adoption and diffusion of corporate tour operator networks (Level 2) and automated on-line links to external systems (Level 4), which is fostered by co-operative technology initiatives (Level 3), enable tour operators to automatically exchange individual customer information and automatically book additional single components. These developments combined allow tour operators to produce the types of holiday packages shown in Figure 6.1.



(German terms, being fairly well established in the industry, are included for reasons of completeness. 'Baukastenreisen' are also referred to as 'A-la-carte Reisen'. Package tours, or inclusive tours, are 'closed packages', whereas the other types are 'open packages'. FIT (foreign independent travel / flexible itinerary tour) packages are a sub-group of tailor-made tours (Weber, 1995, p. 95).)

**Figure 6.1**  
Types of Holiday Packages

Furthermore, links to GDSs and direct booking systems (Level 4) enable tour operators to open up international markets, while links to new destination systems (Level 5) enable them to expand into the independent and business travel markets. All of these developments support the hypothesis that tour operators are radically reorganising and reinventing, i.e. 're-engineering' (Kauffmann, 1995; Müller, 1995) their business activities.



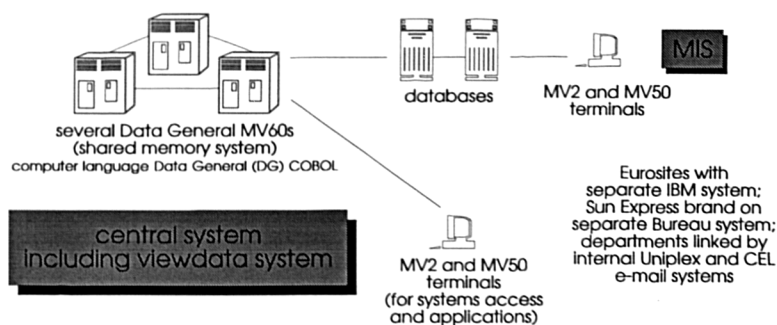
## 6.2 Level 1 System Strategies: New Tour Operator Systems

The major European tour operators, which were interviewed in-depth, are presented in alphabetical order in Sub-Section 6.2.1. In Sub-Section 6.2.2, information on other interviewed major European tour operators is presented. While the main perspective taken is organisational, some technical information is included at this level to outline those tour operator systems which are company specific and, hence, about which little information, in contrast to descriptions of off-the-shelf systems, is published elsewhere.

### 6.2.1 In-Depth Case Studies of Major European Tour Operators

#### 6.2.1.1 The Case of Airtours Holidays Limited / Airtours PLC

Airtours developed and introduced its bespoke central tour operator system in 1982, four years after the company's foundation as a small travel agent. Airtours developed the bulk of the software for the central system and for a number of smaller systems in-house, while adding some other software developed by, for example, Infos. Airtours' system structure, as in January 1995, is outlined in Figure 6.2.



**Figure 6.2**

Airtours Holidays Limited's Central System in January 1995

The data in the central system has been stored since the system was developed as a matrix of flight and property variables, similar to tables in a typical package holiday brochure, in what is regarded as a monolithic database system. In January 1995, about 750 processes ran on the databases, in particular for reservations, stock control, property information, financial information, flight ledger and self-billing. The system was partly enhanced over the years to incorporate less rigid combinations of components, but in general remained fairly inflexible regarding the production of tailor-made holidays.

*New System Strategy:* During the latter half of 1993 and during 1994, some enhancements were made to the structure and processing of data held in the system to allow more complex and flexible combinations of components. However, due to the technical limits imposed by the relatively old system, in January 1995 Airtours did not exclude the possibility that the entire central system may be replaced over the next few years, in particular with the aim of introducing Windows-based, multimedia and more flexible applications. Since Airtours aimed to expand into the more individual and premium holidays markets, it made an initial step in serving these markets by removing its long-haul brand Tradewinds from the central system onto a separate, more flexible system in mid 1995, as planned, with Tradewinds' new viewdata system being on-line since 2 October 1995. While previously only fixed-itinerary trips could be booked, Tradewinds has since been offering tailor-made options. Finally, at the end of September 1995, Airtours indeed announced its decision to 'completely overhaul' its systems with the help of Electronic Data Systems Corporation (EDS), which also included the transfer of Airtours' information technology director to EDS to work with EDS in tandem (Davies, 1995).

While Airtours already held some pictures of hotels and locations in electronic form on Apple Macintoshes in January 1995 for catalogue productions, it was experimenting with image technology to eventually transfer all slides held in hardcopy form into digital form, which could then be used for the automated production of catalogues as well as for display on internal and external screens.

### 6.2.1.2 The Case of DER-Tour / Deutsches Reisebüro GmbH

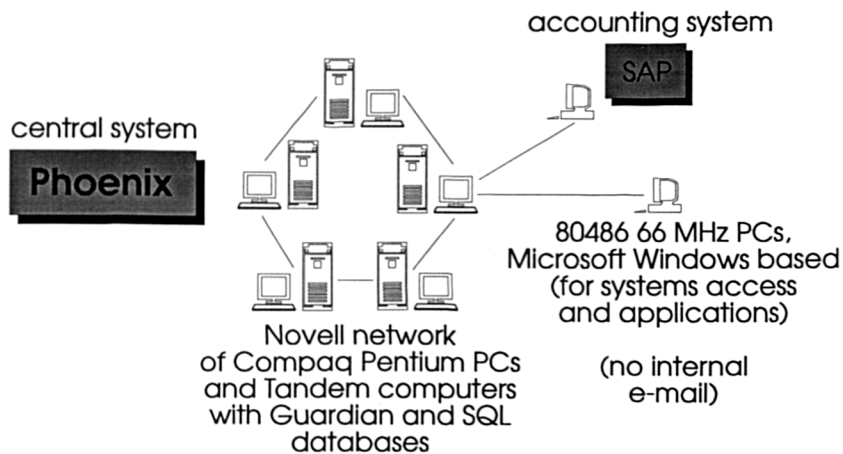
DER has only expanded its tour operations over the past few years, having previously focused on travel agency (distributing in particular railway seats for Deutsche Bahn AG and airline tickets for Deutsche Lufthansa AG, its two owners), on business travel agency, and on group and incentive travel. Corresponding to this shift in company strategy towards tour operations, DER-Tour decided to completely replace its old tour operator system TOUR, which had been installed during the mid 1980's. TOUR was a batch-processing system running on an IBM Enterprise System ES9021/500 mainframe with the IBM MVS (multiple virtual storage) operating system and Cullinet IDMS and IBM DB2 databases, which was only on-line during the day and closed overnight to process files.

*New System Strategy:* No system components of the old system were to be taken over, and all IBM 3270 dumb terminals were to be replaced by PCs with graphical display. It was even decided to key-in all data manually into the new system, to avoid taking over 'garbage' data and writing expensive data transfer programs, while also treating the input of data as training on the job. In addition, the new system was to replace the TOUR mask, an older version of the TOMA mask (Figure 6.12) which was used by the old system for selling via START, with the TOMA mask (and internal masks). The new system was moreover to run 24 hours a day, seven days a week.

All technical functions within DER have been handled by its partly-owned subsidiary DER-Data Informationsmanagement GmbH since 1991, when the subsidiary was founded (previously, DER had its own technical department, which was established in 1971). However, due to DER's focus on sectors other than tour operations, DER-Data did not have enough expertise to develop a completely new tour operator system in-house for DER-Tour. Thus a number of software companies were consulted and packages were tested, with the final decision being made in favour of a Californian software company, which had previously developed a tour operator

program. This software company was contracted to develop a system for DER-Tour's sole use, with DER-Data personnel eventually taking over the technical operations and maintenance of the system.

The new system Phoenix (temporarily called TOUR II) was to be implemented in several phases. Phase 1 was to be completed by mid summer 1995, taking over all winter 1995/1996 bookings, with the summer 1995 bookings running parallel on the old TOUR system. Phase 2 was to take over all summer 1996 bookings, thus making TOUR redundant, and to automate catalogue production and distribution. (In fact, Phoenix became operational on 1 December 1995 for bookings of two catalogues, with the other catalogues following during 1996 (Jegminat, 1996).) The system Phoenix, as planned for mid 1995 with most of the systems' components already having been in test operation in November 1994, is shown in Figure 6.3.



**Figure 6.3**

DER-Tour's Phoenix as Scheduled for Mid 1995

Phoenix had strategic priority, with the managing director of DER-Tour personally supervising the project. Rather than being a 'simple' reservation system, Phoenix was planned as a distribution and information system (Schmidt, 1994d), conducting 'active selling' by, for example, automatically offering alternative choices to customers. The modular off-the-shelf accounting package SAP (Systeme, Anwendungen, Produkte / systems, applications, products) by SAP AG, Walldorf, Germany, which can be adapted flexibly to a company's individual needs (GI, 1994; Waller, 1993), was acquired to support this flexible production of holiday packages.

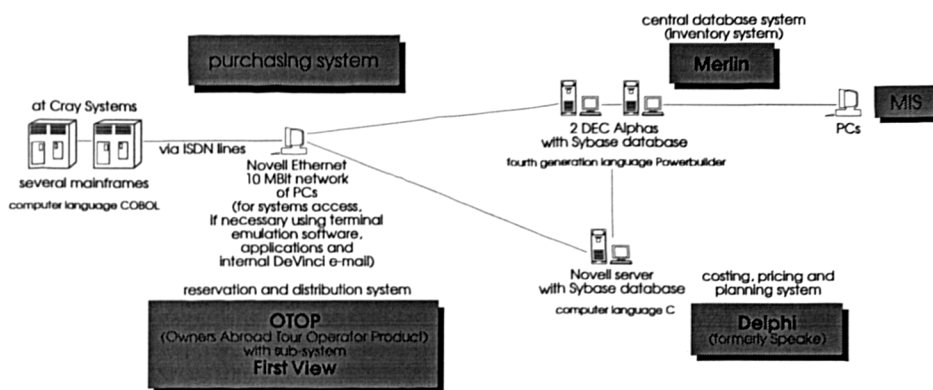
Data access took place internally via folders for each service, for example for flight transportation, accommodation, catering and car hire. The data was held within this client/server architecture on distributed databases and in a very modular form, with the option of implementing hypermedia links in the future, allowing any combinations of the entries to form (and price) all types of package holidays and in particular 'Baukastenreisen', i.e. tailor-made holiday packages. Many new components were also added, such as information on swimming pools, parking places and sports on offer. Digital pictures were further stored in the system, replacing the storage and manual handling of previously used optical disks. Direct data transfer as part of semi-automated catalogue production was also planned, replacing the Macintosh Pagemaker software and manual transfer of floppy disks.

### **6.2.1.3 The Case of First Choice Holidays & Flights Limited / First Choice Holidays PLC**

When First Choice Holidays PLC, then the Owners Abroad Group PLC, moved for the first time into the tour operator business in 1983 by purchasing the Falcon Leisure Group, it also acquired Falcon's viewdata system TOFS (The On-line Falcon System). This system has since been constantly updated and was renamed First View in September 1994, when the whole group of companies was renamed and rebranded. TOFS was integrated into the reservation and distribution system OTOP (Owners Abroad's Tour Operator Product), a version of ATOP (Advanced Tour Operators Product; formerly Autofile's Tour Operators Product) specifically enhanced for the Owners Abroad Group, acquired from Cray Systems during the 1980's. The mainframes, on which OTOP has been running since it was implemented, were located at Cray Systems' (until 1995 called Cray Systems Autofile (CSA), part of Cray Electronics) premises in Slough/Berkshire, with Cray Systems' staff also maintaining and further developing the system such as the implementation of an on-line link to Galileo UK. OTOP contained in particular the data on stocks such as holiday packages, hotel beds and flight seats and other sales information; some duplicated data, however, was also held at First Choice's headquarters in Crawley for security reasons and to generate management information. Several other systems existed parallel to OTOP, most notably Speake. The bespoke costing, pricing and planning system Speake was developed for the Owners Abroad Group around 1990 by a former employee of the Thomson Travel Group.

*New System Strategy:* During the early 1990's, it was decided to completely re-develop the internal systems, making, for the first time, mainly in-house developments with the help of external software companies. A project was started in 1993 and scheduled for completion by early 1996 to rewrite Speake, later referred to under the working title Delphi, including its transfer onto a client/server architecture. Costing and performance evaluation functions as well as a customer service system containing, among others, complaints and compensation information, were added to

Delphi. In January 1994, a project to develop Merlin, a central database system, was launched. 24 project phases were outlined, the first phase having been completed in November 1994 with the hardware implementation of Merlin with a client/server architecture. The second phase, to link Merlin with Delphi and OTOP, was scheduled for 1995, with several connections already being in test operation in January 1995. First Choice's main systems, as in January 1995, are outlined in Figure 6.4.



**Figure 6.4**

**The Main Systems of First Choice Holidays & Flights Limited in January 1995**

One of the main aims of the projects Merlin, based on a relational database structure, and Delphi, was the production of tailor-made and individually priced holiday packages, which previously could not automatically be handled by the old systems. Initially, Merlin contained supplier, contract and payment information for accommodation providers only, such as their addresses and phone numbers, insurance and bank details, the type of accommodation (for example hotel, villa, apartment), room descriptions, the number of rooms, information on extra facilities, and details of costs and any special offers; while further project phases included the incorporation of information on other suppliers, the automation of payments and, as completely new information, the digital storage of pictures of the various hotels and resorts, which could be used for the production of brochures and CD-ROMs and be

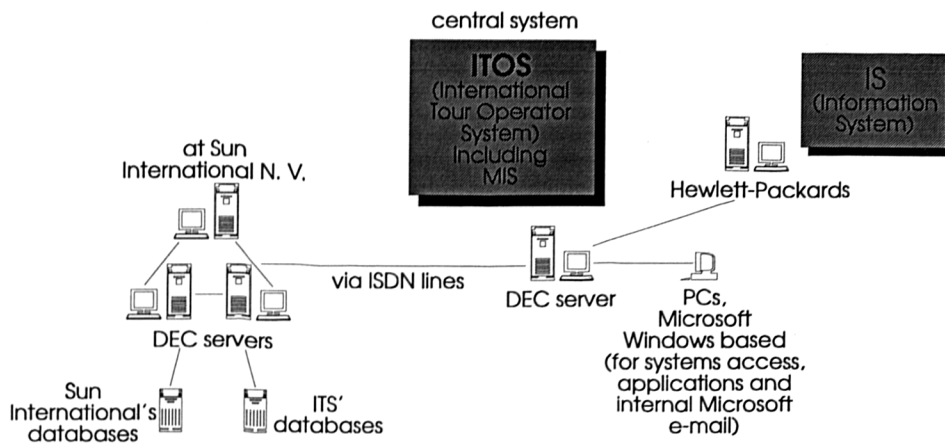
displayed on screens in travel agencies. This latter phase was completed by mid 1995 (Jolley, 1995c). The brochure production was also to be automated, with all information being centrally stored in Merlin.

#### **6.2.1.4 The Case of International Tourist Services Länderreisedienste GmbH (ITS)**

ITS' old system Videoton was a PC-based system with little automation (Jegminat, 1994a), using mostly fax and paper notes, which was developed in-house about 17 years ago and used in particular for purchasing activities. The system was linked to the corporate network and an IBM 3090 mainframe of its parent company Kaufhof Holding AG in Köln, which handled mainly the bookings and reservations, using software developed in-house about 15 years ago. Following a strategic senior management decision at Kaufhof, resulting from an impression that customers were increasingly lost to competitors, it was decided to replace the entire system with a new one.

*New System Strategy:* During the early 1990's, the partly-owned subsidiary Sun International N.V., Belgium, had developed the system ITOS in-house, though based on the TOS (Tour Operator System) software by the Belgian Sema Group. It was decided in summer 1993 to adopt ITOS for ITS and, extensively using staff from Andersen Consulting, ITOS went on-line at ITS on 1 August 1994, replacing the previous system entirely from that date (Hoffmann, 1994b). (Parallel to this development, ITOS was also implemented at all subsidiaries of Sun International N.V. in 1994, as discussed in Table 6.2 for the Bridge Travel Group.) Much of the data had to be re-inputted into the new system, although some data was automatically transferred from the old system using 'translation tables'. While all data has since been keyed into the system and amended at ITS, the actual data was being held on computers at Sun International's newly formed subsidiary Dilight in Oostende, Belgium. Figure 6.5 outlines ITOS as used by ITS in November 1994.





**Figure 6.5**

**International Tourist Services Länderreisedienste GmbH's ITOS in November 1994**

Also from mid 1993 to mid 1994, an information system (IS) was developed in-house with the help of the German branch of SAS Data, a subsidiary of SAS Scandinavian Airlines System, Sweden. Kuoni Fernreisen GmbH, the Holland International Travel Group v.o.f. and Kaufhof Holding AG, all formerly part of the same tour operator group, have since shown interest in adopting this IS for their own purposes.

ITOS contained, apart from the software necessary for supporting the TOMA mask (when accessed via START) and the ITOS booking masks (when directly accessed), four main types of information held in a relational database: Airline, accommodation, travel agent and final consumer information. Each of these information sections consisted of several modules, such as 'supplier' / 'buyer' (containing names and addresses of and other information on suppliers or buyers, respectively), 'contract' (i.e. sale conditions) and 'flight' / 'hotel' / etc. (i.e. the actual service data including contingencies and routing information). While an initial objective was to get ITOS properly running for the first year, further data was to be entered over time such as car hire and information on performances. In particular, the aim of this very modular

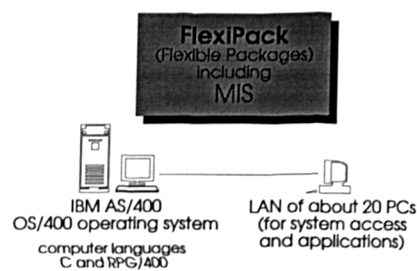
data storage was to allow the flexible combination of the stored data and the creation of any types of holiday packages in the future.

While ITS has been using a combination of WordPerfect word-processing, Excel spreadsheet, dBase database and Pagemaker desktop publishing (DTP) software (most of which were linked internally by e-mail) together with a manual design studio for the production of catalogues in the past, it was planned to electronically store pictures on ITOS and link ITOS directly with DTP software to allow the semi-automated production of catalogues in the future. Multimedia display was also planned with the inclusion of sound and videos.

#### **6.2.1.5 The Case of Kuoni Fernreisen GmbH (and of Kuoni Travel Limited) / Kuoni Reisen Holding AG**

Whereas the parent company, Kuoni Reisen Holding AG (formerly Reisebüro Kuoni AG) in Switzerland, and a number of its subsidiaries used the bespoke system Komet, which was developed during 1990 to 1993 (FVW International, 1994a), Kuoni Travel Limited in England, Viaggi Kuoni S.p.A. in Italy, Viajes Kuoni S.A. in Spain and Voyages Kuoni S.A. in France all used the program Kuoni Platform 2. Kuoni Platform 2 was developed in-house by Kuoni Travel Limited at the end of the 1980's and subsequently adopted by the Italian, Spanish and French sister tour operators. The program was constantly improved and updated by Kuoni Travel Limited, with the updates as well as specific country modules such as interfaces to national payment or reservation systems being sent to the other sister tour operators.

*New System Strategy:* When Kuoni Fernreisen GmbH was founded in January 1994, it was decided to implement the new system FlexiPack (Flexible Packages) based on Kuoni Platform 2. FlexiPack became operational shortly before Kuoni Fernreisen started trading on 1 August 1994 (Figure 6.6). FlexiPack was specifically designed to cater for tailor-made long-haul trips, with all data being stored in modular form in a DB2/400 relational database management system.



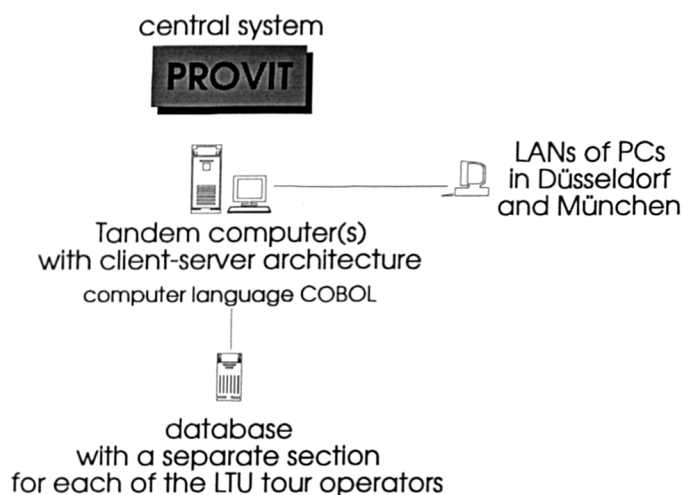
**Figure 6.6**

*Kuoni Fernreisen GmbH's FlexiPack in November 1994*

The system's hardware was acquired with the help of International Tourist Services Länderreisedienste GmbH (ITS) and Kaufhof Holding AG, consisting in its core of an AS/400 from International Business Machines Corporation (IBM). The IBM AS/400 Advanced Series was launched in May 1994 based on the older IBM AS/400 series, which was introduced in 1988, itself replacing the S/38, which was developed in 1980 (Andrews, 1994; IBM, 1993; IBM Direct, 1994). It was specifically aimed at midrange, interactive and general-purpose business computing environments and supported client/server architectures.

### 6.2.1.6 The Case of The LTU Group

*New System Strategy:* The project PROVIT, based on ideas dating back to August 1990, was launched in 1992. Successively, the individual stand-alone systems of the five LTU tour operators and LTU Touristik GmbH & Co. Betriebs KG's central system were to be replaced by in-house systems based on a client/server architecture, with each of the systems having complete host-to-host access to all the other systems. Jahn Reisen GmbH's system was replaced in May 1996, with the other systems to follow during 1996 and 1997. All systems were to have access to a central relational database, which was to be split into five sections, one for each of the five tour operators. The planned structure of LTU's PROVIT system is shown in Figure 6.7.



**Figure 6.7**

The LTU Group's PROVIT as Scheduled for 1996

The system software was based on TOS (Tour Operator System) 3 of the Belgian Sema Group, but was extensively changed by software companies in Riga, Latvia, and in India on behalf of LTU. It was planned that every LTU tour operator was eventually to use the same software such as that for yield management, which was being centrally developed in-house and programmed by LTU Touristik GmbH & Co. Betriebs KG, but with data input and computations being handled by each of the five tour operators. While Tjaereborg Allkauf Reisen's previous system had allowed some flexible combinations of holiday packages (Schmidt, 1994c), the new PROVIT system was to allow a tailor-made production of all LTU tour operators' packages. Graphical display facilities of PROVIT were also being implemented and scheduled for completion by 1997/1998, including the display of maps, which consumers could zoom-in on, and video sequences (Schmitz, 1995).

### 6.2.1.7 The Case of NUR Touristic GmbH

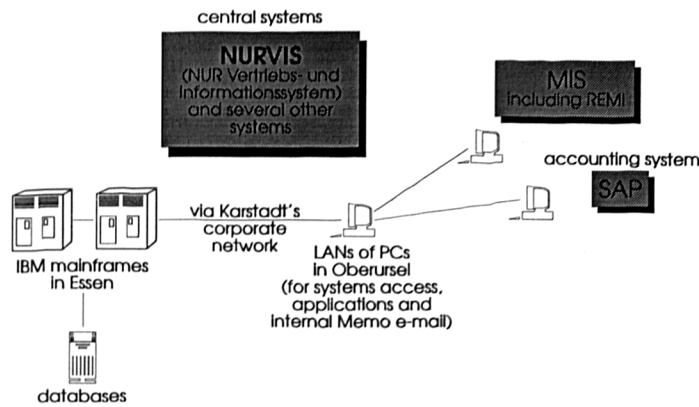
NUR Touristic introduced its first system, a punch card based batch system, at the end of the 1960's, replacing the so-called 'central reservation boards', i.e. long and 'room-filling' boards to which paper notes of reservations made were physically attached. In 1972/1973, the first terminals were installed into which simple data, separated by commas, was inputted. In 1979, the project NURVIS was inaugurated and a team of five people from IBM was employed to develop an accounting system, specifically designed for NUR Touristic, though partly based on standard software. In 1982, a concept was developed for a larger data processing system, which was introduced first for holidays to Tunisia in 1985, followed successively (to avoid a technological jump which could have led to technical and other problems) for other destinations. By 1987, however, a number of functions and projects related to this system had failed, and it was decided to set-up a systems department at NUR Touristic in 1988 to improve the in-house systems. Between the end of 1987 and early 1989, the reservation system NURVIS was finally introduced for all destinations (Hoffmann, 1994a), the last ones being the more complex long-haul destinations, while also replacing an outdated 'UT-Bild' system with modern systems.

While NURVIS, NUR Touristic's core system, was a reservation system and, to some extent, an information system, a number of other systems were developed to supplement NURVIS, such as systems to link NUR Touristic's destination agencies, travel agencies and hotels, finance and accounting systems (including the later purchased flexible standard SAP accounting package), and MISs including market information systems, for example the 'Reisemittlersystem' (REMI / travel agent system). REMI was developed during 1990 to 1992, and implemented during 1992 and 1994, in total accounting to 230 'man-months'. It consisted of three 'folders':

- information about contracts with travel agents
- notes on forthcoming events such as promotions and training schemes
- market intelligence information (see Section 6.5.3).

Basically all of these systems were linked to each other, though some used separate databases so not to hinder each others' operations. However, it would be possible to link all databases, being relational, to logically combine their contents in the future, if necessary. Nevertheless, by early 1990, NURVIS still only constituted the central part of NUR Touristic's reservations systems. Customer data as well as invoices and payments of travel agents and customers were still handled using punch cards. Gradually, the punch card systems were all replaced during the early 1990's; for example, the transportation files were replaced by an IMS and IBM DB2 database system in 1990. Between 1991 and October 1994, all remaining punch card based functions were re-written and incorporated into NURVIS and further functions were added, thus making NURVIS a 'complete' reservation system since October 1994.

Until 1991, NUR Touristic's main computer centre was located at Neckermann Versand AG's premises, when it was combined with that of the joint parent company Karstadt AG and located at Karstadt's headquarters in Essen. The computer centre had three IBM mainframes, each with ten processors working at about 480 MIPS (million instructions per second). One mainframe was used by Karstadt AG and the other two for NUR Touristic's and Neckermann Versand's combined purposes. Although these two machines were logically separate, processing time could be shared if the capacity of one machine was not sufficient. For example, Neckermann Versand's mail order business tended to be busy during Christmas and Easter periods as regard sales and corresponding processing times, whereas NUR Touristic's processing times were high in particular during July and August due to late holiday bookings needing timely searches for alternative availabilities since the majority of places had already been sold. NUR Touristic's main systems, as in November 1994, are outlined in Figure 6.8.



**Figure 6.8**

**The Main Systems of NUR Touristic GmbH in November 1994**

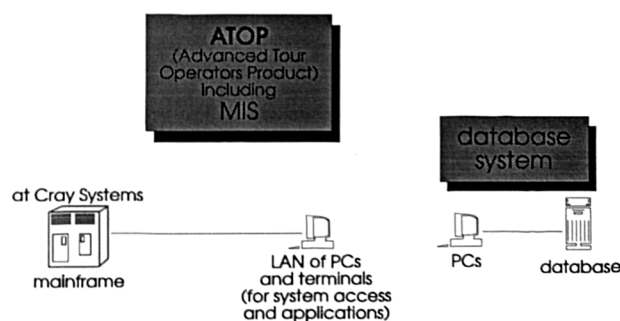
*New System Strategy:* With the completion of NURVIS in October 1994, a project for 1995 and 1996 included the development of software to supplement NURVIS for the production of more modular and flexible holiday packages aimed at more individual customer groups, separating in particular transportation and accommodation components and improving calculation and pricing functions such as quoting prices daily rather than per week of holiday purchased. Acquisition of the TOS (Tour Operator System) software of the Belgian Sema Group was considered, since this option was taken previously by NUR Touristic's Belgian subsidiary Sunsnacks N.V., for the purposes of producing tailor-made holidays. However, as the software's yield management functions especially were considered inadequate, this led to a decision to continue to develop the software in-house. Further projects planned to supplement NURVIS included planning support systems, airline seat and hotel bed purchasing systems, and information systems such as destination (or tourist) information systems. While the two subsidiaries Neckermann Reizen België N.V. (NVB), Belgium, and Neckermann Vlieg्रेizen Nederland B. V. (NVN), The Netherlands, were already using desktop publishing (DTP) software for catalogue production, NUR Touristic GmbH planned to introduce DTP software and to replace its 'Atelier' (drawing office) within the next few years.



### 6.2.1.8 The Case of Thomas Cook Holidays / The Thomas Cook Group Limited

Thomas Cook Holidays has basically always focused on tailor-made and more ‘up-market’ trips for consumers, aimed in particular at sale through its own Thomas Cook Holiday Shops. While the production of these holidays was predominantly done manually in the past, Thomas Cook Holidays subscribed to ATOP (Advanced Tour Operators Product) by Cray Systems around 1990 and has since automated more and more of its internal functions as regards the production of package holidays.

*New System Strategy:* The main computers were located at Cray Systems’ premises in Slough/Berkshire and were remotely accessed by Thomas Cook Holidays in Peterborough (Figure 6.9). Parallel to ATOP, Thomas Cook Holidays operated a separate database system mainly for marketing and customer information purposes, with most of the data being manually transferred onto it from the ATOP system on floppy disks. This system was developed and maintained by an external database management company. Thomas Cook Holidays had in addition access to TIB (Travel Information Bank), a headoffice system of The Thomas Cook Group Limited, which was purely used for the display of marketing and internal update information. Although some holidays were sold on-line via new interactive systems, Thomas Cook Holidays did not have its own viewdata system.



**Figure 6.9**

The Main Systems of Thomas Cook Holidays in March 1995

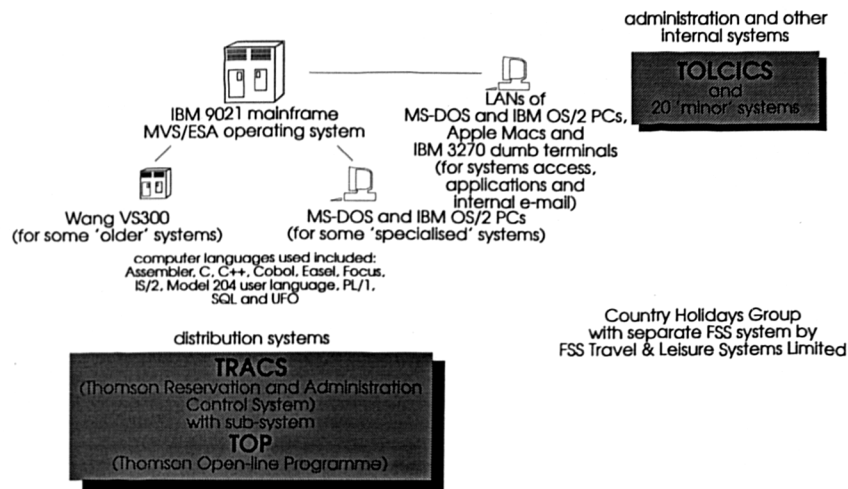
During 1994 to mid 1995, around £20 million was invested at Thomas Cook Holidays and Thomas Cook Holiday Shops in systems, especially for the new platform system Janus for Thomas Cook's travel agencies, but also for a number of new innovative technologies such as self-booking kiosks and interactive television and home-shopping technologies, which are described at Level 4. In May 1995, Thomas Cook acquired more than 50% of the CD-ROM software company Leisureplan, South Africa, and also during early 1995, Thomas Cook Holidays tested a new system, which was able to cost, route and price tailor-made holidays. All catalogue production was conducted in-house, using desktop publishing (DTP) software, with a production schedule of less than two weeks.

#### **6.2.1.9 The Case of Thomson Tour Operations Limited / The Thomson Travel Group**

Thomson Tour Operations Limited, when called Thomson Holidays Limited, acquired the core software for TRACS (Thomson Reservation and Administration Control System), the oldest system that was still in use in 1995, around 1973 from KLM Royal Dutch Airlines. It was re-written in-house to suit the company's needs and became operational in 1976, replacing a manual card system. TRACS initially served as an internal inventory systems to streamline sales, reservations and booking procedures (Holloway, 1988, p. 191). While TRACS has been continuously adapted until the present, further systems were added, most notably the viewdata-based reservation system Thomson Open-line Programme (TOP) in October 1982.

Apart from a batch invoicing system that was used during the early 1970's and a number of experimental PC systems that were tested during the 1980's, much of the core software was still in use in 1995, though operating on IBM rather than Amdahl hardware. In May 1995, Thomson Tour Operations used more than 20 different systems, running on a number of different machines with different architectures and having been written in a number of different computer languages, as shown in Figure

6.10, but all being extensively linked to one another. Whereas some older systems used hierarchical and VSAM databases, the more recent ones used M204 relational databases. All systems have been developed in-house with the exception of a few non-tour operating systems such as personnel and ledgers systems, which have been bought-in. With minor exceptions, all systems were linked internally and were accessed in-house by IBM 3270 dumb terminals or PCs, if necessary using emulation software.



**Figure 6.10**

The Main Systems of Thomson Tour Operations Limited in May 1995

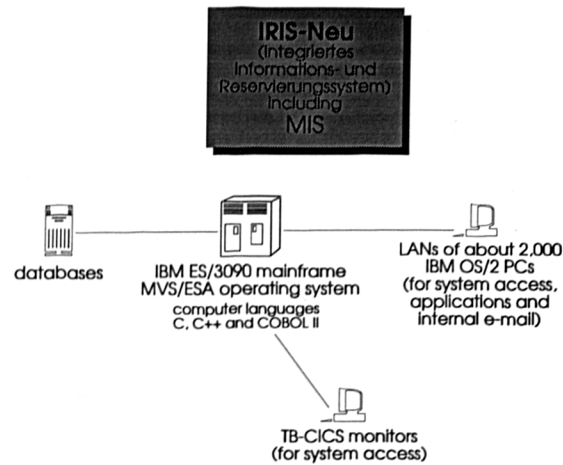
*New System Strategy:* A number of system enhancements and up-grades were made during 1994 to the main administration system TOLCICS and a number of other back-office systems, including the storage of some flight seats and beds as individual components. In December 1995, improved price and demand matching functions were also introduced, as planned, allowing prices to be adapted more flexibly. Moreover, new IBM hardware and software was acquired in 1994 to enable multimedia film footage to be shown on screens at travel agencies. In May 1995, all 'photographic stock' was being scanned-in and stored in databases so as to be used in

the future in conjunction with the Quack Express software and Apple Macintoshes for the (semi-automated) catalogue production, with data being transferred on floppy disks to the printing company.

#### **6.2.1.10 The Case of Touristik Union International GmbH & Co. KG (TUI)**

IRIS, also referred to as IRIS-Alt ('old'), was developed in-house during the early 1970's, shortly after TUI was founded in 1968. Although most system components were gradually rewritten or replaced over the years, constantly updating and improving IRIS' functionalities, some were still in use in November 1994. TUI's subsidiary Airtours International GmbH adopted a scaled down version of IRIS for its own purposes and renamed it ARIS (Airtours Reservations- und Informationssystem).

*New System Strategy:* Major changes took place through the introduction of IRIS-Neu ('new') for some destinations in August 1992 (Schmidt, 1994b), with all destinations scheduled to be on the system by August 1995 (Figure 6.11). While previously all data was held as packages within IRIS-Alt, a modular data structure was introduced with IRIS-Neu, using IBM DB2 databases. TUI planned in particular the production of individual holidays and tailor-made services with this system, as reflected in the introduction of the new product 'Tourconcept'.



**Figure 6.11**

Touristik Union International GmbH & Co. KG's IRIS-Neu in November 1994

Further flexible functions were added to IRIS-Neu, such as an electronic hotel auction. This function was not in use at the end of 1994, but had been tested so that it could be used as soon as the need (or opportunity) for it arose. IRIS-Neu also included the planning and calculation program TOPAS (Touristisches Planungs- und Kalkulationssystem). Moreover, graphic display functions were added, with the additional aim of producing CD-ROMs together with (its formerly partly-owned subsidiary) Reise Quelle GmbH.

## 6.2.2 Further Case Studies of Major European Tour Operators

The new system strategies of those major European tour operators, which were interviewed by telephone, are stated in Table 6.2.

Tour Operator Group (Interviewed Tour Operator, if different)	Name(s) of Main Tour Operator System(s) System Developer(s)	New System Strategy
British Airways Holidays Limited / British Airways PLC (BA), England	<p><b>Quick Res</b> (central system)</p> <p><b>BA Link Option 2</b> (distribution system)</p> <p><b>BABS</b> (British Airways Booking System)</p> <p>own developments</p>	<p>Quick Res was the bespoke central tour operator and database system. While some allocations were held (mainly as blocks) on Quick Res, others were stored on BABS (Appendix 4), to which Quick Res was directly linked. On 24 April 1995, the bespoke viewdata system BA Link Option 2 replaced the old PAL system for USA and city destinations, with all other worldwide destinations to follow. BA Link Option 2 was linked internally to Quick Res and, for distribution purposes, to BA Link, a flight-only viewdata system of British Airways PLC. The BA Link Option 2 was more flexible than the PAL system since it allowed late or last-minute searches, showed alternatives if requests were not found (i.e. conducted active selling) and enabled the production of more individual offers.</p>
<p>Club Méditerranée S.A. (<b>Club Med</b>), France</p> <p>(Club Méditerranée Deutschland GmbH, Germany)</p>	<p>N. A.</p> <p>own development</p>	<p>Club Med implemented its first system in France around 1970. During the early 1990's, Club Med developed a new system which was to be implemented by all subsidiaries worldwide by mid 1995, with the summer 1996 holidays being the first to be sold using it. All main computers and all systems staff were located in Paris, France, with Club Med Deutschland having PC access to the system. Although the old system was relatively flexible, allowing the combination of, for example, flights, resorts and different length of trips, the new system allowed much greater flexibility, regarding both combinations as well as inter-connectivity to almost any other purchasing and distribution system worldwide.</p>
Frosch Touristik GmbH, Germany	<p>N. A.</p> <p>own development</p>	<p>The original system was developed when the company was founded in 1983. The system has since been heavily modified, running in mid 1995 on an IBM AS/400 with the operating system OS/400 and a DB2/400 relational database. The system was regarded by Frosch Touristik as being highly flexible regarding the production of individual holiday packages and connectivity to other systems. The catalogue production department used NEC computers, with parts of the production process being automated.</p>

Tour Operator Group (Interviewed Tour Operator, if different)	Name(s) of Main Tour Operator System(s) System Developer(s)	New System Strategy
<b>Hetzel-Reisen</b> GmbH & Co. KG, Germany	<b>TOS</b> (Tour Operator System)  Sema Group, Belgium	<p>The TOS software was acquired from the Sema Group and transferred onto an IBM MVS-6 mainframe of the external information technology company BTB, Leinfelden-Echterdingen, which managed and maintained the system. BTB also offered services to other companies, but strictly separated all data. Hetzel-Reisen's 150 PCs were linked by a Novell network, which in turn was linked by two 64 kilobit/sec. lines to BTB's premises (Schmidt, 1994e). The TOS software was written in COBOL and, since 1994, has used an IBM DB2 relational database. The system was regarded by Hetzel-Reisen as being very flexible, with the data being stored in the database as individual components and linked by 80 to 100 tables. TOS replaced a system developed in-house during the early 1980's, which needed extensive maintenance being (also) based on an IBM MVS-6 mainframe, but written in PL/I using a hierarchical database. The catalogue production was not automated in March 1995.</p>
<b>Kreutzer Touristik</b> GmbH, Germany  ( <b>Fischer Reisen</b> GmbH, Germany)	<b>TOPIX</b>  ISO GmbH, Nürnberg	<p>TOPIX was implemented at Kreutzer Touristik during the first half of 1994 and became operational in August 1994, with the summer 1995 holidays being the first to be sold via the system. TOPIX was based on Sequent multi-processor computers and an Oracle Parallel Server, running under UNIX. This open system was a bespoke development for Kreutzer Touristik by ISO GmbH. The system also included new functionalities of the TOMA mask. The system was regarded by Kreutzer Touristik as being very flexible, with all individual data being stored in tables (i.e. relational database), which would also enable a further increase in flexibility in the future if necessary. In January 1995, Amerika Flugreisedienst GmbH (AFD), Frankfurt am Main, was acquired by Kreutzer Touristik, which offered more individual trips, which were also to be handled by TOPIX. Some electronic transmissions took place for the catalogue production. TOPIX replaced an old Nixdorf 8890 system, which was not able to cope with the number and speed of transactions. Following Condor Flugdienst GmbH's acquisition of Fischer Reisen GmbH and a stake in Kreutzer Touristik GmbH in 1995, it was decided to implement TOPIX also at Fischer Reisen GmbH (Krause, 1996).</p>
<b>Sun International</b> N.V., Belgium  (Bridge Travel Group, England)	<b>ITOS</b> (International Tour Operator System)  own development	<p>ITOS was developed in-house during the early 1990's, based on the TOS (Tour Operator System) software by the Belgian Sema Group. ITOS was installed in mid 1994 at all major subsidiaries of Sun International N.V. worldwide. It replaced all old systems within the group such as Sun International's SITOS (Sun International Tour Operator System) and Cresta Holidays Limited's HPL-TOPS by HPL Computer Systems (Hallamshire Programming Limited), Slough/Berkshire, which was used for the Cresta World Travel brand. While ITOS was initially only used for internal bookings in Britain, the new BTG (Bridge Travel Group) viewdata system, for example, was introduced at the end of 1995 for external bookings.</p>

Key names are highlighted.

**Table 6.2**  
New System Strategies of Major European Tour Operators

Gooding (1994b) describes a flexible system of Rainbow Holidays, York (part of Greenfield Holdings). Rainbow Holidays jointly developed with the system company C-Cat Limited, Hull, the TourCat system at a cost of £1.5 million. The project was started in 1990, with the software being based on C-Cat's TravelCat, and completed in June 1993, replacing Rainbow Holidays' old system which was implemented in 1984. The system allowed the production of itinerary-built holidays, initially luxury holidays to Australia and New Zealand, containing detailed information on air transportation, ferry crossings and even bus schedules, with a customer receiving an itemised print of the trip's itinerary. Since March 1994, the system has also been marketed to other tour operators.



## **6.3 Level 2 System Strategies: Corporate Tour Operator Networks**

### **6.3.1 Backward Vertical Relationships with Airline Subsidiaries**

All the in-house airlines of the interviewed tour operator groups operated one (or more) internal airline system(s) at the time of the interviews (for example O'Connell, 1995a); and had done so for a number of years. However, only a few of these airline systems were directly linked to the in-house tour operator systems (Table 6.3). Moreover, few of these links were used to transfer data other than basic planning information or some passenger details, with most of the data being transferred manually from one system to another. In fact, only the systems within the British Airways group had fully transparent links, i.e. had full access to each others' databases. Internal payments between all interviewed tour operators and their in-house airlines were, with few exceptions, also handled manually.

All other information exchange between the interviewed tour operators and their in-house airlines took place manually, using paper notes sent by standard mail, telex or fax, supported by occasional telephone messages, with each of the tour operators and airlines having to key-in the information manually into their respective systems. Only occasionally, data was also transferred on floppy disks. These methods were labour-intensive, in particular through duplication of tasks, and slow, especially regarding cancellations, re-bookings and last-minute requests. Moreover, it made individual seat bookings uneconomical, with, therefore, almost all of the seats being booked as blocks instead, usually on a seasonal, i.e. half-yearly, basis. For example, First Choice Holidays' Air 2000 operated about 700 flights per week during a recent summer season on behalf of its in-house tour operators, consequently leading to a total of approximately 700 data entries for the whole summer season which were entered manually into its flight plot system, with the other entries being automatically generated. This, obviously, did not allow for the handling of individual seat data.

Tour Operator Group	In-House Airline	Links between Tour Operator System(s) and In-House Airline System(s)
Airtours PLC, England	Airtours International Airways Limited	The Airtours International airline system, which consisted of several sub-systems linked in the form of a star, was connected to Airtours' central tour operator system; however, only very little data was exchanged via this electronic link.
British Airways Holidays Limited / British Airways PLC, England	British Airways PLC	The tour operator system Quick Res was fully transparently linked to BABS.
The LTU Group, Germany	LTU International Airways Luftransport-Unternehmen GmbH & Co. KG	Each of the LTU tour operators made relatively independent negotiations with the LTU airline regarding the following year's seat allotments, which were then keyed in manually into each of the five tour operator systems. All systems except that of Tjaereborg Allkauf Reisen GmbH had a host-to-host connection to the LTU airline system, but these connections were only used for the transfer of passenger information once holiday packages had been sold, and for alterations of information already entered. Whenever an LTU tour operator needed additional seats while another LTU operator still had allocated but unsold seats on an LTU aircraft, the balancing of these seats had to be handled via telephone contact with the central company LTU Touristik GmbH & Co. Betriebs KG, which keyed the information on these seats into its own system. In mid 1993, this process of manually balancing allocations was automated by the sales department of LTU Touristik by providing a pool facility on its central system, which was accessible on-line by all five LTU tour operators enabling the booking of any unsold LTU seats. Internal payments between the five tour operators and between the tour operators and the airline were also handled via LTU's central system.
Nazar Holiday Reiseveranstaltung GmbH, Germany / Ten Tur Holding, Turkey	Onur Air Nazar	Nazar had separate semi-automated access to the system Sagreb of Onur Air Nazar to access flight and seat details.
The Thomson Travel Group, England	Britannia Airways Limited	Thomson's tour operator and airline systems were linked; but only some planning and passenger information was exchanged.
Virgin Holidays Limited / Virgin Travel Group, England	Virgin Atlantic Airways Limited	Virgin Atlantic Airways used the system SHARES of Electronic Data Systems Corporation (EDS), USA, as a real-time inventory system. The ATOP system had a partly transparent link to SHARES to check availability of Virgin Atlantic Airways' seats, but with allotments being held in the ATOP system.

**Table 6.3**  
**In-House Tour Operator to Airline System Links**

*New System Strategies:* Increasingly, fully transparent on-line links are being implemented between tour operators and their in-house airlines, allowing the automated exchange of individual booking and passenger information, replacing all manual data transfer and enabling the booking of single seats instead of blocks of seats. The most recent developments are outlined in Table 6.4, with further links, in particular those of DER-Tour (with Deutsche Lufthansa) and TUI (with its in-house airlines), being outlined at Level 4, since they are part of rather sectorial developments.

Tour Operator Group	In-House Airline	New Links between Tour Operator System(s) and In-House Airline System(s)
Airtours PLC, England	Airtours International Airways Limited	Airtours planned to re-develop its airline system and, then, to fully link it with its tour operator system within the next few years.
First Choice Holidays PLC, England	Air 2000 Limited	Air 2000 was working on several internal airline systems in January 1995, which were scheduled to be completed by the end of 1995. After completion of these systems and as part of the overall new strategy to bring airline and tour operator operations closer together, it was planned to directly link Air 2000's new system to First Choice's tour operator systems by mid 1996 to automate all data transfer.
Inspirations PLC, England	Caledonian Airways Limited	With the acquisition of Caledonian Airways Limited in early 1995, the group of companies were in a state of change in May 1995, with major organisational restructuring taking place. For example, FATS was being linked to the Caledonian airline system, initially for back-office functions only, but with full data exchange being planned.
Kreutzer Touristik GmbH, Germany	Condor Flugdienst GmbH	Condor was linked to TOPIX via SITA lines (Krause, 1996).
The LTU Group, Germany	LTU International Airways Luftransport-Unternehmen GmbH & Co. KG	PROVIT was to have a fully transparent link to the LTU airline system.

**Table 6.4**

**New In-House Tour Operator to Airline System Links**

### **6.3.2 Backward Vertical Relationships with Accommodation Subsidiaries (and Other Supplier Subsidiaries)**

Almost no direct electronic data exchange between the interviewed tour operators and their in-house accommodation suppliers took place prior to the introduction of the new tour operator systems described in Section 6.2. Predominantly, long paper lists, also referred to as 'passenger lists', 'supply lists', 'release lists' and 'room lists', were printed at the tour operators' premises and carried, typically in red suitcases from Germany and in mail bags from Britain, as 'co-mail' (company-mail) by tour representatives to the destinations, where they were distributed to the local accommodation operators. These lists contained the 'PAXs', i.e. passengers' details, together with accommodation, catering and other information such as information on bus transfers. Two of the main advantages of the use of these lists were that their carriage cost relatively little and that staff could 'scribble' on them at the destinations to make alterations. On the other hand, some data had to be inputted manually into the individual systems of the accommodation suppliers, thus incurring time and financial costs.

These paper lists were carried once a week in general to the destinations, or out of necessity or economical considerations more or less frequently. Initial lists were transported typically six weeks prior to departure (sometimes eight weeks, for example before Christmas, when demand tended to be high and supply limited). In the following weeks, any lists detailing necessary amendments or further bookings were carried; and one week before departure, the final lists were carried. If any further changes, cancellations and bookings took place, all further communication was handled by telephone, fax and (often real-time) telex, the latter two usually being automatically triggered (e.g. using a 'Ferrari Fax'). Some tour operators such as TUI used telex, while most used fax for these last-minute communications. Telex was regarded by several operators as outmoded and was only used by these for communication with suppliers in less developed countries or regions such as North Africa where fax communication was unreliable. Floppy disks were sent by some

tour operators only occasionally to large accommodation providers; and rather expensive and slow standard paper mail was very rarely used.

A minor exception to the above methods was adopted by NUR Touristic GmbH, which had a direct system link to Paradiana International Management & Consulting for Hotels & Resorts GmbH, the headquarters of the Aldiana clubs and Paradise hotels. However, Paradiana International was located in the same building as NUR Touristic in Germany and had itself to communicate by co-mail, telephone, fax or telex with the individual Aldiana and Paradise properties, which used the stand-alone standard PC-based hotel management software Fidelio of Fidelio Software GmbH, München (which merged with Micros, USA, in 1995).

Similarly, little direct electronic data exchange took place between the tour operators and other, i.e. non-accommodation and non-airline, in-house suppliers in the past. Hapag-Lloyd Tours GmbH had a direct link to the central computer of the operator of the cruise ship 'MS Bremen'; and Touristik Union International GmbH & Co. KG (TUI) had a direct link via leased X.25 lines to Ultramar Express S.A. in Spain which allowed the booking of rental cars from their fleet.

*New System Strategies:* Increasingly, backward vertical on-line links with owned hotels and other suppliers are being implemented, which allow the direct and automated exchange of single booking and customer information (Table 6.5). Tour operators such as Airtours, NUR Touristic and TUI hoped, however, that prior to them establishing links with their in-house accommodation suppliers, sector or even industry-wide communication standards could be established, as discussed at Level 3.

Tour Operator Group	New Links between Tour Operator System(s) and In-House Accommodation (and Other) Supplier System(s)
Airtours PLC, England	Airtours planned to directly link most of its hotels during 1996 or shortly thereafter.
Bridge Travel Group, England	With ITOS, direct links to Sun International N.V., Belgium, and dial-up links to Sun Parks International N.V., Belgium, were implemented in 1994.
Club Méditerranée Deutschland GmbH, Germany	Fully transparent connections using direct lines were established in 1995 with Club Méditerranée S.A., France, which in turn had links with its hotels, apartments, resorts and cruise ship operators worldwide.
International Tourist Services Länderreisedienste GmbH (ITS), Germany	An output-link (i.e. one-way link) was established with Sun Parks International N.V., Belgium, with lists being printed at Sun Parks.
NUR Touristic GmbH, Germany	NUR Touristic planned to link most hotel subsidiaries during 1995 and 1996.
Touristik Union International GmbH & Co. KG (TUI), Germany	TUI planned to introduce direct lines to some in-house accommodation suppliers in the near future.

**Table 6.5**

**New In-House Tour Operator to Supplier System Links**

### 6.3.3 Backward Vertical Relationships with Destination Agencies

As with in-house accommodation and other suppliers, communication with destination agencies took place in the past mainly by co-mail, with the additional exchange of telephone and (automated) fax and telex messages. Some large destination agencies also received floppy disks. With growing numbers of PC installations at the destinations agencies since the end of the 1980's, some resort offices were linked to the tour operator systems (Table 6.6). However, the uptake of these links tended to be 'patchy', with typically only large resort offices being linked since it was more cost effective to print the paper lists at the destinations rather than pay for their transportation, whereas smaller offices were often not linked for financial reasons. Flexibility was less an issue for the installation of these links due to block bookings.

Tour Operator (Group)	Links between Tour Operator System(s) and Destination Agency System(s)
The Air Travel Group Holidays Limited, England	A company mailing system was used for e-mail communications with some agencies.
Airtours PLC, England	While the PCs at large resort offices were directly linked to the Airtours central system via X.25 lines in January 1995, others used Cray Systems' X.25 WAN (wide area network) and some smaller offices used an outdated and problematic Vantage store and forward mailbox system.
Bridge Travel Group, England	Dial-up e-mail links existed to some agencies.
British Airways Holidays Limited / British Airways PLC, England	BABS was used to link some agencies.
First Choice Holidays PLC, England	About 85% to 90% of First Choice Holidays' resort offices were linked by automated dial-up connections using a batch system, which operated overnight. The lists were then printed off the PCs locally and daily at the destinations.
Fischer Reisen GmbH, Germany	Dial-up links to several large agencies on the Canaries and Balearics were used.
Hetzel-Reisen GmbH & Co. KG, Germany	Dial-up Datex-P lines to two large agencies on the Canaries and Balearics used.
Hotelplan International Travel Organisation Limited (Inghams Travel), England	The Unisys system was linked via X.25 lines to the four main European operating offices in Austria, France, Italy and Switzerland. Hotelplan's Tosca on-line reservation system was installed in 1985, linking all European subsidiaries, followed in 1987 by all in-house Swiss travel agencies. In 1990, a link of the computer systems (ISY) between Hotelplan and Interhome was also established.
Inspirations PLC, England	FATS had dial-up e-mail links to a few agencies.
Jetsave Travel Limited, England	Some agencies were linked by dial-up connections.

Tour Operator (Group)	Links between Tour Operator System(s) and Destination Agency System(s)
The LTU Group, Germany	Some resort offices were linked by SITA lines.
NUR Touristic GmbH, Germany	In November 1994, about 40% of passenger information was electronically sent to the destinations via telephone lines to the PCs, or PC-LAN (local area network) servers as in the case of large resort offices such as the one on Mallorca. This communication took place automatically during the night, with a typical transmission to the largest agency on Mallorca taking approximately five minutes.
Olimar Flugreisen GmbH, Germany	Direct leased lines to four owned offices in Portugal and one in Italy were used.
Phoenix Reisen GmbH, Germany	Several destination agencies were linked by dial-up Datex-P connections.
The Thomson Travel Group, England	Several key resort offices have been linked by leased lines since 1985.
Touristik Union International GmbH & Co. KG (TUI), Germany	TUI had a direct link via leased X.25 lines to Ultramar Express S.A. on Mallorca, which looked after approximately 1.5 million guests a year.
Virgin Holidays Limited, England	Of seven offices in the USA, five were linked by dial-up e-mail links and two by fixed VPN (virtual private network) links.

**Table 6.6**  
**Tour Operator to Destination Agency System Links**



*New System Strategies:* With increasing modularisation of accommodation, catering, entertainment and other travel and tourism components provided at the destinations, together with increased flexibility in combining these into a holiday package, tour operators are replacing inflexible electronic links to destination agencies and are implementing links to those agencies which previously did not have connections, thus eventually giving all their destination agencies full on-line access to the central tour operator systems to allow the automated exchange of single passenger details (Table 6.7). Imminus, in co-operation with Sprint International, and AT&T Istel are especially offering new services to link destination agencies and foreign offices (TTG, 1995a).

Tour Operator (Group)	New Links between Tour Operator System(s) and Destination Agency System(s)
Airtours PLC, England	A strategic information technology (IT) project was scheduled for 1995, 're-engineering' the complete resort structure of Airtours' and the Scandinavian subsidiary SLG's 55 own resort offices, in particular to realise synergies, due to SLG having been acquired by Airtours in May 1994. As part of this IT project, most of the resort office links were to be replaced by ExcelNet links of Intelnet, thus eventually directly linking all resort offices to both Airtours and SLG.
Attika Reisen AG, Germany	Attika Reisen planned the introduction of direct lines to its resort offices.
Club Méditerranée Deutschland GmbH, Germany	All Club Med resort offices were linked to Club Méditerranée S.A., France, which in turn was linked by direct lines to Club Med in Germany in 1995.
Cosmosair PLC (Cosmos), England <sup>1</sup>	Until 1994, the transfer of files between the head office in England and 27 major resorts was handled by a 'crude' e-mail facility, while rooming lists were sent abroad by paper and late booking data by telex. These overseas communication processes were replaced in 1994 by the new system Tourcom, which was a PC-based dial-up system with standard modems and laser printers for destination agencies to access the information at Cosmos' head office. Dedicated lines were considered too expensive since on average only one or two calls per resort per day were necessary, and the Internet was considered as insufficiently secure. With the introduction of Tourcom, costs were kept at a low level with the use of data compression techniques, with an average call taking three minutes and costing about £1.- each, thus leading to a total of approximately £15,000 per year (Hemming, 1995, p. 50).
DER-Tour, Germany	All destination agencies were to get full access to Phoenix via IBM's global X.25 corporate network during 1997.
Feria Internationale Reisen GmbH, Germany	Feria was waiting in March 1995 to receive SITA X.25 leased lines, which it had applied for.
First Choice Holidays PLC, England	In mid 1993, a project called 'Model Office' was launched to re-design the links with the resort offices, but then 'kept on a low flame' due to the new project Merlin. Eventually, it was decided to integrate Model Office into Merlin. As part of Model Office, all dial-up lines were to be replaced by leased fixed SITA lines, with all overseas agencies getting direct on-line access to Merlin.

Tour Operator (Group)	New Links between Tour Operator System(s) and Destination Agency System(s)
Gesellschaft für internationale Begegnung und Cooperation mbH (GeBeCo), Germany	The use of the Internet was considered for communication with agencies in Far East Asia.
Inspirations PLC, England	Inspirations planned to link more of its agencies.
International Tourist Services Länderreisedienste GmbH (ITS), Germany	It was planned to give all destination agencies full direct on-line access to ITOS in the future.
Kreuzer Touristik GmbH, Germany	Direct lines to Spain and the Caribbean were planned, either using Datex-P lines with file transfer or SITA lines.
Kuoni Travel Limited, England <sup>1</sup>	Kuoni Travel installed on-line links to most of its destination agencies during 1994 (TTG, 1994a).
The LTU Group, Germany	PROVIT was to link all destination agencies.
Manos (UK) Limited, England	Direct lines were planned.
Meon Travel Limited, England	The Internet was considered for e-mail communication to overseas offices.
NUR Touristic GmbH, Germany	NUR Touristic planned to increase the amount of information transmitted electronically to the destination agencies from 40% to 80% - 90% by the end of 1995.
Panorama Holiday Group Limited, England	<i>Direct lines were planned.</i>
Thomson Tour Operations Limited, England	In 1994, the tour operator systems were upgraded to handle 200,000 clients overseas at any one time, with an average number of 21,000 clients travelling on a single day during the summer high season. In addition, all leased lines were closed, mainly for cost reasons having spent in excess of £1.- million per year on operating its own network (Hemming, 1995, p. 50). Instead, dedicated SITA lines have been used for messaging since.
Unger Flugreisen GmbH, Germany	SITA lines were planned.

<sup>1</sup> Cosmos and Kuoni Travel were not interviewed.

**Table 6.7**  
New Tour Operator to Destination Agency System Links

Moreover, basically as a second step, destination agencies can get full access to the headquarters' databases to allow them to operate as tour operators (or travel agents) themselves by selling holiday packages (or components) to customers at the destinations. In particular, this use of distributed databases means that the destination agencies are not required to make major investments in their own tour operator systems and to conduct airline seat and other contracting themselves. Since destination agencies then become 'sister tour operators' as a consequence of this strategy, these examples are discussed in more detail in the following section.

### 6.3.4 Horizontal Relationships with Sister Tour Operators

A number of electronic links existed between some tour operators within a group, but these were fairly restricted in their data exchange (Table 6.8).

Tour Operator or Travel Group	Links between Sister Tour Operator System(s)
Airtours PLC, England	Airtours Holidays Limited had an electronic link to SLG in Sweden for e-mail communications.
Hotelplan International Travel Organisation Limited (Inghams Travel), England	An X.25 link existed between the Unisys system and the system of the Austrian sister tour operator, but only to exchange booking information on Austria-to-Britain flight components.
The LTU Group, Germany	The five LTU tour operators were linked to exchange LTU airline seats (Table 6.3).

**Table 6.8**  
In-House Tour Operator to Tour Operator System Links

*New System Strategies:* Increasingly, horizontal links among sister tour operators are being implemented which allow the full exchange of data, in most cases using fully transparent links and distributed databases to share the stored data (Table 6.9).

Tour Operator or Travel Group	New Links between Sister Tour Operator System(s)
Airtours PLC, England	Airtours planned to implement fully transparent links among most of its tour operator subsidiaries worldwide. A link to SLG was implemented in October 1995, using, as the first customer, Imminus' Fastroute data communications network (TTG, 1995k).
Club Méditerranée S.A., France	Club Med linked all of its tour operator subsidiaries in 1995, enabling the global sharing of data within the group.
Deutsches Reisebüro GmbH (DER), Germany	The final main phase, Phase 3, of the project Phoenix included the linking of all foreign DER subsidiaries by one of two means, either by installing PCs at the subsidiaries' front-ends with direct access to Phoenix, or by installing scaled down versions of Phoenix at the subsidiaries. In any case, full data exchange via IBM's global X.25 corporate WAN (wide area network) was to take place using distributed databases. The various systems of the individual subsidiaries, for example the off-the-shelf system HPL-TOPS by HPL Computer Systems (Hallamshire Programming Limited), Slough/Berkshire, which was used by DER Travel Service Limited, London, were to be replaced.
International Tourist Services Länderreisedienste GmbH (ITS), Germany	With all subsidiaries of Sun International N.V. having been connected to Sun International's ITOS in 1994, ITS also planned to link all of its other subsidiaries such as the Holland International Travel Group to ITOS, then obviously increasing the number of DEC servers used at Sun International to cope with the increased processing time required.
Kuoni Reisen Holding AG, Switzerland	As a result of Kuoni Reisen Holding AG's aim to link all of its subsidiaries to achieve synergies and to produce and distribute holidays worldwide using the Australian system Worldmaster (formerly Worldlink) (Pulfer, 1994), Reisebüro Kuoni Ges.mBH, Austria, was linked to Kuoni's central system in Zürich, Switzerland, in early 1994; and, from April 1995 onwards, SITA provided a global corporate network for the whole of the Kuoni Reisen Holding AG group of companies.
The LTU Group, Germany	PROVIT was to fully link all LTU tour operators.
NUR Touristic GmbH, Germany	With NURVIS being fully operational since October 1994, NUR Touristic planned to link all of its foreign subsidiaries next. In particular, a major project was scheduled for 1995 to link the three Belgian subsidiaries All Air Arrangements N.V., Neckermann Reizen België N.V. (NVB) and Sunsnacks N.V. to NUR Touristic's systems for the purpose of realising technical and other synergies, since about 80% to 85% of the functions performed by the various systems were identical.
Sun International N.V., Belgium	All tour operator subsidiaries of Sun International worldwide were linked to ITOS in 1994.

**Table 6.9**

**New In-House Tour Operator to Tour Operator System Links**

### **6.3.5 Forward Vertical Relationships with Travel Agent Subsidiaries and Other Booking Offices**

A number of electronic links existed between a group's tour operator and travel agent systems, but these were mainly used to communicate management information rather than sales information, with the exception of British Airways and NUR Touristic, which used these links to distribute holiday packages directly to its own travel agencies (Table 6.10). The links between DER-Tour and DER's travel agencies, and between TUI and TUI's travel agencies, via START, with START having been a partly-owned subsidiary of TUI and being an indirectly partly-owned subsidiary of DER, are also examples of in-house tour operator to travel agent links. However, these links are discussed at Level 4, since START is also Germany's main national travel and tourism distribution system, and since these links are used by DER and TUI to communicate with their respective travel agent subsidiaries in the same way as with external travel agents.

Tour Operator Group	Links between Tour Operator System(s) and In-House Travel Agent System(s)
Airtours PLC, England	Airtours' central system was linked to Going Places Leisure Travel Limited's systems, but only for e-mail.
British Airways PLC, England	Most of British Airways' travel agencies located in 70 countries had been linked to BABS during the 1980's. Some holiday packages were distributed via BABS to these travel agencies.
Inspirations PLC, England	Inspirations' travel agencies had links to the headoffice for back-office functions.
International Tourist Services Länderreisedienste GmbH (ITS), Germany	Kaufhof Holding AG's corporate network, which linked all Kaufhof department stores as well as other outlets, branches and offices of Kaufhof using ISDNs, was used for e-mail communication between ITS and its travel agencies.
NUR Touristic GmbH, Germany	Until 1991, NUR Touristic's parent company Karstadt AG owned and operated two corporate networks, one for linking Karstadt's department stores and other non travel and tourism retail outlets, and one for Karstadt's two main subsidiaries, Neckermann Versand AG and NUR Touristic. NUR Touristic used this corporate network in particular for communication between its various offices, regional booking centres and owned travel agent outlets. In 1989, for example, a mailbox (Netmaster), developed by Neckermann Versand AG, was introduced for the purposes of one-way communications from NUR to its own travel agencies. In 1991, with the help of IBM, the two corporate networks were replaced by an SNA (systems network architecture) backbone corporate network using 64 kilobit lines, with control units being located in each of Karstadt's department stores, leading to faster response times than that of the previous networks. It was also planned that part of Karstadt's corporate network was to be replaced by air wave transmissions in the future. In addition, the standard software Memo was introduced by Karstadt for all companies in the group including NUR Touristic and its national offices and travel agent outlets for corporate electronic communications. The central systems of all in-house travel agents within the Karstadt group were transferred onto the mainframe in Essen (including, later, that of the Holiday Land franchise), which were accessed by PCs at the outlets. Increasingly, this corporate network was also used by NUR Touristic to distribute its holidays directly to owned and co-operating travel agencies. In fact, about 70% of the turnover was distributed via this corporate network in 1994.
The Thomson Travel Group, England	Thomson Tour Operations' system were linked with Lunn Poly Limited's systems (e.g. the FSS system by FSS Travel & Leisure Systems Limited), but only for e-mail.

**Table 6.10**

**In-House Tour Operator to Travel Agent System Links**

Apart from these links, all communication between tour operators and travel agents took place via the external distribution systems discussed at Level 4 as well as by telephone, fax and standard mail and, though rarely, by telex. In contrast to the travel agent subsidiaries, all central telephone reservations departments and regional booking centres of the interviewed tour operators, whether they were located at the same or, as in some cases, at different premises, had direct and fully transparent on-line links to the tour operator systems. For example, First Choice Holidays' headquarters in Crawley were linked with the four sales centres in Manchester/England, Glasgow/Scotland, Northern Ireland and the Republic of Ireland.

*New System Strategies:* More tour operators are implementing forward vertical electronic on-line links to their travel agent subsidiaries to give them direct and automated access to the tour operator databases (Table 6.11). These links replace most of the manual telephone, fax and standard mail messages, therefore reducing costs and increasing speed and flexibility. These links can also reduce costs by avoiding subscription charges to the external systems such as those of START in Germany. Moreover, direct access avoids restrictions imposed by external booking systems, for example in the display of information and pictures or in the use of multiple booking masks. While most external systems were character- and line-based in the past, direct links enable the tour operator groups to install colour screens at their travel agencies and display pictures and sound. Some of the main restrictions of external booking systems and booking masks such as START's TOMA are discussed in more detail at Level 4.

Tour Operator Group	New Links between Tour Operator System(s) and In-House Travel Agent System(s)
British Airways PLC, England	With the improved flexibility of British Airways Holidays' tour operator systems in 1995, holiday packages were increasingly being sold across British Airways' entire global network. Indeed, eventually it was aimed to allow a client to originate his/her journey almost anywhere in the world and travel almost anywhere, while being served by the British Airways group and its partners.
DER-Tour, Germany	It was planned to give DER's travel agencies direct access to Phoenix. It was moreover intended to install a graphical interface to access Phoenix; however, it was hoped that an industry standard for graphical reservations and bookings could be found prior to this development (Section 6.4).
Hetzl-Reisen GmbH & Co. KG, Germany	Hetzl-Reisen linked all its own travel agencies directly to TOS via ISDN lines in mid 1994.
International Tourist Services Länderreisedienste GmbH (ITS), Germany	Most of ITS's travel agencies and airport offices were given direct access to ITOS via Kaufhof's corporate network in mid 1994.
Kreutzer Touristik GmbH, Germany	Kreutzer Touristik's travel agencies were linked to TOPIX via SITA lines (Krause, 1996).
The LTU Group, Germany	All of LTU's travel agencies were to be directly linked to PROVIT, using software developed by LTU's partly-owned subsidiary Travel Management Systems GmbH (TMS), which was acquired by LTU among others for this reason in May 1994. LTU was also considering using the corporate network of Westdeutsche Landesbank Girozentrale (WestLB), one of its owners, to connect PROVIT to its travel agencies.
The Thomas Cook Group Limited, England	In October 1995, Thomas Cook was developing a PC Windows based system together with Pro Systems Europe to allow full electronic data exchange with the various sales outlets (TTG, 1995i).

**Table 6.11**

**New In-House Tour Operator to Travel Agent System Links**

In the past, customers' travel documents were usually printed at the tour operators' premises and then posted to the travel agents, who then either asked the customers to collect them or who then posted the documents onwards to the customers. With the implementation of these direct links and, if necessary, ATB-printers (automated ticket and boarding pass) to print specific transportation tickets such as for scheduled flights and rail trips, this document transfer is being automated and conducted while the customers are still waiting at the travel agents, therefore reducing costs and increasing the flexibility in supplying short-notice holiday packages.



Airport offices (or desks) of tour operators are also increasingly being directly linked to the tour operator systems. Staff at airport offices look after the customers while they are at the airports so as to deal with any problems such as delays, flight cancellations, organisation of buses and customer confusion. With their presence and by dealing with these problems, airport offices also fulfil a marketing and image function for the tour operator. In addition, airport offices issue the travel documents to those customers who booked their holidays only a few days prior to departure and, therefore, did not get their documents posted out to them; or would issue amended travel tickets where tickets with inaccurate information had initially been given. Moreover, some airport offices act, to a limited extent, as travel agents by selling predominantly last-minute holiday packages to customers. With regards to the first two functions, The Thomson Travel Group, for example, linked the main British airports Heathrow, Gatwick and Luton to Thomson's systems in 1985, followed by all major British regional airports in 1986, thus eliminating the need to post out flight manifests to the airports. Over the years, other tour operators have linked their airport offices. For example, the PCs at all of Airtours' airport offices were linked to the Airtours central system; as were all of First Choice Holidays' airport offices linked to OTOP. The six LTU airport offices and further partner airport offices were linked to the LTU airline system to issue LTU airline tickets, but were not linked to the systems of the LTU tour operators.

More recently, airport offices have been given full access to the tour operators' systems so as to allow the sale of last-minute holiday packages. For example, all of ITS' airport offices were directly linked to ITOS in 1994, giving them access to e-mail and office communication, but also especially to all customer, flight and other travel details. While LTU had a limited last-minute flight system at Düsseldorf Airport in March 1995, being linked to the LTU airline system, an extension of this system was planned to link other airports and incorporate LTU tour operator packages.

#### 6.4 Level 3 System Strategies: Technology Initiatives

Some co-operating destination agencies, travel agencies and airport offices were linked, as part of the Level 1 and Level 2 strategies described above, to the tour operator systems. Apart from these links, few co-operative system strategies appear to have existed in the past. Meon Travel Limited had X.25 links between its TOURS system and systems of tour operators in Belgium, Germany and The Netherlands for holiday package distribution. The German partner was Frosch Touristik GmbH, which over-branded Meon Travel's products as 'Villas In Style'. No other links as part of co-operative strategies were found. Even First Choice Holidays did not have a system link to Thomas Cook Holidays, which over-branded First Choice Holidays' Sovereign Worldwide brochure until August 1995 (when this alliance was dissolved), accounting for almost 20% of First Choice Holidays' sales. Instead, all data transfer took place manually.

*New System Strategies:* Since the early to mid 1990's, a number of technology initiatives have been affecting the British and German, and indeed the European, travel and tourism industries and the package holiday business in particular. One of the first technology projects was EUROTOP, a joint venture of GSI Transport Tourisme, France (19.9%), IBM France (19.9%) and EUCOM (60.2%), itself a partnership of Deutsche Telekom AG and France Télécom (Lüttich, 1992). Further partners in this project were the seven tour operators Club Med, Cosmos, Kreuzer Touristik, The Thomson Travel Group, TUI (in particular Seetours International GmbH & Co. KG) and the two French tour operators Fram and Voyatel, as well as AT&T Istel. The aim of this project was the electronic presentation of travel and tourism catalogues on screens in travel agencies, thus increasing the flexibility, especially through quantity, individuality and speed, in package holiday information presentation. For this purpose, the tour operator systems were to be directly connected via ISDN lines to an IBM 3090 host, which in turn was to be connected via ISDN lines to the distribution networks START in Germany, Esterel in France and viewdata (Videotex) in the United Kingdom. However, while EUROTOP

reflected the wishes of tour operators to present catalogue information electronically, the project itself was not successful and eventually abandoned in 1993.

In Germany in mid 1992, a concept for standardising electronic information services within the travel and tourism industry was proposed by a number of travel and tourism organisations and associations and termed 'Touristische Informations-Norm' (TIN / tourism information standard) (DEHOGA, 1993, p. 186; Fleck, 1995, p. 331). TIN, which was based on the UN-EDIFACT (United Nations Electronic Data Interchange for Administration, Commerce and Transport) standard, provided a data standard which allowed, or created the flexibility necessary, to link various systems used in the travel and tourism industry to electronically exchange information. TIN has been submitted to the European Union by the German standardisation office Deutsches Institut für Normung e. V. (DIN) as a potential European travel and tourism standard.

Two further initiatives based on TIN were also created in Germany. One initiative originated from the two major travel agencies Deutsches Reisebüro GmbH (DER) and Hapag-Lloyd Reisebüro GmbH, which had instructed the consultancy firm Team to re-organise the data exchange of payment information for the two organisations (Hoffmann, 1995). This initiative was taken up by the main travel agent and tour operator association, Deutscher Reisebüro-Verband e. V. (DRV), with a number of organisations such as START, TUI, NUR Touristic, the LTU Group and Thomas Cook Reisebüro GmbH also supporting it. By mid 1995, an electronic communication standard for the exchange of payment details within the entire travel and tourism industry in Germany was created and named Standard-Datensatz Touristik (SDS-T). This standard was tested by DRV and Hapag-Lloyd Reisebüro at the end of 1995, and further applications followed during 1996 (Hoffmann, 1996a).

In parallel, since the end of 1994, the four leading German charter airlines, Condor, LTU, Hapag-Lloyd and Aero Lloyd, and several German tour operators including TUI, NUR Touristic, LTU, ITS and Kreuzer Touristik have been discussing the

creation of a standard for full electronic data exchange between the charter airlines and the tour operators, or, at least, an automatic transfer of all passenger information between the organisations. The contact person at NUR Touristic, however, argued that in the past the organisations involved have been fairly secretive about their data for political reasons and that this was evolving slowly towards a more liberal attitude with the acceptance of direct data exchange.

Similarly, the Travel Technology Initiative (TTI) was initiated by The Thomson Travel Group in Britain in 1994, continuing the minimally successful Global Technology Initiative (GTI), which was launched in 1992. Members of the TTI Forum, the standardisation body, which was advised by the Equinus consultancy, included the three leading tour operators Thomson, Airtours and First Choice Holidays as well as AT&T Istel and Galileo UK. Although some standard messages were agreed upon by late 1994, such as the EDI (Electronic Data Interchange) message RESCON for communication between tour operators and travel agents, and despite a certain desire among the interviewed organisations to achieve positive results, no major standards, however, have been agreed upon by the end of 1995. A further technology initiative in Britain included the multimedia initiative Travelpoint.

If these initiatives are (increasingly) adopted and become successful, they are likely to foster the uptake of electronic links which are discussed at Level 2 and Level 4. While it is too early to assess the exact impacts of these technology initiatives on the package holiday business, these developments reflect the desire of at least several major tour operators and charter airlines in Britain and Germany to establish communications standards for electronic data exchange among operators in the sector (also McDonnell, 1995). This aim was also specifically expressed by several contact persons at the interviewed charter airlines, and at the major tour operators interviewed in-depth, most of all Airtours, DER-Tour, NUR Touristic and TUI. These operators preferred such standards to be established before they went ahead with their Level 2 and Level 4 strategies to connect subsidiaries, suppliers and travel agents, and to introduce CD-ROMs and the display of multimedia, so as not to invest

in technologies which may become redundant as a consequence of new industry standards.

Finally, regarding Level 3, while small tour operators have formed alliances or associations such as The Association of Independent Tour Operators (AITO) in Britain, mainly as a response to the increasing concentration and dominance of large tour operators (Kärcher and Williams, 1994 and 1995), little evidence was found that these co-operations are developing new joint system strategies. A minor exception was the Bundesverband Mittelständischer Reiseunternehmen e. V. (asr) in Germany, which, since the end of 1995, has been offering an e-mail service and a fax-polling service, which can be dialled-up by customers to get up-to-date fax information on tour operators' offers, to its members.

An example of a 'virtual organisation' (Mertens, 1994), such as the Rosenbluth International Alliance (RIA) in the business travel agency sector (Clemons et al., 1992), which, however, was dissolved in 1993 by Rosenbluth International (formerly Rosenbluth Travel) (Cohen, 1995a and 1995b), was not found in the package holiday business.

## **6.5 Level 4 System Strategies: The Linking of Systems within the Package Holiday Sector**

Backward vertical links used for purchasing holiday components are discussed in Sub-Section 6.5.1, while forward vertical links used for distributing holiday packages are analysed in Sub-Section 6.5.2. Horizontal links to systems of competing tour operators are outlined in Sub-Section 6.5.3.

### **6.5.1 Backward Vertical Links between Principals' Systems and Tour Operator Systems**

100% of all price negotiations between the interviewed tour operators and the airlines took place on a personal basis, almost always face-to-face, for example during the major tourism exhibition ITB (Internationale Tourismus Börse) in Berlin in the spring of each year, and sometimes by telephone. Telephone and fax messages were used to follow up these price negotiations, if necessary. Long established personal relationships between senior representatives of tour operators and airlines often existed, with some of these price negotiations happening as part of what was described by one German interviewee as 'pub crawls'. These price negotiations usually took place on a half-yearly, i.e. seasonal, basis and about a year ahead of the relevant season. Contracting at other times took place only in exceptional cases, for example when a competitor ceased trading and thus new demand arose, or when fears of terrorist attacks such as in Turkey and Egypt or conflicts such as the Gulf War in 1990/1991 made customers re-book their holidays.

As a result of these price negotiations, price classes were established. These price classes depended in particular on:

- whether a tour operator booked seats in advance, i.e. 'allocations', or planned to book them at a later stage, i.e. 'ad-hoc bookings'
- whether the seat bookings were risk or non-risk bookings

- whether whole- or part-charters were purchased.

Whole-aircraft charters involved the booking of an entire plane in contrast to part-charters, which involved only an agreed number of seats. Risk bookings (in German 'Festkontingente'), in contrast to non-risk bookings (in German 'Prorata'), were guaranteed or fixed and thus non-changeable for tour operators unless high fines were paid. With regards to non-risk bookings, tour operators sometimes also incurred fines when they returned or cancelled seats at a late time. Non-risk bookings can be compared to 'options' in financial markets, whereas risk bookings, and ad-hoc bookings with previously agreed price classes, can be compared, to a certain extent, to 'futures'. Allocations had a major advantage over ad-hoc purchases in that they reduced insecurity about future availability of components and the prices charged for them, but on the other hand had the major disadvantage that they reduced flexibility in the production of holiday packages. In addition, allocations, whole-charters and risk bookings were less expensive to purchase, while ad-hoc bookings, part-charters and non-risk bookings were more expensive but reduced the risk of unsold capacities.

Similarly, most accommodation purchasing of all interviewed tour operators took place on a personal basis with relatively stable contractual relationships. Typically at least a year in advance of the season, contractors, usually working closely together with the destination agencies, were sent by the tour operators to the accommodation suppliers to negotiate prices and to arrange the necessary contractual paperwork. In some cases, particularly with smaller suppliers in remote locations, price negotiations were handled by telephone with subsequent exchanges of faxes. Similar to airline bookings, price classes were agreed mainly according to allocations versus ad-hoc bookings, exclusive versus non-exclusive contracts, and risk versus non-risk bookings which could be returned usually up to 14 days before the respective date of delivery. The purchasing of other components, such as car rental and cruise ship, took place very similarly to that of airline and accommodation booking. Almost always allocations were sold by the tour operators first, with additional purchases only being made thereafter depending on demand. However, during very busy times

such as during trade fairs non-allocated hotel beds were sold first to gain higher commissions, followed only then by allocations.

All representatives of the interviewed tour operators and charter airlines commonly argued that the way these price negotiations are taking place is unlikely to change much in the near future. In contrast, the subsequent processes, i.e. the data transfer regarding allocations and ad-hoc purchases, are changing extensively. These processes are, therefore, concentrated upon here. The distinction between whole-charters and part-charters, as well as between exclusive and non-exclusive contracts, is irrelevant with regards to the processes that follow the price negotiations and, hence, is not further investigated.

With regards to *allocations*, routing/general-accommodation/etc. information on the allocations is exchanged first, typically very shortly after the price negotiations have taken place. This initial information mainly consists of number of seats/beds/etc., departure and arrival times, departure and arrival locations and stop-overs regarding transportation components, and associated price classes including whether the bookings are risk or non-risk. Once the holiday packages have been sold, customer (or passenger) information, consisting mainly of number of people in a party, names and other relevant information such as number of children and special requirements, is exchanged. Both initial information and customer information can be exchanged several times if alterations are necessary, for example for promotions and discounts. Finally, regarding non-risk bookings only, information about returned unsold components is exchanged.

In the past, this information exchange of allocations data was handled almost entirely manually, with both tour operators and principals having to key-in separately any relevant data into their own systems. Flight (or routing) data and customer information was exchanged with airlines mainly using standard mail. General accommodation details were exchanged mainly personally between the contractors and the accommodation providers, with the contractors keying all information into



the tour operator systems after they have returned from their visits to the accommodation providers; while customer information was sent to the accommodation providers mainly on paper lists transported as co-mail. As with in-house accommodation suppliers (Section 6.3.2), these paper lists were carried once a week to the accommodation suppliers, or out of necessity or economical considerations more or less frequently. Initial lists were transported typically six to eight weeks prior to departure; any lists with necessary amendments or further bookings were carried in the following weeks; and one week before departure, the final lists were carried. These final lists also served as a contract which the accommodation suppliers had to sign, thus committing them to provide the service outlined while also guaranteeing their payment. Short notice amendments were sent using (automated) fax and telex. Any other communication took place by standard mail, co-mail, fax, telex and, only occasionally, by telephone.

With regards to *ad-hoc purchases*, or extra requests, the availability of seats/beds/etc. is checked by tour operators with their suppliers, followed by the reservation, booking and confirmation of these components. Customer information is exchanged either at the time of the reservation and booking or at a later stage, followed by information exchange with regards to any necessary amendments. Finally, regarding non-risk bookings only, information about cancelled components is exchanged.

In the past, this information exchange of data concerning ad-hoc purchases was also handled mainly manually, with both tour operators and principals having to key-in separately any relevant data into their own systems. The checking of availability as well as the booking and reserving of airline, accommodation and other components usually took place by telephone and fax, with all subsequent data exchange being handled very similarly to those of allocations. Therefore, the purchasing and confirming of extra components took in some cases up to several days. Only the availability of a few components was checked, and the subsequent booking and reservation was handled, instantly using electronic on-line systems, most of all the GDSs.

In the past, almost all charter airline seats were bought in bulk as allocations, while scheduled airline seats were bought both as allocations and ad-hoc purchases. Almost all data exchange between the interviewed tour operators and charter airlines took place non-electronically. The only exceptions with electronic data exchange were:

- the data exchange between the tour operators and their in-house airlines described at Level 2
- the use of SITA lines by Airtours, ITS (via Kaufhof's corporate network), the LTU Group, Thomson and TUI to exchange some PAX-information with a number of airlines a couple of days before departure, for rescheduling and for communicating of operational issues, with Fischer Reisen planning to also introduce such connections
- Meon Travel Limited's use of viewdata systems to purchase some seats from consolidators
- the links to the LTU airline system by Club Méditerranée Deutschland GmbH and Schauinsland-Reisen GmbH.

In Table 6.12, the percentage of charter airline seats purchased, compared to scheduled airline seats, is listed for each of the tour operators. Given the relatively high percentage of charter airline seats purchased by most tour operators, this reflects the relatively low importance of electronic data exchange between tour operators and airlines in the past.

Tour Operator	Percentage <sup>1</sup>
Attika Reisen AG, Germany	100%
Iberotravel Limited, England	100%
Manos (UK) Limited, England	100%
NUR Touristic GmbH, Germany	100%
Olimar Flugreisen GmbH, Germany	100%
Touristik Union International GmbH & Co. KG (TUI), Germany	100%
First Choice Holidays & Flights Limited, England	> 99%
The LTU Group, Germany (all except Meier's Weltreisen)	> 98%
Unijet Travel Limited, England	98%
Inspirations PLC, England	> 95%
Fischer Reisen GmbH, Germany	95%
Kreutzer Touristik GmbH, Germany	90% - 95%
Hetzel-Reisen GmbH & Co. KG, Germany	90%
Alltours Flugreisen GmbH, Germany	> 90%
Berliner Flug Ring GmbH (BFR), Germany	> 90%
Nazar Holiday Reiseveranstaltung GmbH, Germany	> 90%
Phoenix Reisen GmbH, Germany	> 90%
Reisebüro Jäger GmbH, Germany	> 90%
Schauinsland-Reisen GmbH, Germany	> 90%
Thomson Tour Operations Limited, England	> 90%
Airtours Holidays Limited, England	> 80% (summer); > 90% (winter)
Panorama Holiday Group Limited, England	80%
The Air Travel Group Holidays Limited, England	> 80%
International Tourist Services Länderreisedienste GmbH (ITS), Germany	> 80%
Hotelplan International Travel Organisation Limited (Inghams Travel), England	70%
Unger Flugreisen GmbH, Germany	60%
The LTU Group, Germany (Meier's Weltreisen)	50%
Meon Travel Limited, England	50%
Club Méditerranée Deutschland GmbH, Germany	< 50%
Jetsave Travel Limited, England	20%
Studiosus Reisen München GmbH, Germany	10%
Feria Internationale Reisen GmbH, Germany	5%
Kuoni Fernreisen GmbH, Germany	5%
DER-Tour, Germany	2% - 5%
British Airways Holidays Limited, England	2%
Gesellschaft für internationale Begegnung und Cooperation mbH (GeBeCo), Germany	1%
Ikarus Tours GmbH, Germany	0%
Thomas Cook Holidays, England	0%
Virgin Holidays Limited, England	0%

<sup>1</sup> Of charter airline seats purchased compared to scheduled airline seats purchased. Figures are annual estimates and listed in decreasing order. '>' and '<' mean 'more than' and 'less than', respectively. The Bridge Travel Group in England and the German Delphin Seereisen GmbH, Frosch Touristik GmbH, Hapag-Lloyd Tours GmbH, Klingenstein & Partner Studienreisen and Wikinger Reisen GmbH did not state any figures.

**Table 6.12**  
**Percentages of Charter Airline Seats Purchased**

While, with few exceptions, charter airlines seats were purchased non-electronically in the past, apart from the exceptions mentioned above, some IATA, i.e. scheduled, airline seats were acquired using electronic links to the four GDSs Amadeus, Galileo, SABRE and Worldspan. When scheduled airline seats were purchased as allocations, GDSs were not used; instead, the purchasing activities were handled manually as with charter airline seat bookings. Only when scheduled airline seats were purchased on an ad-hoc basis, GDSs were used in some of the cases. Data on the purchase of scheduled airline seats of the interviewed tour operators are listed in Table 6.13 together with information about the use of the GDSs. Given that some airlines did not have any connection to GDSs, including for example Ikarus Tours GmbH which even purchased 100% scheduled airlines seats, and given that all allocations were handled manually, this data reflects the relatively limited importance of GDSs for tour operator purchasing at least at the time of the interviews.

Moreover, most of these links were only semi-automated, i.e. separate terminals were used by the tour operator staff to access the corresponding GDS. When booking of additional seats was required, a member of staff at the tour operator had to access the relevant GDS via separate viewdata terminals in Britain, START/Amadeus terminals in Germany or other separate terminals in the same way travel agents were accessing these terminals. Amadeus and SABRE, in fact, did not provide, at the time of the interviews, automated host-to-host interfaces for tour operators to link them with tour operator systems. Therefore, it is specifically stated in Table 6.13 in the column titled 'Comments' if automated links to Galileo and Worldspan were used.

Tour Operator	Percentage <sup>1</sup>	A <sub>2</sub>	G <sub>3</sub>	S <sub>4</sub>	W <sub>5</sub>	Comments
Ikarus Tours GmbH, Germany	100%					
Thomas Cook Holidays, England	100%		✓	✓		90% allocations and 10% extra purchases using Galileo UK (50%) and SABRE (50%) with automated links to ATOP
Virgin Holidays Limited, England	100%					
Gesellschaft für internationale Begegnung und Cooperation mbH (GeBeCo), Germany	99%	✓		✓		
British Airways Holidays Limited, England	98%					
DER-Tour, Germany	95% - 98%	P			✓	very few allocations were purchased; almost all ad-hoc purchases took place using an automatic interface to Worldspan since 1991, with an automatic interface to START/Amadeus being planned
Feria Internationale Reisen GmbH, Germany	95%	✓	✓			of these, 40% were allocations and 60% extra purchases
Kuoni Fernreisen GmbH, Germany	95%		✓			of these, 30% were allocations and 70% extra purchases using an Inside Availability link to Galileo International; Kuoni Travel Limited implemented a direct link to Galileo UK in mid 1994
Studiosus Reisen München GmbH, Germany	90%	✓				
Jetsave Travel Limited, England	80%		✓			
Club Méditerranée Deutschland GmbH, Germany	> 50%	✓				
The LTU Group, Germany (Meier's Weltreisen)	50%	✓	✓	✓	P	had automatic interfaces to Galileo International and SABRE
Meon Travel Limited, England	50%		✓			FSS had automated Galileo UK link; products on TOURS were manually booked using separate Galileo UK terminal
Unger Flugreisen GmbH, Germany	40%	✓	✓	✓		some were booked automatically
Hotelplan International Travel Organisation Limited (Inghams Travel), England	30%		✓			of these, about 80% were allocations and 20% extra requests using ATOP with automated link to Galileo UK; flights for Unisys products were manually booked on separate Galileo UK terminal with the Unisys system having only an automated link to Galileo UK for administration purposes
Panorama Holiday Group Limited, England	20%					

Tour Operator	Percentage <sup>1</sup>	A <sub>2</sub>	G <sub>3</sub>	S <sub>4</sub>	W <sub>5</sub>	Comments
The Air Travel Group Holidays Limited, England	< 20%	✓	✓			a non-automatic standard and an automated interface to Galileo UK (> 95%) and a separate Amadeus terminal (< 5%) were used
International Tourist Services Länderreisedienste GmbH (ITS), Germany	< 20%		P			ITS planned to implement two or three automated Galileo International links in January 1995 for individual purchases of especially IATA (i.e. scheduled) airline seats, hired cars and beds in international hotel chains, corresponding to the introduction of a new North America catalogue and a new city breaks catalogue, both aimed at the individual travellers' market. These links became operational in May 1995.
Airtours Holidays Limited, England	< 20% (summer); < 10% (winter)		✓	✓	✓	were used for Tradewinds brand only; an automated Galileo UK link was implemented for Tradewinds in mid 1995; Airtours Flights and Late Escapes had further separate terminals
Hetzel-Reisen GmbH & Co. KG, Germany	10%	✓				
Alltours Flugreisen GmbH, Germany	< 10%					
Berliner Flug Ring GmbH (BFR), Germany	< 10%					
Nazar Holiday Reiseveranstaltung GmbH, Germany	< 10%	✓				
Phoenix Reisen GmbH, Germany	< 10%					
Reisebüro Jäger GmbH, Germany	< 10%	P				
Schauinsland-Reisen GmbH, Germany	< 10%					
Thomson Tour Operations Limited, England	< 10%					
Kreutzer Touristik GmbH, Germany	5% - 10%	✓	P	P	P	automated connections were to be implemented by the end of 1995
Fischer Reisen GmbH, Germany	5%					
Inspirations PLC, England	< 5%					
Unijet Travel Limited, England	2%		✓		✓	the consolidator arm had a much higher scheduled flight percentage
The LTU Group, Germany (all except Meier's Weltreisen)	< 2%	✓			P	
First Choice Holidays & Flights Limited, England	< 1%		✓			an automated interface was used for sub-reservations, i.e. connecting flights and city breaks programme
Bridge Travel Group, England	N. A.		✓			
Delphin Seereisen GmbH, Germany	N. A.					

Tour Operator	Percentage <sup>1</sup>	A 2	G 3	S 4	W 5	Comments
Frosch Touristik GmbH, Germany	N. A.	✓	✓	✓	✓	some were booked automatically; large proportion of scheduled flights purchased by consolidator arm
Hapag-Lloyd Tours GmbH, Germany	N. A.	✓				
Klingenstein & Partner Studienreisen, Germany	N. A.	✓				
Wikinger Reisen GmbH, Germany	N. A.	✓				
Touristik Union International GmbH & Co. KG (TUI), Germany	0%	P				planned for 1995 for connecting flights; Airtours International GmbH has been using Amadeus since March 1994

'✓' means that the particular system was used by the corresponding tour operator at the time of the interview.

'P' means that the corresponding tour operator planned the introduction of the particular system within 12 months of the interview. More specific times of the adoption of the GDS are stated in the column titled 'Comments'.

<sup>1</sup> Of scheduled airline seats purchased compared to charter airline seats purchased. Figures are annual estimates and listed in decreasing order. '>' and '<' mean 'more than' and 'less than', respectively.

<sup>2</sup> Amadeus.

<sup>3</sup> Galileo International in Germany and Galileo UK in the United Kingdom.

<sup>4</sup> SABRE.

<sup>5</sup> Worldspan.

**Table 6.13**

**Data on Scheduled Airline Seats Purchasing**

Overall, the data of both charter and scheduled airline seat purchasing of the interviewed tour operators shows a relatively low use of automated electronic on-line systems in the past. Hence, the data exchange was rather labour-intensive, slow and inflexible, especially once allocations had been exhausted and individual components had to be purchased.

*New System Strategies:* Increasingly, backward vertical links to suppliers, either indirectly via GDSs or directly, are being implemented for automated reservations and bookings of travel and tourism components.

Firstly, backward vertical links between the GDSs and tour operator systems, i.e. indirect links, are being installed (Kärcher, 1995b). DER-Tour was the first tour operator in Germany with a direct on-line connection to one of the GDSs by implementing Worldspan's Tour Connect in 1991, which had been jointly developed by Worldspan and Cray Systems. In 1994, this link was integrated into the more advanced Worldspan's WorldSolutions, which was launched in 1993, for automated bookings of scheduled flights and, since early 1995, hotel rooms. Correspondingly, Galileo International launched its Inside Access in 1994 for tour operators, which used EDIFACT standard messages for communicating (McLaren, 1994). Kuoni Fernreisen GmbH, for example, used Galileo International's link to access the system Trust II of Steigenberger Reservation Service GmbH & Co. KG (SRS), Frankfurt am Main, Germany (Appendix 4), to automatically book beds in SRS Hotels in Asia. Consequently, Amadeus introduced a transparent link in mid 1995; and SABRE was planning to introduce a similar link in the near future. DER-Tour planned to adopt the new Amadeus link, which would, therefore, also create a 'Level 2 link' to its in-house airline Lufthansa.

Secondly, direct backward vertical links between tour operator and supplier systems are being established (Table 6.14). These links lead to very similar consequences as the direct in-house tour operator to supplier systems links described at Level 2, such as avoiding restrictions imposed by external systems. The GDSs, for example, were limited in the acceptance of special requests, such as dietary requirements or orders for champagne and flowers on arrival, which tour operators had to send by fax in parallel to the booking via the GDSs.



Tour Operator	Direct Links between Tour Operator System(s) and Principals' System(s)
British Airways Holidays Limited, England	The hotel partners of British Airways PLC, which provided the bulk of accommodation that was sold by British Airways Holidays, were directly linked to BABS.
DER-Tour, Germany	DER-Tour interfaced to Utell International (Table A4.1) for hotel bookings, Worldspan and the systems of a number of resort operators, such as Center Parcs and EuroDisney, and car rental companies via IBM's corporate X.25 network, with a connection to START/Amadeus also being planned. While the connections to the car rental companies were for file transfer only, the connection to Utell International allowed automated and instant checking, reserving, booking and confirming of hotel components.
Meon Travel Limited, England	Direct links to some accommodation suppliers such as a hotel chain in France were being used.
NUR Touristic GmbH, Germany	NUR Touristic had direct connections to some suppliers such as Center Parcs and planned further direct access to other suppliers' systems. In addition, NUR Touristic was investigating a new airline seat purchasing system by Electronic Data Systems Corporation (EDS), which was to be operational from mid 1995.
Virgin Holidays Limited, England	In May 1995, EDI links were being implemented with the Walt Disney company in the USA for data exchange.
Charter Airline	Direct Links between Tour Operator System(s) and Principals' System(s)
Aero Lloyd Flugreisen GmbH & Co. Luftverkehrs KG, Germany	Aero Lloyd's in-house airline system was linked to DCS' Robin in 1993/1994, allowing access via START and, in the future, direct access.
Condor Flugdienst GmbH, Germany	Condor's airline system Cobra was linked to START (using TOMA) and DCS' Robin in 1994. The software company Shaked in Israel has also been developing an airline system for Condor since April 1994 to supplement Cobra, which will eventually allow tour operators and travel agents to directly link-up to the system. The new airline system became partly operational in October 1995, with full operations being scheduled for Easter 1996.
Hapag-Lloyd Fluggesellschaft mbH, Germany	Hapag-Lloyd operated the Hapag-Lloyd Einzelplatzbuchungssystem for single-seat purchases, which was linked to START. It considered extending this system so as to be directly accessed by tour operators in the future, with a possible 'Level 2 link' to TUI. Hapag-Lloyd was testing DCS' Robin at the end of 1994.
LTU International Airways Lufttransport-Unternehmen GmbH & Co. KG, Germany	The LTU airline operated approximately 90% charter and 10% scheduled flights. The charter seats were handled by the internal airline system, which was developed around 1980. In November 1990, when LTU started to also operate scheduled flights, the LTU airline system was linked to the Lufthansa Inventory System, thus co-hosting it, to sell scheduled airline seats. The Lufthansa Inventory System was in turn linked to Amadeus and Galileo International. (Tapes containing flight and seat information were also sent to SABRE and Worldspan, using OAG's (Official Airline Guides) services.) More recently, the LTU airline has been allowing tour operators to directly access its airline system, for example Club Méditerranée Deutschland GmbH and Schauinsland-Reisen GmbH. In addition, the LTU airline was linked to DCS' Robin in 1994.

**Table 6.14**

**Direct Tour Operator to Supplier System Links**

Moreover, some charter airlines have started to list their seats on the GDSs (also Richardson, 1994c). While some seats on the LTU airline have become bookable via Amadeus and Galileo International because of LTU's scheduled flights operations, Aero Lloyd was the first German charter airline to sell on SABRE (using SABRE's Tourlink) since 1994, though initially only displaying a limited number of seats. Condor was also linked to Amadeus and, to sell seats abroad, to Galileo International and SABRE in 1994. Similarly, while in the past the systems of accommodation suppliers were mostly stand-alone (Beaver, 1992; Boyce, 1995a and 1995b; BTW Briefing, 1995b and 1996; Buhalis, 1995, pp. 54 - 57, and 1996a, p. 131), these are increasingly being linked (Emmer et al., 1993; Go, 1992; Hoffmann, 1996c and 1996d; Scales, 1995b; Vlitos Rowe, 1995, pp. 51 - 68; Williams, 1994), a development which is in particular supported by HEDNA (Table 6.15). Such developments are also taking place for car rental companies (Scales, 1995a).

<b>The Hotel Electronic Distribution Network Association (HEDNA)</b>	
USA	
HEDNA was a lobbying organisation for the hotel industry, which was founded in 1991 and regarded as one of its major aims the promotion and improvement of the use of hotel computer reservation systems. Apart from hotels, hotel representative companies and switching companies, its members included travel agency consortia, GDS operators and operators of other electronic distribution networks.	
Source	• HEDNA (1993). <i>Explanation of HEDNA</i> . The Hotel Electronic Distribution Network Association, USA.

**Table 6.15**  
**HEDNA**

A further development regarding especially the purchasing of accommodation components is the adoption of laptop computers by contractors. Previously, contractors had to key-in purchasing and contractual information into the tour operator systems after their return from visits to the suppliers. Increasingly, laptops and, in some cases, portable printers, are being acquired and used by contractors (Table 6.16). Destination specific data is loaded down from the tour operator systems

onto the laptops before the purchasing trips (or by remote access from the destinations). This information includes standardised contracts, which are filled in using screen masks, complaints information about the suppliers and market intelligence information on competitors and their suppliers. All new data is then inputted by the contractors at the destinations, and the contracts are immediately printed and signed there as well, thus replacing the need to transfer what was by some interviewees referred to as ‘tons’ and ‘mountains’ of paper contracts, while reducing the cost and time span of the purchasing period. Finally, the purchasing data is transferred directly from the laptops onto the tour operator systems, either by remote access or after the contractors’ return.

Tour Operator	Use of Laptops by Contractors
Airtours Holidays Limited, England	Several laptops were being introduced which will have direct access to the headquarters’ databases in England.
DER-Tour, Germany	Several laptops were used, with selected data being downloaded from DER-Tour’s databases.
First Choice Holidays PLC, England	It was planned to have Merlin data, for example marketing and sales information, on laptops. On-line links of the laptops to the purchasing system and Merlin were also planned. Information on competitors and complaints information about hotels was to be accessed and printed at the locations.
Iberotravel Limited, England	The first laptop was being used.
Inspirations PLC, England	Some contractors have been using laptops since 1993.
International Tourist Services Länderreisedienste GmbH (ITS), Germany	It was planned that buyers get laptops and portable printers. Destination specific data was to be down-loaded onto them before the purchase trips, and new data was to be inputted at the destinations using standard contracts, which were incorporated into screen masks.
Jetsave Travel Limited, England	The introduction of laptops was planned.
Kreutzer Touristik GmbH, Germany	The first laptop was in use.
The LTU Group, Germany	The introduction of laptops was planned.
Meon Travel Limited, England	Laptops were being tested.
NUR Touristic GmbH, Germany	The introduction of laptops was planned.
Panorama Holiday Group Limited, England	The introduction of laptops was planned.

**Table 6.16**

**Adoption of Laptops for Purchasing Activities**

During mid 1995, TUI introduced mobile terminals to tour representatives on Mallorca (FVW International, 1995f). Bookings of day excursions and other programmes were keyed into the terminals, with customers immediately receiving a printed receipt of their bookings. The information was then loaded down from the terminals and electronically transmitted by Ultramar Express S.A. to TUI in Hannover, where the monies were debited from the customers' credit cards. These terminals reduced time and administrative efforts for tour representatives by replacing the previous paperwork.

Finally, regarding Level 4, the payment processes between tour operators and their suppliers are increasingly being automated. In the past, these payments were almost entirely handled manually. Invoices, or bills, were sent by the principals to the tour operators by standard mail or via the destination agencies and paid for using vouchers and cheques, or, more recently, by manually administered bank transfers. TUI, for example, used to give customers 'guest vouchers', which they handed to the hotels on their check-in. The vouchers could then be redeemed by hotels like cheques at agreed banks. ITS gave hotels (via customers) vouchers which the hotels could claim at the destination agencies, which then paid the hotels by bank transfers. Only during the most recent years, these manual payments have been and are being replaced by automated bank transfers and by electronic funds transfer systems such as BACS (Banks Automated Clearing Service), Utell International's payment services for hotels (Table A4.1), and IATA's Bank Settlement Plan (BSP) for scheduled flights (Table A12.3). DER-Tour, for example, had automated transmissions of data blocks to BSP, using a service provided by DER-Data Informationsmanagement GmbH, which did the BSP accounting for DER-Tour in return for an internal commission. Similarly, Airtours PLC has phased out most manual payments and replaced them with a self-billing system and automated bank transfers. Overall, this automatising of payments reduced complexities and cost for tour operators, and increased reliability and flexibility of the payment processes.

## 6.5.2 Forward Vertical Links between Buyers' Systems and Tour Operator Systems

In comparison to purchasing activities, a larger proportion of the distributing activities of tour operators was handled electronically and automatically at the time of the interviews (Table 6.17). Nevertheless, several tour operators, especially smaller operators and operators serving the more upmarket long-haul holiday markets such as British Airways Holidays, Thomas Cook Holidays and Virgin Holidays, sold most or even all of their holiday packages manually, i.e. by telephone, fax and standard mail (Table 6.17).

Tour Operator	Estimated Percentage of Automated Sales	Estimated Percentage of Manual Sales
Airtours Holidays Limited, England	97%	3%
Iberotravel Limited, England	95%	5%
Club Méditerranée Deutschland GmbH, Germany	> 90%	< 10% (mainly for support)
NUR Touristic GmbH, Germany	> 85%	< 15%
Inspirations PLC, England	85%	15%
Touristik Union International GmbH & Co. KG (TUI), Germany	81% (40% - 50% of Airtours International GmbH)	19% (50% - 60% of Airtours International GmbH)
First Choice Holidays & Flights Limited, England	> 80% (0% of Eclipse brand)	< 20% (100% of Eclipse brand)
Kuoni Fernreisen GmbH, Germany	> 80%	< 20%
Phoenix Reisen GmbH, Germany	> 80%	< 20%
Thomson Tour Operations Limited, England	> 80%	< 20%
The Air Travel Group Holidays Limited, England	80%	20%
Kreuzer Touristik GmbH, Germany	80%	20%
Unijet Travel Limited, England	80% (90% seat-only; < 80% of USA holidays)	20% (10% seat-only; > 20% of USA holidays)
Alltours Flugreisen GmbH, Germany	> 70%	< 30%
International Tourist Services Länderreisedienste GmbH (ITS), Germany	> 70%	< 30%
Nazar Holiday Reiseveranstaltung GmbH, Germany	> 70%	< 30%
Olimar Flugreisen GmbH, Germany	> 70%	< 30%
Unger Flugreisen GmbH, Germany	> 70%	< 30%
Berliner Flug Ring GmbH (BFR), Germany	70%	30%
DER-Tour, Germany	70%	30%
Frosch Touristik GmbH, Germany	70%	30%
Hotelplan International Travel Organisation Limited (Inghams Travel), England	70%	30%

Tour Operator	Estimated Percentage of Automated Sales	Estimated Percentage of Manual Sales
Panorama Holiday Group Limited, England	70%	30%
The LTU Group, Germany (all except Meier's Weltreisen)	> 60%	< 40%
Fischer Reisen GmbH, Germany	60%	40%
Manos (UK) Limited, England	60%	40%
Attika Reisen AG, Germany	> 50%	< 50%
Hetzel-Reisen GmbH & Co. KG, Germany	> 50%	< 50%
Reisebüro Jäger GmbH, Germany	50%	50%
Studiosus Reisen München GmbH, Germany	50%	50%
The LTU Group, Germany (Meier's Weltreisen)	> 40%	< 60%
Jetsave Travel Limited, England	40%	60%
Virgin Holidays Limited, England	35%	65%
Schauinsland-Reisen GmbH, Germany	< 30%	> 70%
British Airways Holidays Limited, England	20% (aim of 40% with new BA Link Option 2 system)	80%
Feria Internationale Reisen GmbH, Germany	20%	80%
Thomas Cook Holidays, England	< 10%	> 90%
Delphin Seereisen GmbH, Germany	0%	100%
Hapag-Lloyd Tours GmbH, Germany	0%	100%
Ikarus Tours GmbH, Germany	0%	100%
Klingenstein & Partner Studienreisen, Germany	0%	100%
Meon Travel Limited, England	0%	100%
Wikinger Reisen GmbH, Germany	0%	100%

Figures are annual estimates. '>' and '<' mean 'more than' and 'less than', respectively. The Bridge Travel Group, England, and Gesellschaft für internationale Begegnung und Cooperation mbH (GeBeCo), Germany, did not state any figures.

**Table 6.17**  
**Percentage of Automated Versus Manual Sale of Holiday Packages**  
**by Tour Operators**

With few exceptions described below, all automated sales took place with travel agents rather than with final consumers. Therefore, the percentage figures of automated sales stated in Table 6.17 are also the minimum percentages of holidays sold via travel agents compared to holidays sold directly to consumers. Automated sale was introduced on a larger scale during the late 1970's and early 1980's with the implementation of national videotex-based (referred to as viewdata in Britain) reservation systems (Archdale, 1988). The main examples of early networks are Istel (Table A3.1), Fastrak (Table A3.2) and Prestel (Appendix 4) in Britain, and START

(Table A3.3) in Germany. While Prestel lost its importance to the package holiday business over the years, new national networks were established more recently in Germany, especially Dillon Communication Systems GmbH's (DCS) Robin and Merlin (Table A3.4) in 1991, and Stinnes-data-Service GmbH's StiNET (Table A3.5) in March 1994. DCS' Robin was an umbrella system to access either Merlin or START. At the end of 1994, more than 30 German tour operators, including NUR Touristic and ITS, were using Robin to access START, thus increasing their bargaining power and reducing their subscription charges, while also gaining additional services provided by DCS.

Prior to the implementation of videotex / viewdata systems, most sales were handled manually, while only few holiday packages were sold automatically by direct dial-up access of travel agents' terminals to tour operators' reservation systems. Thomson, for example, had a larger number of direct access points in Britain which reduced the costs of dial-up for travel agents. With the advent of videotex systems, these direct links were replaced in Britain, while some remained in Germany. Thomson, for example, installed one of the first viewdata-based reservation systems in Britain with TOP (Thomson Open-line Programme) in October 1982. The front-end TOP, a sub-system of TRACS, was made available to travel agents to serve as an external reservation and booking system and, as a result of its success in gaining acceptability, TOP's use was made mandatory in 1987 for all travel agents in Britain wanting to make bookings with Thomson Holidays (Holloway, 1988, p. 191). In Germany, TUI's IRIS has been linked to START since START became operational in 1979, since TUI was one of the founders and owners (until mid 1996) of START.

In Britain in early 1995, the automated sale of holiday packages, with the exception of Level 2 (i.e. internal) sales and Thomas Cook Holidays' sales via direct booking systems, was almost entirely conducted via the national viewdata networks Istel and Fastrak. All British tour operators had connections to both Istel and Fastrak, with the exception of Iberotravel Limited, which only had a connection to Fastrak, and Meon Travel Limited and Thomas Cook Holidays, which had no connections. (Meon

Travel's new system was to have a viewdata interface, but it had not been decided whether to use it.) The Air Travel Group Holidays Limited used in addition the reservation system EasyRes by the Reed Travel Group. In Germany, most automated sale, apart from Level 2 sales, was conducted via START and DCS' Robin / Merlin (Table 6.18), with Alltours Flugreisen GmbH, Fischer Reisen GmbH, Hetzel-Reisen GmbH & Co. KG, the LTU Group, NUR Touristic GmbH and Olimar Flugreisen GmbH also using StiNET. Access to these national reservation systems in Britain and Germany was either via regional gateways (START, for example, operated 29), or direct. Airtours PLC, for example, had several 64 kBit/sec. direct lines to Istel and Fastrak; and TUI had direct access to the START/Amadeus host, i.e. two Siemens BS2000, in Frankfurt am Main, using four 64 kBit/sec. leased lines.



Tour Operator in Germany	START (including START/Btx)	DCS' Robin / Merlin
Alltours Flugreisen GmbH	✓	
Attika Reisen AG	✓ (since February 1993)	✓
Berliner Flug Ring GmbH (BFR)	✓	P
Club Méditerranée Deutschland GmbH	✓	
DER-Tour	✓ (via IBM's corporate network)	P (realised in late 1995)
Feria Internationale Reisen GmbH	✓ (since 1994)	✓ (since 1994)
Fischer Reisen GmbH	✓	✓
Frosch Touristik GmbH	✓	✓
Gesellschaft für internationale Begegnung und Cooperation mbH (GeBeCo)	✓	
Hetzel-Reisen GmbH & Co. KG	✓	✓
International Tourist Services Länderreisedienste GmbH (ITS)	✓ (via Kaufhof's corporate network)	✓ (used by Jet Reisen GmbH)
Klingenstein & Partner Studienreisen	P (1996)	
Kreutzer Touristik GmbH	✓	✓ (since mid 1995)
Kuoni Fernreisen GmbH	✓	✓
The LTU Group	✓	✓
Nazar Holiday Reiseveranstaltung GmbH	✓	✓
NUR Touristic GmbH	✓	✓
Olimar Flugreisen GmbH	✓	✓
Phoenix Reisen GmbH	✓	
Reisebüro Jäger GmbH	✓	
Schauinsland-Reisen GmbH	✓	✓
Studiosus Reisen München GmbH	✓	
Touristik Union International GmbH & Co. KG (TUI)	✓	
Unger Flugreisen GmbH	✓	P
Wikinger Reisen GmbH	P (realised on 1 November 1995)	

'✓' means that the particular system was used by the corresponding tour operator at the time of the interview.

'P' means that the corresponding tour operator planned the introduction of the particular system within 12 months of the interview. More specific times are stated in brackets and updated from industry sources.

Delphin Seereisen GmbH, Hapag-Lloyd Tours GmbH and Ikarus Tours GmbH did not have or plan any connections.

**Table 6.18**  
**Use of START and DCS**

In general, while the typical 'mass-market' packages were sold mainly automatically, complex and/or expensive holidays, such as holidays for weddings / honeymoons / anniversaries, tailor-made and long-haul holidays, were sold mainly manually. In addition, once allocations had been exhausted, further packages were usually also arranged manually by tour operators. For example, The Air Travel Group Holidays Limited, Berliner Flug Ring GmbH (BFR), Gesellschaft für internationale Begegnung und Cooperation mbH (GeBeCo), Inspirations PLC, Jetsave Travel Limited and Thomas Cook Holidays offered to arrange almost any package holiday similar to their standard programme, but this assembly was often not done automatically and thus could take any time from between several minutes to several days to arrange and confirm.

*New System Strategies:* While the new system strategies with regards to purchasing activities aim to increase the number of activities handled automatically and electronically, it could be argued that the new system strategies with regards to distribution activities aim to maintain the level of electronically handled activities (and only aim to increase it at a later stage). In most cases, the previous tour operator distribution systems are unable to automatically and electronically distribute those packages made more complex through modularisation and individualisation. Therefore, tour operators are increasingly implementing new system strategies with regards to distribution activities to also automatically distribute complex types of holiday packages. Especially, developments of the following kinds are distinguished, each of which is described in more detail below:

- (Sale via travel agents:) Forward vertical direct links between tour operator systems and travel agent systems.
- (Sale via travel agents:) Forward vertical links between tour operator systems and national reservation systems.
- (Sale via travel agents:) Forward vertical links between tour operator systems and global distribution systems (GDSs).
- (Direct sale:) Forward vertical links between tour operator systems and electronic consumer trading platforms.
- (Direct sale:) Forward vertical links between tour operator systems and other on-line direct booking systems.

*Forward vertical direct links between tour operator systems and travel agent systems* are increasingly being established (Table 6.19; also Noakes, 1995d; Richardson, 1994a and 1994b). These links have very similar consequences to the direct in-house tour operator to travel agent system links described at Level 2.

Tour Operator	Direct Links between Tour Operator System(s) and Travel Agent System(s)
The Air Travel Group Holidays Limited, England	Some travel agencies were directly linked.
DER-Tour, Germany	It was planned to give external travel agents direct access to Phoenix.
First Choice Holidays PLC, England	First Choice planned to make some information contained in Merlin accessible on-line to travel agents, in particular hotel and resort information such as a description of the hotels together with the number and location of restaurants, bars and beaches in their vicinity. First Choice also developed a new distribution system in 1995, which was scheduled for completion by December 1995 / early 1996, which ran on viewdata as well as PCs and enabled the display of graphics and videos (Jolley, 1995c).
Fischer Reisen GmbH, Germany	Fischer Reisen used direct lines to some agencies.
Frosch Touristik GmbH, Germany	Several major travel agent chains, such as NUR Touristic GmbH's Holiday Land Franchise Management (Holiday Land Reisebüro GmbH i. Gr.), Neckermann KatalogWelt + Reisebüro and Reisebüro Blum GmbH, were directly linked.
International Tourist Services Länderreisedienste GmbH (ITS), Germany	Kaufhof's corporate network was utilised by ITS to directly connect some large travel agent chains to ITOS.
Kreutzer Touristik GmbH, Germany	TOPIX was linked via SITA lines to some travel agents in Germany and Austria.
The LTU Group, Germany	Several external travel agent chains were to be directly linked to PROVIT, using software developed by LTU's partly-owned subsidiary Travel Management Systems GmbH (TMS), possibly using the corporate network of Westdeutsche Landesbank Girozentrale (WestLB).
NUR Touristic GmbH, Germany	NURVIS was linked, via Karstadt's corporate network and the corporate network of the main German automobile association ADAC (Allgemeiner Deutscher Automobil Club) to ADAC's travel agencies. In fact in 1994, about 70% of NUR Touristic's automated total sales were sold via Karstadt's corporate network compared to 25% via START and, mainly in the Neue Länder, 5% via START/Btx. (However, following liberalisation on 1 November 1994 in Germany and the contracting of mainly former TUI travel agencies by NUR Touristic GmbH, the relative percentage of sale via START is likely to have increased in 1995.) Moreover, most tour operators, which distributed their packages via NUR Touristic's Holiday Land Franchise Management (Holiday Land Reisebüro GmbH i. Gr.; founded in 1993), were directly linked to Holiday Land's standard RIO systems via Karstadt's corporate network.
The Thomas Cook Group Limited, England	Thomas Cook, in co-operation with the system company Cray Systems, was planning to directly link travel agencies (TTG, 1995h).

**Table 6.19**

**Direct Tour Operator to Travel Agent System Links**

In particular, these direct links avoid subscription charges to, and restrictions imposed by, external booking systems. Figure 6.12 shows TOMA, the booking mask used by travel agents to book tour operator packages via START until early 1995. TOMA is selected as 'Aktion ?V' for 'Veranstalter' (tour operator) on START. This booking mask was designed to enable automated bookings of standard holiday packages, i.e. fixed-itinerary or 'single-centre' holidays, with a 'centre' being a hotel, resort or any other form of accommodation. However, if two or more centre holidays, or itinerary-built holidays, were demanded, the booking processes using TOMA were tedious and time consuming, or could not even be supported at all. Moreover, booking masks such as TOMA and those used on viewdata systems in Britain are character- and line-based and, thus, do not allow the display of pictures, videos and sound. Direct lines to travel agent systems avoid these restrictions of external systems and enable tour operators to implement their own distribution systems, which can contain multiple sub-masks and/or multimedia to more flexibly distribute their holiday packages, while at the same time also gaining more detailed customer information.

EXP . . .	A-NR . . .	LB . VB - FN . . . . .						TOMA												
. . . . .																				
AKTION . .	VERAN . . . .	REISEART . . . .	PERS . . . .	AGNR . . . . .			VORG . . . . .													
. . . . .																				
			BER . . . . .	SEITE / BLAETTERN . . . .																
M	PO	ANF	LEISTUNG	UNTERBR	ANZ	VON	BIS	TL-ZUORDNUNG	ST	PREIS										
. . . . .																				
. . . . .																				
. . . . .																				
. . . . .																				
. . . . .																				
. . . . .																				
. . . . .																				
. . . . .																				
TL	A	NAME/VORNAME/TITEL			A/ERM	PREIS	TL	A	NAME/VORNAME/TITEL											
01	.	. . . . .			.		02	.	. . . . .											
03	.	. . . . .			.		04	.	. . . . .											
05	.	. . . . .			.		06	.	. . . . .											
BEM									GES											
NAME				VORN/TI																
STR, NR				PLZ, ORT																
ZUSATZ				TEL-NR				TEL-KD												
ANZ	. . . . .	ZA	. . . . .	TV	. . . . .	KS	. . . . .	AUFT	. . . . .	BEF	. . . . .	RA	. . . . .	PERS	. . . . .	ZIEL	. . . . .	D	. . . . .	P

(Sources: For example Kuoni Fernreisen, 1994; and ITS (1994). *Katalog Direkt Reisen Sommer 1995* (1. Auflage). International Tourist Services Länderreisedienste GmbH, Köln, Germany, p. 141.)

**Figure 6.12**  
**START's TOMA (Touristik Maske / tourism mask)**

*Forward vertical links between tour operator systems and national reservation systems:* As a response to the (threat of) establishment of direct links between tour operator and travel agent systems (described above), and links between tour operator and direct booking systems (described below), which by-pass national reservation systems, the operators of these national systems are adding flexible features to their systems to allow reservations and bookings of more individual holiday packages, thus trying to keep old as well as encourage new customers to use their systems (Färber, 1994/95; Lindsay, 1992; Puhmann, 1994/95). At the time of the interviews, all tour operators in Germany which sold packages via START used TOMA, with the exceptions of DER-Tour, TUI and TUI's subsidiary Airtours International GmbH. These three operators used slightly adapted versions of TOMA, namely DER-Tour with its old TOUR mask, TUI with its IRIS-Neu mask since January 1994 (and

previously its IRIS mask), and Airtours International GmbH with its ARIS mask. Moreover, NUR Touristic GmbH's internal dialogue mask was very similar to TOMA; in fact, START, TUI and NUR Touristic had jointly developed TOMA in 1988.

With the introduction of the two new national reservation systems DCS' Robin / Merlin in 1991 and StiNET in 1994, both of which were not videotex-based, multiple booking masks (in contrast to the single TOMA mask) and colour display were offered to tour operators and travel agents in Germany. Moreover, DCS allowed tour operators using Robin as an umbrella access to START to operate multiple booking masks on START since the second half of 1994, with Kuoni Fernreisen GmbH's FlexiPack being the first system to incorporate and use them. From line twelve of the TOMA mask onwards, Kuoni Fernreisen was able to override TOMA and display its own sub-masks at the travel agents' booking screens via START in an interactive mode unique among all interviewed tour operators in Germany (also Kuoni Fernreisen, 1994). This included 'active selling', i.e. the automatic display of alternatives if certain destinations were not available. These functions had been jointly developed by Kuoni Travel Limited and DCS, allowing an estimated 70% to 80% of FlexiPack's functions to be accessible on START. The FlexiPack masks were in fact similar to, though not as complex as, the ITOS masks as used by International Tourist Services Länderreisedienste GmbH (ITS) in-house and by ITS' owned travel agencies through direct access to ITOS.

Consequently, START, which had replaced much of its corporate videotex-based (Btx-based) network by ISDNs and Euro-ISDNs during the late 1980's and early 1990's, offered its customers, since early 1995, the Microsoft Windows-like graphic version of TOMA, called START Comfort. START and TUI, which formerly partly-owned START, were also planning to implement a graphic interface to START, called 'Touristische graphische Benutzeroberfläche' (TGBO), by mid 1996, which would replace both TOMA and the IRIS-Neu mask. Similarly, Club Med, DER-Tour, ITS, Kreuzer Touristik and LTU, all of which had developed flexible internal

booking masks, in most cases making (or planning to make) them available to their in-house travel agencies, were also aiming to display these booking masks on travel agents' screens via the national reservation systems in Germany.

During the first years after START became operational, START was only accessible via separate videotex terminals (DRV, 1992 and 1994b). About 24,000 T1-START terminals were still used in Germany in 1994. Since November 1988, START has also been offering PCs; however, without allowing the display of other CRSs on the same terminal/computer. Therefore, some travel agencies in Germany used separate START terminals/PCs in parallel to PCs for other systems such as ITOS, NURVIS and PROVIT. While START originally provided network services, reservation software (which included TOMA) and hardware such as terminals and PCs in one combined package, in most recent years tour operators and travel agents have been allowed to select only parts of this service (also Barth, 1994/95) as a response to the advent of, and competition from, the other reservation systems Robin / Merlin and StiNET. In addition, TUI decided to sell its stake in START in June 1996 partly so as to start using other national reservation systems such as StiNET (Niedecken, 1996).

In contrast to Germany, tour operators in Britain have always been able to develop their own viewdata reservation software, with Istel and Fastrak only providing the network services. While, in the past, most viewdata systems developed by tour operators and system suppliers have been mainly geared towards distributing standard 'mass-market' holiday packages, several tour operators have been implementing new viewdata systems to cope with the increased modularisation and individualisation of holiday products as part of their development of new tour operator systems and are, therefore, described at Level 1. Further new flexible viewdata systems include, for example, Kudos of Kuoni Travel Limited. Kuoni Travel completed a major upgrade of its reservation system in October 1994, increasing viewdata lines to 200 for both Fastrak and Istel and adding new functions to Kuoni Platform 2 and the viewdata system Kudos, which supplemented Kuoni Platform 2, such as a late-availability search and a special offers facility (TTG,



1994a). Virgin Holidays Limited was also developing a more flexible viewdata interface in May 1995. Previously, Virgin Holidays sold only single-centre and fixed-itinerary two-centre holidays; but with the new viewdata system, it planned to distribute up to eight-centre holidays automatically via the system. While especially smaller tour operators and travel agents have been reluctant, as yet, to replace viewdata given that only an estimated 50% - 60% of travel agencies in Britain were using PCs in their offices in October 1995 (TTG, 1995h and 1995j), Richer (1995b and 1996b), for example, argues that viewdata needs to be eventually replaced by more advanced communication forms or platforms such as EDI or the Internet to enable the distribution of more complex travel and tourism information and products; a concern shared in particular by major tour operators and travel agents in Britain (TTG, 1996b). At the end of 1996, both AT&T Istel and Imminus, for example, considered implementing 'intranets' on the Internet (Swindell, 1996).

*Forward vertical links between tour operator systems and global distribution systems (GDSs) for distributing package holidays are also increasingly being established (Kärcher, 1995b). The first automated link for any of the four GDSs was launched specifically for German tour operators by Galileo International in 1991, named TourMaster. SABRE introduced its Tourlink in 1993 (which was later renamed Tourguide), with Frosch Touristik GmbH being the first German tour operator to sell via it since November 1993. By December 1994, six German tour operators were using SABRE Tourlink, which were Frosch Touristik GmbH and its subsidiary CA Ferntouristik GmbH, ETO Tours GmbH, FERIA Internationale Reisen GmbH, ISTS Intercontinental Reisen GmbH and NUR Touristic GmbH. In February 1993, Galileo International launched its Leisure Shopper product, a more advanced version of TourMaster, in the USA and, in early 1995, in Europe. Subsequently, Amadeus and Worldspan have been offering direct links more recently. (In fact, the standardised booking masks of the four GDSs were similar to TOMA.) Table 6.20 shows the use, or intended use, of the GDSs by all interviewed tour operators, incidentally with no British tour operator using, or planning to use, this option at the time of the interviews.*

Tour Operator in Germany	Amadeus	Galileo International's TourMaster	SABRE's Tourlink	Worldspan
DER-Tour	P (mid 1996)			P (mid 1995)
Fischer Reisen GmbH		P (realised in September 1995)		
Frosch Touristik GmbH			✓ (via DCS' Robin since November 1993)	
Kreutzer Touristik GmbH, Germany			(realised via DCS' Robin in mid 1996)	
The LTU Group	P	P (realised in October 1995)	P	P
Nazar Holiday Reiseveranstaltung GmbH		✓		
NUR Touristic GmbH		✓	✓ (since December 1994)	
Olimar Flugreisen GmbH		✓	✓	
Schauinsland-Reisen GmbH		P (mid 1995)	P (mid 1995)	P (mid 1995)
Studiosus Reisen München GmbH	P	P		
Touristik Union International GmbH & Co. KG (TUI)	✓			
Unger Flugreisen GmbH		P		

'✓' means that the particular system was used by the corresponding tour operator at the time of the interview.  
 'P' means that the corresponding tour operator planned the introduction of the particular system within 12 months of the interview. More specific times for the adoption of the GDS are stated in brackets and updated from industry sources.

According to data supplied by SABRE, Tourlink was used in January 1996 in addition by Attika Reisen AG, Germany, Cosmosair PLC, England, Fischer Reisen GmbH, Germany, and Schauinsland-Reisen GmbH, Germany, while Studiosus Reisen München GmbH, Germany, planned to use it.

**Table 6.20**  
**GDS Use for Distributing Holiday Packages**

These new on-line links between tour operator systems and GDSs and, to some extent, consumer trading platforms (described below) allow tour operators to sell their products especially internationally, and indeed globally (Table 6.21). In addition, these links enable customers to change their travel itineraries while abroad by accessing the GDSs, thus also catering for these individual demands.

Tour Operator	International Sale via GDSs
Club Méditerranée S.A. (Club Med), France	Club Med, which sold holidays on Esterel in France, offered packages on SABRE in the USA and via SABRE on the Internet worldwide, though predominantly in the USA.
DER-Tour, Germany	The international distribution of DER-Tour's holiday packages was planned by linking Phoenix to the GDSs Amadeus and Worldspan.
NUR Touristic GmbH, Germany	NUR Touristic planned the international, and ultimately global, distribution of holidays, having linked NURVIS to Galileo International and SABRE.
Olimar Flugreisen GmbH, Germany	Olimar Flugreisen was selling holiday packages via the GDSs in Austria.
Studiosus Reisen München GmbH, Germany	Studiosus Reisen, which already sold holidays in Austria and Switzerland, planned to increase this sale with links to the GDSs.
Unger Flugreisen GmbH, Germany	Unger Flugreisen, which previously sold most of its packages in Berlin, planned to expand its distribution into Germany's Neue Länder and Poland.

**Table 6.21**  
International Sale via GDSs

Especially as a consequence of (planned) international sale, continuous operation and availability of their systems has become crucial for some tour operators. In the past, START as well as almost all tour operator systems in Britain and Germany were closed during the night for a number of hours, while only some systems of mainly travel and tourism principals such as British Airways, Deutsche Lufthansa and Deutsche Bahn remained operational for 24 hours. As part of the new system strategies, some tour operators such as DER-Tour were also making their systems become available round-the-clock throughout the year.

In contrast to the less automated payment processes of travel and tourism principals, most of the payment processes with travel agents had been automated for a number of years. In Britain, payments were typically processed by automated (monthly) bank transfers (often via pools) with large travel agent chains, or by (weekly or monthly) direct debits with small travel agencies (for example using BACS / Banks Automated Clearing Service). In Germany, most payments between tour operators and travel agents were settled by direct debits, either as 'Direktinkasso' or 'Reisebüroinkasso'. 'Reisebüroinkasso' (or 'Indirektinkasso'), which TUI solely used until 1 November

1994, involved the travel agents accepting full payments from consumers, with TUI claiming the monies by direct debits from travel agents, usually 21 days before departure. In contrast, 'Direktinkasso', which was favoured by tour operators such as NUR Touristic and ITS, involved the travel agents accepting only a (10%) deposit from consumers, with the final payments being directly settled between tour operators and consumers. 'Direktinkasso' benefitted tour operators by improving cash flow, and payment was secured even in the event of a travel agent going bankrupt, whereas the method of 'Reisebüroinkasso' involved less administrative effort.

As a further development with regards to distribution activities to both travel agents and final consumers, marketing, advertising and information distributing activities are being automated, replacing in particular mass-mailings by fax (and, though very rarely, telex) to travel agents, and by standard letters to travel agents and consumers. The electronification and automatisisation of these activities can give cost savings and increase flexibility in distribution activities, especially by reducing the time-span for the delivery of product information (Blois, 1987). For example, customers can, by law, return their holiday packages if they are not informed, at the time of the booking, about crucial aspects of the holiday components, such as a repair of a swimming pool or high noise levels. While in the past, when such changes occurred, up-date information had to be posted to travel agents manually, new tour operator systems such as ITS' ITOS contained 'blinking' fields within their booking masks which travel agents could select to reveal the relevant up-date information. Further developments of electronification and automatisisation include (for additional information see BIX, 1995):

- **Audiotex and fax-polling:** START Telematik GmbH operated in Germany the 'Reise-Fon', an audiotex system which was linked to START, allowing travel agents and consumers to access last-minute information on holiday packages. Moreover, the LTU Group used the audiotex service Line-EDInet of Stinnes-data-Service GmbH. The LTU Group was able to deposit documents such as holiday information, mainly for advertising purposes, on local servers, which travel agents and customers could dial-up by telephone, with the documents being sent to them by automated fax. TUI has also been operating automated telephone numbers for last-minute trips since 1994.
- **CD-ROMs:** Meier's Weltreisen GmbH (part of the LTU Group) launched a CD-ROM for its Asia programme in April 1995, and TUI planned to produce CD-ROMs together with Reise Quelle GmbH in 1995. In May 1995, Thomas Cook acquired a stake in the CD-ROM software company Leisureplan, South Africa (Noakes, 1996b); and in mid 1995, The Virgin Travel Group set-up the software and CD-ROM company New Media Solutions, which also co-operated with First Choice Holidays PLC. Inspirations PLC also considered the introduction of CD-ROMs to reduce costs for brochure production and advertising. (For general CD-ROM and electronic product catalogue strategies see Rudin, 1993.)
- **On-line databases:** In 1994, Infox System GmbH, Bonn, was Germany's leading distributor of hardcopy update information to travel agencies in terms of number of customers, distributing items such as leaflets about promotional or special offers, amendments to catalogues or any other information. (ABC Travel-Link of ABC Promotional Marketing Services PLC, Abingdon / Oxfordshire, was the British equivalent to Infox System GmbH, delivering documents to travel addresses in the United Kingdom, also referred to as the 'Travel Industry Distribution Club'.) Each Wednesday, tour operators and other organisations supplied Infox with hardback copies of the information to be distributed, or transmitted the information via ISDN lines directly to Infox where it was printed. (In fact, this weekly advertising cycle determined the production processes of tour operators such as NUR Touristic GmbH, which scheduled their production from Wednesday to Wednesday each week.) Infox then distributed these leaflets to

approximately 17,000 travel agencies in Germany by Friday of each week. (In addition, Infox had a co-operation with InfoPost in Belgium, Luxembourg, The Netherlands and the USA regarding international distribution of information.) In 1993, Infox System GmbH and DCS formed, and co-owned, Infox Electronic Datasystems GmbH, Hamburg. Since August 1993, Infox Electronic Datasystems and DCS have been operating the on-line database Elektronik Infox, which stored last-minute tour operator packages and was accessible via Merlin, START, SABRE and 'Selbstbedienungs-'('SB', i.e. self-service)-Terminals, thus supporting last-minute advertising without the need to produce, and distribute, hardcopy information. Furthermore, START Telematik GmbH operated the on-line database START-Info-Datenbank, which was linked to START and contained last-minute packages.

- Television channels: Thomas Cook has handled the bookings on behalf of Sky Television as part of its cable and satellite Sky Travel Channel since the channel was launched in October 1994. While the bookings were initially handled by telephone and standard mail, an audiotex system was introduced in early 1995. Other companies on television channels included First Choice Holidays & Flights Limited on Travel TV, and Transair Flugreisen GmbH (part of the LTU Group) on RTL Tele-Reisen. (For general video strategies of tour operators see Hanefors and Larsson, 1993; also Riley and Van Doren, 1992.)

- Teletex: Several of the interviewed tour operators were displaying offers using teletex, or videotex (Peymani, 1996; Reichel, 1994), services, as indicated in Table 6.22. The company Teletext, which provided the teletex services for the two British television networks ITV (Independent Television) and Channel 4 (Jolley, 1994b), was also planning to implement an interactive booking service in the future (TTG, 1995e).

Tour Operator	Use of Teletex for Marketing
The Air Travel Group Holidays Limited, England	on ITV Teletext
Airtours PLC, England	ITV Teletext has been used by Late Escapes since early 1994; Late Escapes Limited, a telesales specialist, was taken over by Airtours in October 1994
First Choice Holidays & Flights Limited, England	on ITV Teletext since May 1995
Hotelplan International Travel Organisation Limited (Inghams Travel), England	ITV Teletext was considered for the future.
Inspirations PLC, England	initially, ITV Teletext was used indirectly; in July 1995, Inspirations acquired telesales specialist Orchid Travel
Jetsave Travel Limited, England	ITV Teletext was used occasionally.
The LTU Group, Germany	on SAT.1-Text since May 1995 (FVW International, 1995d)
Manos (UK) Limited, England	on ITV Teletext
Meon Travel Limited, England	Meon Travel was experimenting with ITV Teletext for late offers.
Panorama Holiday Group Limited, England	ITV Teletext was used in the past, but regarded as too expensive.
The Thomas Cook Group Limited, England	on ITV Teletext since mid 1995
Thomson Tour Operations Limited, England	on ITV Teletext since early 1994; Lunn Poly on ITV Teletext since mid 1995; Thomson opened its first dedicated Lunn Poly Telephone Booking Centre in Coventry in July 1994, aimed specifically at direct sale using Teletext

**Table 6.22**  
**Teletex Use for Marketing Purposes**

Until the early 1980's, many package holidays were sold by direct sale, predominantly by telephone and, especially in Germany, by mail-order (Lundberg, 1980, pp. 118, 124). In fact, NUR Touristic GmbH was founded in 1963 as a division of the mail-order company Neckermann Versand KG, selling initially only directly. With the expansion of the package holiday business and the introduction of videotex / viewdata systems during the late 1970's and early 1980's, the balance shifted toward a dominance in sale via the travel trade (Price, 1988). In Britain in 1994, about 90% of all holiday packages were sold through travel agents (Mintel, 1994b, p. 14; also National Westminster Bank, 1988, p. 1). Similarly, in Germany, several tour operators were arguing that for 'political' reasons they did not want to have a high percentage of direct sale since, otherwise, travel agents would not rack their brochures and sell their packages. Therefore, these tour operators usually sold directly only to some repeat customers and to those customers who deliberately by-passed travel agents through directly contacting the tour operators by telephone or mail.

However, a larger percentage of outgoing and especially long-haul holidays, which tended to be more expensive and individually tailored, was sold directly to consumers. In Britain in 1994, for example, only about 60% - 80% of long-haul holidays were sold via travel agents (Mintel, 1994c, p. 17). In Table 6.23, the percentage figures for direct sale and sale via travel agents for each of the interviewed tour operators are listed. (Moreover, most tour operators owned and operated at least a small number of travel agent outlets so as to 'indirectly' conduct 'direct sale' without offending other travel agents.)



Tour Operator	Estimated Percentage of Direct Sale <sup>1</sup>	Estimated Percentage of Sale via Travel Agents
Wikinger Reisen GmbH, Germany	50%	50%
Meon Travel Limited, England	30%	70%
Attika Reisen AG, Germany	< 30%	> 70%
Hetzel-Reisen GmbH & Co. KG, Germany	< 30%	> 70%
Nazar Holiday Reiseveranstaltung GmbH, Germany	< 30%	> 70%
Schauinsland-Reisen GmbH, Germany	< 30%	> 70%
Thomas Cook Holidays, England	< 30% (but increasing)	> 70%
Unger Flugreisen GmbH, Germany	< 30%	> 70%
Thomson Tour Operations Limited, England	20% - 25%	75% - 80%
The Air Travel Group Holidays Limited, England	< 20%	> 80%
Alltours Flugreisen GmbH, Germany	< 20%	> 80%
Berliner Flug Ring GmbH (BFR), Germany	< 20% (planned to increase)	> 80%
Bridge Travel Group, England	< 20%	> 80%
Fischer Reisen GmbH, Germany	< 20%	> 80%
Frosch Touristik GmbH, Germany	< 20%	> 80%
Hapag-Lloyd Tours GmbH, Germany	< 20%	> 80% (including 70% reader holidays)
The LTU Group, Germany	< 20%	> 80%
NUR Touristic GmbH, Germany	< 20% (planned to increase)	> 80%
Olimar Flugreisen GmbH, Germany	< 20%	> 80%
Phoenix Reisen GmbH, Germany	< 20%	> 80%
Touristik Union International GmbH & Co. KG (TUI), Germany	< 20%	> 80%
British Airways Holidays Limited, England	15%	85%
Inspirations PLC, England	< 15%	> 85%
Hotelplan International Travel Organisation Limited (Inghams Travel), England	10%	90%
Manos (UK) Limited, England	10%	90%
Panorama Holiday Group Limited, England	< 10%	> 90%
Virgin Holidays Limited, England	6%	94%
Ikarus Tours GmbH, Germany	5%	95%
First Choice Holidays & Flights Limited, England	< 5% (100% of Eclipse brand)	> 95%
Unijet Travel Limited, England	< 5%	> 95%
Iberotravel Limited, England	< 5%	> 95%
Studiosus Reisen München GmbH, Germany	< 3%	> 97%
Feria Internationale Reisen GmbH, Germany	< 1%	> 99%
Airtours Holidays Limited, England	0% (however, indirectly via Late Escapes; Airtours Flights and Eurosites also sold directly)	100%
Club Méditerranée Deutschland GmbH, Germany	0%	100%
Delphin Seereisen GmbH, Germany	0%	100% (including other tour operators)
DER-Tour, Germany	0%	100%

Tour Operator	Direct Sale <sup>1</sup>	Sale via Travel Agents
International Tourist Services Länderreisedienste GmbH (ITS), Germany	0% (planned for 1995)	100%
Jetsave Travel Limited, England	0%	100%
Kreutzer Touristik GmbH, Germany	0%	100%
Kuoni Fernreisen GmbH, Germany	0%	100%
Reisebüro Jäger GmbH, Germany	0%	100%

<sup>1</sup>Listed in decreasing order.

Gesellschaft für internationale Begegnung und Cooperation mbH (GeBeCo), Germany, and Klingenstein & Partner Studienreisen, Germany, did not state any figures.

**Table 6.23**

**Percentages of Direct Sale Versus Sale via Travel Agents**

With the implementation of new system strategies by some tour operators deliberately aimed at direct sale, the overall percentage of direct sale is likely to increase, at least slightly, in the future. The interviewed tour operators regarded direct sale particularly useful for the sale of last-minute holidays, which accounted for approximately 8% of all holiday sales in Germany and 15% in Britain in 1995. Most of all, these new system strategies included forward vertical links between tour operator systems and electronic consumer trading platforms, and between tour operator systems and other on-line direct booking systems. The main electronic consumer trading platforms, or public data networks (PDNs) (White, 1994b), as used by tour operators in Britain and Germany were the Internet's World Wide Web (WWW), CompuServe, Microsoft Network (MSN) and Datex-J / T-Online (formerly Bildschirmtext / Btx). While these platforms are described in Appendix 1, Table 6.24 lists further key examples of the interviewed tour operators and other major travel and tourism organisations which were using the World Wide Web, CompuServe and Microsoft Network, mainly for advertising purposes, but increasingly also for bookings (also Hälker and Neumann, 1996). Furthermore, several tour operators in Germany including the LTU Group and TUI were using the Reise-Shop on Datex-J (Appendix 1), and Tourimus Info Internet (TII) on the World Wide Web (Appendix 1), which were linked to START and operated by START Telematik GmbH.

Interviewed Travel and Tourism Group	Tour Operator (Subsidiary or Brand) on The Internet's World Wide Web (WWW) <sup>1</sup>	Compu Serve	Microsoft Network (MSN)
Airtours PLC, England	<ul style="list-style-type: none"> <li>Late Escapes Limited since August 1995</li> </ul>		
British Airways PLC, England	<ul style="list-style-type: none"> <li>airline British Airways since August 1995, being the third UK airline on the Internet; the service was initially aimed at business travellers only, but, since February 1996, also accessible by the general public (since mid 1995, also linked to a trial home system by Galileo International in the USA together with USAir Group Inc.)</li> </ul>	since mid 1995	
Club Méditerranée S.A. (Club Med), France	<ul style="list-style-type: none"> <li>Club Méditerranée Inc., USA, since the end of 1994 (address "www.cts.com:80 /~vacation", a site operated by All-Inclusive Vacations, an on-line sub-division of Travel Network / Miles of Travel, San Diego, USA, in partnership with Club Med; Travel Network Organisation had &gt; 100 franchised travel agencies in the USA)</li> </ul>		since August 1995
Dial Corporation, USA	<ul style="list-style-type: none"> <li>Crystal Holidays Limited since July 1995 (via I.T.S.)</li> <li>trail-phase by Jetsave Travel Limited in mid 1995</li> </ul>		
First Choice Holidays PLC, England	<ul style="list-style-type: none"> <li>First Choice Holidays &amp; Flights Limited with brand 2wenty5 since 21 June 1995 (via I.T.S.; address "http://www.its.net/firstchoice/")</li> <li>Signature Vacations Inc., Canada, since early 1995</li> </ul>		
Iberotravel Limited, England	<ul style="list-style-type: none"> <li>brand Sunworld Sailing (formerly Sovereign Sailing) since August 1995 (via I.T.S.)</li> </ul>		
The LTU Group, Germany	<ul style="list-style-type: none"> <li>LTU airline since October 1995 (addresses "http://www.ltu.com/ltu" and "http://www.ltu.de")</li> <li>planned for tour operators</li> </ul>		
NUR Touristic GmbH, Germany	<ul style="list-style-type: none"> <li>indirectly via Karstadt and Neckermann travel agencies' Internet shopping mall My-World since 28 October 1996</li> </ul>		
The Thomas Cook Group Limited, England	<ul style="list-style-type: none"> <li>brand Thomas Cook Direct since May 1995; fully on Internet since October 1995 (address "http://www.thomascook.com/")</li> </ul>		since August 1995
The Thomson Travel Group, England	<ul style="list-style-type: none"> <li>direct-selling Portland Holidays Limited since January 1996 (address "http://www.thomson.co.uk")</li> </ul>		
Virgin Travel Group, England	<ul style="list-style-type: none"> <li>Virgin Atlantic Airways Limited since April 1995, being the first UK airline on the Internet (address "http://www.fly.virgin.com/atlantic/" and via Aeronet, Appendix 1)</li> </ul>		

Type of Companies	Major Travel and Tourism Companies on the World Wide Web (Internet) (not interviewed and not listed in Appendix 1)
Scheduled Airlines	<ul style="list-style-type: none"> <li>• Air France S.A. (address "http://www.airfrance.fr")</li> <li>• Air UK Group Limited since August 1995 (being the second UK airline on the Internet; address "http://www.airuk.co.uk")</li> <li>• All Nippon Airways &amp; Co. Limited (ANA) (also with direct links to Japanese home user networks)</li> <li>• American Airlines Inc. (address "http://www.amr-corp.com")</li> <li>• British Midland Airways Limited (BM) with CyberSeat since 11 December 1995 (claimed to be the world's first airline reservations and payment service on the Internet; address "http://iflybritishmidland.com")</li> <li>• Condor Flugdienst GmbH (address "http://www.condor.de")</li> <li>• Deutsche Lufthansa AG (address "http://www.lufthansa.co.uk")</li> <li>• Eurowings Luftverkehrs AG (address "http://www.eurowings.de")</li> <li>• Japan Airlines (JAL) (address "http://www.spin-ad.jp/jal/index"; also with direct links to Japanese home user networks)</li> <li>• KLM Royal Dutch Airlines (address "http://www.klm.nl")</li> <li>• Northwest Airlines Inc.</li> <li>• United Airlines Inc. (in addition to the WWW site, its booking and reservation system United Connection was directly linked to CompuServe and Microsoft Network and was scheduled to link to the Internet in 1996 to allow bookings)</li> </ul>
Consolidators	<ul style="list-style-type: none"> <li>• AFB Travel and Leisure Group PLC (via I.T.S.)</li> </ul>
Hotel Operators	<ul style="list-style-type: none"> <li>• Best Western International Inc. (address "http://www.bestwestern.com/best.html")</li> <li>• Choice Hotels International (address "http://www.hotelchoice.com")</li> <li>• Forte PLC since November 1995</li> <li>• Hilton Hotels Corporation with 'Internet Concierge' (address "http://www.hilton.com")</li> <li>• Hilton International Company since June 1995</li> <li>• Holiday Inn Worldwide (first major hotel group in the world to take bookings on the Internet using coded messages)</li> <li>• Leading Hotels of the World (address "http://www.interactive.line.com/lead")</li> </ul>
Car Rental Companies	<ul style="list-style-type: none"> <li>• Avis Rent A Car's software subsidiary Wizcom since August 1995</li> <li>• Alamo Rent-A-Car since early 1995</li> <li>• EuroDollar since July 1994 (as the first UK car rental company)</li> </ul>
Cruise Ship Operators	<ul style="list-style-type: none"> <li>• Carnival Cruise Lines (address "http://market.net/travel/tc/cruises/ccl/index.html")</li> </ul>
Others	<ul style="list-style-type: none"> <li>• Amadeus' System One in the USA with Amadeus OneLink since May 1995; Amadeus itself since mid 1996 (address "http://www.amadeus.net")</li> <li>• European Travel Commission (ETC) (address "http://www.go-europe.com")</li> <li>• European Passenger Services (EPS) (address "http://www.eurostar.com/eurostar")</li> <li>• ITV's Teletext (to launch in May 1996)</li> <li>• New Prestel (also on Microsoft Network)</li> <li>• Rosenbluth International's tour operator Rosenbluth Vacations</li> <li>• SABRE since September 1995 in the USA and since November 1995 in Europe (launched worldwide electronic home shopping mall The Travelocity in March 1996, thus replacing Eeasy SABRE)</li> <li>• START (address "http://www.start.de")</li> <li>• Worldspan with TravelLatitudes since April 1996</li> </ul>

<sup>1</sup> Internet Travel Services Limited (I.T.S.), Altrincham/Cheshire, England, launched a late-availability holidays and flights service on the Internet in October 1995, with customers clicking on a map of their home area which then displayed partner travel agents, who handled the bookings via viewdata.

**Table 6.24**

**Tour Operators and Other Major Travel and Tourism Companies  
Using the Internet's World Wide Web, CompuServe and Microsoft Network**

Table 6.25 lists total numbers of travel and tourism organisations displaying offers on the World Wide Web in 1995 and 1996.

Type of Travel and Tourism Companies Using the World Wide Web (WWW)	Worldwide Users in March 1996	Worldwide Users in December 1995	Worldwide Users in June 1995
Tour Operators	290	285	166
Travel Agents	374	267	192
Airlines	128	68	46
Accommodation Enterprises	290	229	145
Car Rental Companies	36	23	12
<b>Total</b>	<b>1,118</b>	<b>872</b>	<b>561</b>

Sources: TTG, 1996a and 1996c.

**Table 6.25**

**Travel and Tourism Companies on the World Wide Web (WWW)**

Thomas Cook, for example, launched its services on the Microsoft Network in August 1995, which were particularly aimed at the independent travellers market. Consumers could directly access, via PCs, a multi-media database, which contained information on more than 50,000 hotels, resorts and attractions worldwide (Jolley, 1995e). Maps of regions, areas and towns were to be displayed in the near future, with video footage, electronic guidebooks and a route-planning service set to follow. It was planned to allow consumers to directly book travel and tourism components and holiday packages in more than 100 countries worldwide, in which Thomas Cook was represented locally, thus avoiding legal and other problems of cross-border ticketing and, therefore, making Thomas Cook what could be regarded as the first 'truly' global leisure travel agency.

Finally, tour operator systems are being linked to other on-line booking systems, most of all:

- Interactive home shopping systems: Thomas Cook was a partner in British Telecom PLC's home-shopping system trial, BT Interactive TV, in England during early 1996 (Appendix 1), operating a system called Travel Box.
- Interactive television channels: As part of Sky Travel Channel, Thomas Cook planned a fully interactive text system for the future with customers accessing Thomas Cook's database on a 'pay-as-you-view' basis, i.e. being charged on the time spent accessing Thomas Cook's database.
- Self-service booking kiosks: The main examples are listed in Table 6.26.

Operator	Name of Kiosk	Description
LTU Touristik GmbH & Co. Betriebs KG and Meier's Weltreisen GmbH, Germany	LTU's Reisemulti	LTU's Reisemulti was developed by the system company Ractech. The system started its test operation in autumn 1995 and its multimedia test operation in September 1996, including interfaces to START and TUI's IRIS, with TUI being a partner in the project (Appendix 1).
START Telematik GmbH, Germany	START SB-Terminals, START Automaten	START operated 'Selbstbedienungs' ('SB'; i.e. self-service)-Terminals with touch screens for information functions only and, since July 1994, 'Automaten' (kiosks) with information and booking functions.
The Thomas Cook Group Limited, England	Thomas Cook Travel Kiosks	In May 1994, Thomas Cook installed a self-service, screen-based holiday booking kiosk at its Marble Arch branch in London, claiming the system to be the first of its kind (Appendix 1). The system was linked on-line, including a video link, to Thomas Cook's headquarters in Peterborough. An up-graded version of the first kiosk, called Touch, based on Olivetti hardware (Freeman, 1995), was also tested at two locations in Putney and Cheapside in London in the latter half of 1995, followed by further kiosks at three National Westminster Bank branches in Ealing/London, Maidstone and Kingston upon Thames, with several hundred kiosks being planned worldwide, in particular in Germany and Australia. In 1995, Thomas Cook also signed a deal with Philips Media B.V., The Netherlands, and Thomas Cook's partly-owned subsidiary Leisureplan to further develop the travel kiosks including on-line links to the GDSs and the Internet. In Germany, Thomas Cook Reisebüro GmbH operated stand-alone multimedia kiosks at airports, called Thomas Cook Infobox.
West Midlands Co-op, England	/	The West Midlands Co-op travel agent chain opened in 1995 so-called Holiday Hypermarkets, which included touch-screen terminals.

**Table 6.26**  
**Self-Service Booking Kiosks**

### 6.5.3 Horizontal Links to Competitors' Tour Operator Systems

Both in Britain and Germany, tour operators used separate viewdata or START terminals to test the performance of their own booking systems as well as to monitor competition. While destination agencies checked especially the performance of accommodation providers, catering enterprises and entertainment suppliers, they collected in addition intelligence data on competitors by observing, for example, which tour operators used which hotels, how full those hotels were and how much customers paid. Similarly, regional and district managers, working at the regional booking centres, observed not only the performance of travel agents, but in addition collected intelligence data on competitors. While many of these activities typically involved the manual collection of intelligence data on competitors, ranging from observations, interviews, estimations and consultations of 'any other sources', tour operators are increasingly implementing new systems to automate such activities.

*New System Strategies:* One of the three main folders of NUR Touristic GmbH's travel agent system REMI, which was completed in 1994, contained market intelligence information on almost all travel agents in Germany (basically who sells what how often). NUR Touristic GmbH claimed that this system strategically prepared the company well for the liberalisation phase in Germany, knowing for example existing alliances between tour operators and travel agents and being able to commit 1,600 travel agents from larger chains and 1,900 independent travel agencies to new contracts immediately after 1 November 1994. In addition, a pilot project was started at the end of 1994, giving the 35 district managers within the six regional reservation centres in Germany laptops. These laptops could be used to display market intelligence data to travel agents, showing them, for example, what their competitors within their region sell, and to input any new data and print contracts immediately while visiting travel agents. Afterwards, any new data was down-loaded from the laptops onto the LAN and a local server at the regional centres and, at least once per week, down-loaded from the server onto NUR Touristic's mainframes. These systems were supplemented by a dialogue marketing system containing

addresses and information on consumers, and a reward system for employees of travel agents. A similar system to REMI was also planned for 1995/1996 for destination agencies to collect market intelligence data on suppliers.

Similarly, since the middle of 1994, Airtours has been operating a software, called 'Search & Match', which automatically monitored the sales of travel agents and scanned other tour operator systems for prices. During the late booking season, Airtours changed the prices of its holiday packages several times a day, in contrast to Thomson and First Choice Holidays, which changed their prices only during the night (Skapinker, 1994a). Airtours indeed argued that the Search & Match system enabled the company to conduct more market-driven selling activities.

While in the past automatic scanning of competitors' holiday prices was not conducted in Britain and Germany, price polling systems such as Airtours' Search & Match are increasingly being implemented (TTG, 1994b) as a consequence of increased competition and a move towards more customer-orientation (away from supplier-orientation). Several of the first price polling systems were introduced by business travel agents, such as Thomas Cook Travel Management with its System 4 in 1994 (BTW, 1994), since business travel agents tended to be customer-orientated, wanting to offer business clients the best possible prices. More recently in the package holiday business, Imminus launched the polling system Talking Windows in 1995 (TTG, 1995k), and the system company ICC Travel Systems issued the viewdata software Tardis in May 1995, which allowed travel agents to compare tour operators' offers instantly.

In May 1996, Avro PLC (part of the Globus Group) started to use the system Orbit to scan prices of seat-only offers. Also in May 1996, AT&T Istel launched its viewdata polling system Atlas for late-bookings, updating the information every 30 - 60 minutes (Jolley, 1996a). While Atlas was opposed by the largest three tour operators Airtours, First Choice Holidays and Thomson, it was supported by about 20 tour



operators including Flying Colours Leisure Group, Inspirations PLC, Kuoni Travel Limited, Manos (UK) Limited, and Unijet Group PLC.

In Germany, the consumers' association Stiftung Warentest has been offering a polling service since 1994/1995, scanning on behalf of consumers over 100 stored catalogues for the cheapest offers for certain destinations and departure times. Other last-minute polling systems have also been implemented more recently on START and StiNET.

## 6.6 Level 5 System Strategies: The Linking of Systems within the Industry

*New System Strategies:* Some tour operators are planning, or indeed starting, to implement on-line program-to-program links between their tour operator systems and new destination information, reservation and booking systems in the travel and tourism industry, which are predominantly aimed at the independent travellers' market, such as GermanSoft, CitySoft, Euro-START (formerly EuroSoft), TIM, SAM (including MNET and MAT) and SAMSON (Appendix 4). Thomas Cook, for example, was a partner in the projects TIM (Mingay, 1994), MNET and SAMSON; DER-Tour was a partner in SAMSON; and several tour operators, most of all TUI, were partners in Euro-START. In fact, it could be argued that these tour operators were supporting the development of these new industry-wide systems as an extension of their own system strategies.

Overall, regarding Levels 1 to 5, tour operators have been developing electronic links to a wide variety of information, communication, reservation and booking systems in the travel and tourism industry and have been integrating internal (both back-office and front-office) and external systems. Some tour operators have especially been realising a supply chain management (SCM) (Mertens, 1995a), which is supported along the whole chain by new information and communication technologies, with the final aim of supporting all their business and trading relationships electronically, thus increasing speed, response times and flexibility, while improving accuracy and reducing the time-span for booking, reservation and confirmation processes. NUR Touristic GmbH, for example, had a 'rapid response team' of about three programmers who claimed to be able to develop an interface for NURVIS to almost any external network or system within three to four days; and DER-Tour was possibly the most advanced of the interviewed tour operators by having almost no more manual interfaces.

## **Chapter 7. Consequences of the New System Strategies for the Structure of the Package Holiday Business**

### **7.1 Introduction**

The new system strategies of tour operators, as outlined in Chapter 6, are having, or are likely to have, a number of important consequences for tour operators themselves (Level 1), their groups (Level 2) and their partnerships (Level 3) as well as for the structure of the tour operator business (Level 4) and the travel and tourism industry in general (Level 5). The new system strategies, as part of new co-ordination strategies, are enabling tour operators to implement a number of key positioning strategies.

The following main positioning strategies and developments, which are, or are likely to be, direct consequences of the development and realisation of the new system strategies of tour operators, are discussed in this chapter:

- Level 1: Strategy of low cost
- Level 1: Strategy of increased product range / product innovation / in-house diversification into existing and new product markets, including developments in the package holiday, independent and business travel sectors
- Level 2: Strategy of horizontal integration (and external diversification within the package holiday business), including developments in the outgoing and incoming tour operator sectors
- Level 3: Strategy of forward vertical co-operation with travel agents
- Level 3: Strategy of forward vertical co-operation with customers
- Level 4: Strengthening of the (horizontal) position in the business / reduced competition
- Level 4: Strengthening of the (vertical) position in the business / reduction of the threat of disintermediation
- Level 5: Developments in the airline sector
- Level 5: Developments in the accommodation sector

- Level 5: Developments in the tour operator and travel agent sectors.

These strategies and developments were identified from the interview data and literature, using the proposed theoretical framework (especially Figure 3.6) as the underlying analytical tool and structure. Examples of tour operators which implement these positioning strategies are listed; however, these are not comprehensive lists due to the complexity of these developments. Instead, the examples indicate and underline the general trends. Obviously, certain strategies are correlated. For example, a low cost strategy of each subsidiary of a tour operator (Level 1) also leads to a low cost strategy for the whole tour operator group (Level 2). However, in those cases, the relevant strategies are only discussed at those levels where the main developments are taking place.

## 7.2 Level 1 Consequences

At Level 1, the interviewed tour operators are aiming to achieve especially the two strategies of low cost and increased product range (in-house diversification / product innovation) with the implementation of the new system strategies.

*Strategy of low cost:* After depreciating, or off-setting, the costs of the development, installation, maintenance and operation of the new systems (including links to other systems), the tour operators are aiming to lower the relative cost of the production and distribution of their existing holiday packages, to keep costs low for the production and distribution of new complex individually tailored holidays and, eventually, to realise economies of scale (also Wildemann, 1995). Previously manually handled activities, such as the assembly of packages (Level 1), the production of catalogues (Level 1) and the communication with subsidiaries and sister companies (Level 2), partner companies (Level 3) and external suppliers and buyers (Level 4 and Level 5), are being automated with the realisation of the new systems. While examples of this low cost strategy are mentioned in Chapter 6, further examples are listed in the following:

- Club Med increased its annual profits by over 70% in 1994/1995, claiming that much of this rise was due to the implementation of technology and related marketing strategies (TTG, 1995g).
- DER-Tour / Deutsches Reisebüro GmbH and Kuoni Reisen Holding AG, among others, aimed to reduce costs for each subsidiary worldwide by linking them to give them access to centralised databases, thus replacing the need to operate and maintain multiple databases and, instead, achieving economies of scale. These links are also intended to reduce costs incurred in the coordination of the subsidiaries' activities.
- DER-Tour / Deutsches Reisebüro GmbH and TUI claimed that the new systems enabled them to flatten their management hierarchies, thus saving personnel cost and increasing overall management efficiency.

- First Choice Holidays PLC made 260 staff redundant in December 1994 as part of a general restructuring programme, with further redundancies planned. Several of these redundancies were directly linked to the implementation of the new systems. For example, staff in the database department was reduced from 18 to 6 due to direct data connections replacing the need to re-key information into the systems. The contracts liaison staff was also to be reduced from 16 to 4 or 5, once Merlin was operational, thus automating contracting activities. First Choice also claimed that it would need 300 more staff in the reservations department if it did not have any automated sales.
- ITS spent about DM 3 million per year for postage of, for example, trip confirmations and invoices alone, which was to be reduced with the introduction of ITOS, allowing printing of confirmations at the travel agencies and automatic processing of invoices.
- Each of the five LTU tour operators aimed to achieve cost savings through synergies by sharing one system, rather than each developing, implementing, operating and maintaining a separate system.
- NUR Touristic GmbH argued that, since 1988, when the information technology department was set-up, the company has employed approximately 50 additional staff, but has increased its turnover 2 ½ times due to extensive automation and reduction of costs. With the planned introduction of desktop publishing software for the catalogue production, NUR Touristic estimated that it could save between DM 800 and DM 1,000 per catalogue page, resulting in total savings of about DM 7 million a year (about 20% of the total catalogue production expenses).
- The Thomas Cook Group Limited shed in excess of one hundred jobs at the end of 1994, with several of these redundancies having been directly linked to the introduction of the new systems.

*Strategy of increased product range / product innovation:* Underlying this positioning strategy of in-house diversification into existing and new product markets is in particular the implementation of modular data structures as part of the new system strategies (Section 6.1). Instead of storing holiday packages as blocks of information, the packages are 'unbundled' and each travel and tourism component is stored individually. Further components are also added, such as pictures and information about destinations, which are used in catalogues and on-line display to provide consumers with additional information services.

The main travel and tourism components, or holiday components, which are offered by tour operators, are classified here as transportation, accommodation, catering, leisure and business, additional service, and destination (or, more general, nature and environment) components (Table 7.1). Business components are included to indicate similarities between the leisure and the business sectors, which may increasingly become blurred as discussed at Level 5. Tour operators can provide some protection or preservation of nature and the environment, therefore actively shaping these components. Given an increased awareness of environmental issues worldwide, some tour operators have responded to this trend by incorporating 'green' components into their products. The LTU Group, for example, transported waste back to Germany from the Maldives by plane; Club Med employed underwater gardeners at coral reefs in the Pacific; and Hotelplan has been employing a full-time ecologist since 1992. Another example is the purchase of acres of the Brazilian rain forest, which was included in the price of round trips in Brazil as offered by some specialist tour operators, to assist in its preservation.

Main Travel and Tourism Components	Examples of Main Product Specifications or Descriptions	Examples of Further Product Specifications or Descriptions		
		Location <sup>1</sup>	Quality, Standard and Comfort <sup>2</sup>	Special Facilities and Further Aspects <sup>3</sup>
<b>Transportation Components</b>	<ul style="list-style-type: none"> <li>planes, ships, boats, trains, buses, cars</li> </ul>	<ul style="list-style-type: none"> <li>airports, ports, stations, pick-up points, drop-off points</li> </ul>	<ul style="list-style-type: none"> <li>economy, business, first class</li> <li>convenience of trip, e.g. number of stop-overs, duration of trip</li> </ul>	<ul style="list-style-type: none"> <li>window seats, smoking and non-smoking sections, separate check-ins, lounge access</li> </ul>
<b>Accommodation Components</b>	<ul style="list-style-type: none"> <li>hotels, apartments, villas, resorts or clubs, cottages, farm houses, caravans, cabins</li> </ul>	<ul style="list-style-type: none"> <li>quiet, busy surroundings</li> </ul>	<ul style="list-style-type: none"> <li>2-star to 5-star</li> <li>budget, mid-priced, upscale, luxury</li> </ul>	<ul style="list-style-type: none"> <li>of complexes, e.g. swimming pools, gyms</li> <li>of rooms, e.g. size of rooms such as suites, size and number of beds, en-suite, balcony, sea or mountain view, colour TV, pets allowed, cooking facilities</li> </ul>
<b>Catering Components</b>	<ul style="list-style-type: none"> <li>frequency, e.g. breakfast, single meals, half-board, full-board</li> <li>content, e.g. international, national or local cuisine, special diets</li> </ul>	<ul style="list-style-type: none"> <li>restaurants, cafés</li> <li>served while travelling</li> </ul>	<ul style="list-style-type: none"> <li>of content, e.g. mass-catering to haute-cuisine</li> <li>of locations, e.g. decor</li> </ul>	<ul style="list-style-type: none"> <li>smoking and non-smoking sections</li> <li>time aspect, e.g. fast-food to several course dinners</li> </ul>
<b>Leisure (Entertainment) and Business Components</b>	<ul style="list-style-type: none"> <li>consumer-passive, e.g. performances (music, show, talk, theatre), information (books, maps)</li> <li>consumer-active, e.g. sport, amusements, animation, study or round trips, expeditions or adventure trips</li> </ul>	<ul style="list-style-type: none"> <li>theatres, amusement centres, sport locations, open-air locations</li> </ul>	<ul style="list-style-type: none"> <li>of service providers / performers</li> <li>of locations</li> </ul>	<ul style="list-style-type: none"> <li>range of equipment</li> </ul>



Main Travel and Tourism Components	Examples of Main Product Specifications or Descriptions
Additional Service Components	<ul style="list-style-type: none"> <li>• financial, e.g. bonding schemes, insurances, foreign currencies, travellers' cheques</li> <li>• legal, e.g. visas, provision of lawyer or legal advice</li> <li>• medical, e.g. health insurances, health information, vaccinations, emergency treatments</li> <li>• personal, e.g. support in problem or even crisis situations, telephone helplines, contact persons</li> </ul>
Destinations (Nature or Environment Components)	<ul style="list-style-type: none"> <li>• continents, countries, international and national regions</li> <li>• scenery, e.g. mountains, sea, jungle, desert</li> <li>• climate and weather</li> </ul>

<sup>1</sup> Including the relative location of each component to other components.

<sup>2</sup> Including security aspects of each component.

<sup>3</sup> Including facilities for children, infirm and disabled people of each component.

Note that certain components are obviously correlated; for example, cruise ship (transportation) - cabin (accommodation) - ship restaurant (catering) - on-board entertainment.

For further classifications see Hsieh et al. (1992).

**Table 7.1**  
Main Travel and Tourism Components and  
Examples of Product Specifications or Descriptions

Large tour operators especially have been widening their product range during recent years, covering an increasing variety of travel and tourism components, most of all by expanding into the long-haul holidays market. For example, Airtours, DER-Tour, First Choice Holidays, ITS, Kreutzer Touristik, the LTU Group, Thomson, TUI and Unijet Travel have increased their North American and Caribbean programmes during 1994 to 1996, and DER-Tour, Kuoni, the LTU Group, NUR Touristic, Thomson and TUI their worldwide programmes, both in terms of number of destinations and capacity carried (interviews; various editions of FVW International and Travel Trade Gazette UK & Ireland; NZZ, 1995a). While these increases in travel and tourism components covered are not necessarily a direct result of the new system strategies, most interviewed tour operators argued that their older systems would not have been able to cope with a greatly increased product range, at least not while keeping the number of manual tasks, and thus costs, low.

Moreover, consumers are not only demanding an increased product range such as long-haul and specialist holidays (Aderhold, 1995; Murrie, 1996), but also more flexibility in booking aspects (Economist, 1995e). The main booking aspects of holiday packages are classified here as shown in Table 7.2. Especially the aspects of 'length of stay' and 'flexibility regarding combinations' are crucial factors allowing the creation of individualised as well as itinerary-built or multi-centre holidays, i.e. holiday packages consisting of any feasible combination of transportation, accommodation and additional components. In fact, it can be argued that a move from a 'supplier market', with the supply mainly determining the production of holidays, to a 'consumer market', with the demand mainly determining the production of holidays, is taking place.

Main Booking Aspects of Holiday Packages	Examples of Product Segmentation
Price	<ul style="list-style-type: none"> <li>• low, medium, high</li> <li>• discount / budget to premium / luxury</li> </ul>
Number of consumers / size of party	<ul style="list-style-type: none"> <li>• singles, couples, families with children, groups</li> </ul>
Consumer age and sex group	<ul style="list-style-type: none"> <li>• children, teenagers ('teens'), 'twens' or 18 - 30's, adults, seniors</li> <li>• homosexuals</li> </ul>
Departure time	<ul style="list-style-type: none"> <li>• mid-week, weekends</li> <li>• holiday periods (public holidays, school holidays)</li> <li>• seasons (spring, summer, autumn, winter)</li> </ul>
Length of stay	<ul style="list-style-type: none"> <li>• short-breaks, weekend-trips</li> <li>• 7-days / 7-nights, 14-days / 14-nights</li> <li>• long-stay</li> <li>• any length</li> </ul>
Flexibility regarding combinations	<ul style="list-style-type: none"> <li>• complete packages to individual components</li> <li>• single-centre to multi-centre</li> </ul>
Flexibility regarding changes and cancellations (by customer and by tour operator)	<ul style="list-style-type: none"> <li>• cannot be changed to changeable (or redeemable)</li> </ul>
Customer booking time	<ul style="list-style-type: none"> <li>• booked long in advance to last-minute booking</li> </ul>

**Table 7.2**

**Main Booking Aspects of Holiday Packages and Examples of Product Segmentation**

With the implementation of the new system strategies, most of all flexible data storage, retrieval and processing combined with automated links with suppliers and buyers, tour operators are broadening their product range, increasing their flexibility in booking aspects and, indeed, innovating their products. This strategy, which is referred to as 'mass customisation' (Mertens, 1995b), allows tour operators to diversify into existing as well as new product markets and to achieve economies of scope, while keeping costs reasonably low and thus making individualised holidays affordable to a large number of customers. In the past, most tour operators were either 'specialists' or 'mass-market tour operators' (Goodall and Bergsma, 1991). Specialist tour operators focused on certain niche markets, such as those characterised by low numbers of customers and/or high labour costs, conditions that exist for example with round-the-world trips or special interest holidays. In contrast, mass-market tour operators concentrated on the so-called 'sun-sea-sand' packages. Increased flexibility in the production and distribution of package holidays, however, allows tour operators to increasingly enter niche markets while, at the same time, allowing low-cost mass production. In effect, 'mass customisation' allows tour operators to be mass-producers, generalists and specialists at the same time. (Only the inflexible and labour-intensive sector of escorted travel (Morrison et al., 1994), which includes especially 'round trips' ('Rundreisen') and 'study trips' ('Studienreisen'), is likely to remain a niche market.)

Furthermore, this new product range and flexibility in booking aspects, combined with low prices and efficient booking processes, may increasingly attract new customers such as business and independent travellers to book holiday packages (Kanzler, 1994). In the past, these travellers had assembled (with or without the help of a travel agent) their trips and holidays themselves. Indeed, as indicated in Chapter 6, several tour operators were specifically aiming to enter the markets of business and independent travel in the future. On the other hand, business travel agent consortia and alliances such as American Express and Rosenbluth International may expand into the package holiday markets given their experience in assembling individualised travel itineraries and in the use of new information and

communication technologies. American Express Services Europe Limited, for example, sold only 2,652 holidays by air in Britain during March 1993 to March 1994 (Noakes, 1995c), but sold 15,745 during 1994 and 68,723 during 1995 (Noakes, 1996a). Therefore, with growing flexibilisation and individualisation of package holidays, the distinction between the package holiday business, and the independent and business travel business (O'Brien, 1993), may become increasingly blurred in the long term (also Skuse, 1995).

Overall, this positioning strategy of increased product range / product innovation is perhaps the most important, adopted by tour operators with the introduction of their new systems, since this strategy allows tour operators to flexibly adapt to changes in customer demand (Section 1.1) and since it also underlies key strategies at Level 2 and Level 4.

### 7.3 Level 2 Consequences

At Level 2, the new systems are supporting tour operators in achieving the following key positioning strategy.

*Strategy of horizontal integration (and external diversification within the package holiday business):* The new system strategies are improving the exchange of management information between the various subsidiaries and units necessary for their co-ordination by replacing standard mail, fax, telex and telephone messages with on-line electronic messages. Therefore, both at a national as well as an international level, administration functions and other functions such as those of destination agencies can be combined, and joint purchasing and distribution activities can be more easily and cost effectively conducted, while exercising bargaining power and achieving economies of scale. Fostered by these improvements, and combined with the strategies described at Level 1, further horizontal integration in the tour operator business is likely, both nationally as well as internationally.

Nationally, in particular mass market (and therefore predominantly outgoing) tour operators may integrate (and diversify) further into sectors such as those of specialist holidays (Datzer, 1995b), domestic holidays and (previously) independent travel, especially by acquiring relevant businesses. A 1995 trade advertisement (Figure 7.1) reflects this strategy. Rather than having to establish businesses anew, acquisitions have the advantage that resources, such as brands, knowledge and expertise (human resources) can be acquired, and a supplier and customer base can be secured, in a relatively short period of time.

<b>MAJOR U.K. TOUR OPERATOR</b>
<p>Is actively seeking to acquire businesses in the following niche markets:-</p> <ul style="list-style-type: none"> <li>• Specialist Tour Operating</li> <li>• Conference and Incentive Travel               <ul style="list-style-type: none"> <li>• Schools/Student Travel                   <ul style="list-style-type: none"> <li>• Sports Travel</li> </ul> </li> </ul> </li> <li>• Reader Offer Holidays</li> </ul> <p>All interested parties should write, in confidence, to T.T.G. Box No. 4629</p>

(Source: Travel Trade Gazette UK & Ireland, 29 March 1995, p. 74.)

**Figure 7.1**

**Tour Operator Advertisement**

Further international horizontal integration is also likely. Distributed databases, which allow the automatic combination of data held in various systems, especially support this integration strategy. For example, the headquarters can conduct the purchasing of all long and medium-haul flights and accommodation in global hotel chains and store this data in its system, thus exercising global purchasing power and achieving economies of scale. In contrast, the foreign subsidiaries, while having more detailed knowledge of the local areas, can conduct the purchasing of local components such as connecting flights and accommodation in small hotels, which often are not listed on international systems and therefore cannot be booked directly by the headquarters. The subsidiaries can then store this data on their own systems. Through links between the group's systems, data can be automatically exchanged and packages can be assembled using components stored in any of the systems. Hence, local expertise can be combined with global purchasing power (Prahalad and Doz, 1987), and economies of scale and scope can be achieved.

DER-Tour planned to eventually create global synergies using the Phoenix system. All international airline, hotel and car hire negotiations were to be centrally negotiated from DER-Tour's headquarters in Frankfurt am Main, with the data also being held there and being accessible by all DER subsidiaries worldwide. In contrast, all country specific holiday data were to be held at DER's subsidiaries, with DER-Tour being able to access this data when selling holidays in Germany. Moreover, while DER's subsidiaries previously operated as independently operating units with little co-ordination between them, Phoenix will enable DER to integrate and have tighter control of the subsidiaries and to co-ordinate their activities.

Related developments particularly determine the relationships with, and the roles of, destination agencies, a specific sub-group of tour operators' international subsidiaries. Destination agencies, or resort offices, fulfil two main functions. Destination agencies employ and/or manage tour representatives ('tour reps'), also referred to as tour managers, local (or area) representatives and ground handlers. Tour representatives look after the customers while they are on holiday, conduct transfers between airports and hotels, and organise local excursions and guided, or escorted, tours. This is referred to here as the holiday period function of destination agencies. The predominantly pre-holiday period function of the resort staff is to purchase or arrange, especially, accommodation, catering and entertainment components at the holiday destinations on behalf of the tour operators and to handle communication between the tour operators and the principals that provide these components. Many of the destination agencies' functions, but in particular the pre-season contracting and late-sales management functions, are information and communication intensive, having consequently led to the central importance of new ICTs to them (Toth, 1994).

As part of the new system strategies, some tour operators planned to standardise most of their destination agencies' back-office functions such as the creation of charts, transfer lists, bus routes, room lists, the planning of tour representatives, calculation and the production of payment lists. Inspirations, ITS and NUR Touristic, for

example, produced all the software for tour planning, use of representatives and other destination tasks centrally so as to save costs and to have central control. Similarly, First Choice Holidays mapped and standardised all main processes for their destination agencies during December 1994 and January 1995.

In addition, the contracts, as used by the contractors during the purchasing period with especially accommodation suppliers, are increasingly being standardised internally. DER-Tour and First Choice Holidays, for example, had standardised their contracts, while Airtours and ITS were planning to do this. The replacement of multiple contracts, as used by the contractors in the past, with standardised contracts obviously leads to improved accuracy, for example in contract terminology, and better contractor and hotel accountability. In addition, contracting data can be more easily inputted into the systems using standardised screen masks on, for example, laptops (Table 6.16), which can then be downloaded onto the central tour operator systems. This allows contracts to be written at shorter notice, which reduces the purchasing period and enables further contracts to be produced at short notice. All these improvements add to the increased flexibility in the production of individual package holidays by tour operators.

Furthermore, destination agencies, which in the past have usually acted only as incoming agencies, can become outgoing tour operators themselves. For example, some destination agencies at the classic mass-market destinations of the Balearic and Canary Islands are becoming outgoing tour operators by selling package holidays to local residents. Some LTU destination agencies have gained access to Amadeus and Galileo International to book LTU airline seats for local customers. DER-Tour has re-organised its activities in Italy and the USA during 1994 and 1995, with subsidiaries providing incoming and outgoing holidays. Similarly, Airtours was in the process of re-structuring its subsidiaries in Canada and Scandinavia, which were acquired during 1994 and 1995 and which will act as outgoing and, to some extent, incoming agencies. With falling restrictions and the opening of competition in particular in the global airline business, it can be expected that the distinctions



between the incoming and outgoing package holiday sectors, as they have existed in the past, will increasingly become blurred. In the long term, these developments may also make the tour operator business become a global business, similar to those of the international hotel and business travel agent sectors. (For a general discussion of global strategies see Bartlett et al. (1990) and Hout et al. (1982).)

Finally, regarding Level 2, the strategies of backward and forward vertical integration, though fostered through the new system strategies, are not as such a direct consequence of these and, hence, are not further discussed here.

#### **7.4 Level 3 Consequences**

At Level 3, the following two positioning strategies are direct results of the new system strategies.

*Strategy of forward vertical co-operation with travel agents:* As part of their new systems strategies, some large tour operators have developed management information systems (MISs) which automatically monitor the performance of each of the travel agents under contract (Section 6.5). These systems are used to 'enforce' co-operations with travel agents such that travel agents are automatically rewarded with discounts and other offers in return for making a certain number of bookings with that tour operator. Travel agents failing to make a minimum number of bookings will not have their contracts extended and other travel agents are contracted instead.

*Strategy of forward vertical co-operation with customers:* Similar to the travel agent MISs, MISs have been developed as part of the new system strategies to monitor (direct and indirect) customer booking behaviours (Section 6.5). Although impeded by the bargaining power of travel agents threatening to withdraw tour operators' brochures from their shelves, customer loyalty schemes have nevertheless been

introduced by some tour operators. TUI, for example, introduced the TUI-Card in August 1994 (Lenner, 1994), Kuoni Travel Limited launched its Gold Club scheme in 1995, and the LTU Group introduced the LTU-Card in June 1996. While customers are being rewarded for regular bookings with discounts or other offers, tour operators are gaining not only loyal customers but also detailed information on the customers' travel and holiday behaviour, thus enabling them to tailor their products more specifically to their needs in the future.

Finally, regarding Level 3, it remains to be seen whether horizontal co-operative strategies such as those leading to virtual corporations similar to the Rosenbluth International Alliance (RIA), which was described by Clemons et al. (1992) but which was dissolved in September 1993, will emerge in the package holiday business.

## 7.5 Level 4 Consequences

At Level 4, the following two main strategies are likely to be achieved through the introduction of the new systems. The two strategies are correlated since a strengthened horizontal position can also lead to a strengthened vertical position, and vice versa.

*Strengthening of the (horizontal) position in the business / reduced competition:* As a consequence (as well as aim) of increased flexibility in holiday package production and distribution, tour operators are re-organising their annual production and distribution cycles, which has consequences for relationships with competitors, suppliers and buyers. Until the present, paper-based catalogues, or brochures, have been the main distribution media of tour operators (Wicks and Schuett, 1991; Yacoumis, 1973). The typical production and distribution cycle of holidays used to be dominated, therefore, by the production and distribution cycle of brochures.

The majority of brochures, most of all for the typical 'mass-market' destinations, were produced according to a fairly rigid operating cycle based on the summer and winter seasons. This operating cycle has been of crucial importance to the tour operator business for the past twenty (and more) years (Mill and Morrison, 1992, p. 483). In Britain, the typical summer season lasted from April to October, and the typical winter season from November to April. In Germany, the typical summer season lasted from February / March to October, and the typical winter season from October to February / March. The summer holiday season is analysed here, since the winter season is not only similar, but also less complex (and less financially valuable) than the summer season given that comparatively less winter holiday packages are sold. In Britain in 1994, for example, 72% of all holidays sold were summer holidays, and only 28% were winter holidays (Mintel, 1994b, p. 7).

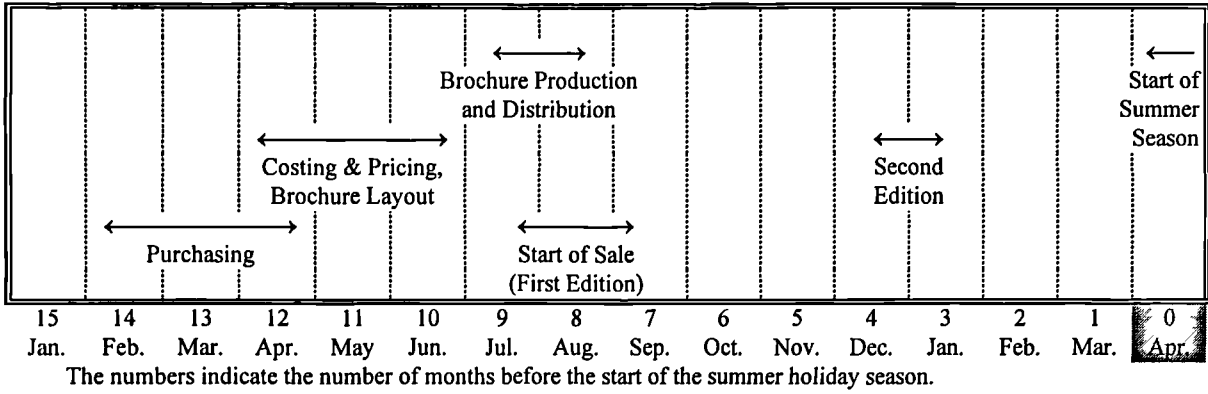
A typical production and distribution cycle consisted of the following main periods:

- **Purchasing:** The purchasing period concerned mainly the contracting and purchase of airline seats and accommodation. It started in January / February of the previous year, i.e. at least one year in advance of the summer season. This period used to be relatively short, typically a few weeks to three months. An iterative planning process was usually conducted between the purchasing and planning (i.e. central tour operator) departments. Seats on in-house charter airlines, beds in accommodation subsidiaries and other services of in-house suppliers are usually reserved first, followed by the purchase of products from external suppliers.
- **Costing and pricing:** Planning, costing, pricing and accounting were regarded by several interviewed tour operators as their core competencies (also, more generally, Innes and Mitchell, 1990). The support of these processes were, therefore, crucial aspects of tour operator systems (Weber, 1995, pp. 99 - 102), which included the validation (logic and correctness) of combinations and yield management (Remmers, 1994).
- **Brochure layout:** The layout phase of catalogues included in particular the taking of photo shoots and the page layouts. This period was also referred to as 'mapping times'. Mappings contain information about flights, such as departure airport, date and time of departure and number of seats, information about accommodation and/or information about other services. The mappings of flights are a particular timely task, since starting and landing slots at many airports are limited. In Britain, the summer season had to be mapped by July to allow enough lead time for the physical brochure production.
- **Brochure production and distribution:** The production of catalogues consisted especially of the delivery of the catalogue contents to the (mainly external) printers (some of which were located in countries abroad such as Italy or, for British tour operators, Germany), and the actual printing and binding of the catalogues. The distribution typically took only one to several days.
- **Start of sale (first edition):** This is the launch date (or period) of the first edition catalogues, i.e. when catalogues are racked for the first time on shelves of travel agencies. In Germany, this used to be a sector-wide agreed date, for example 1

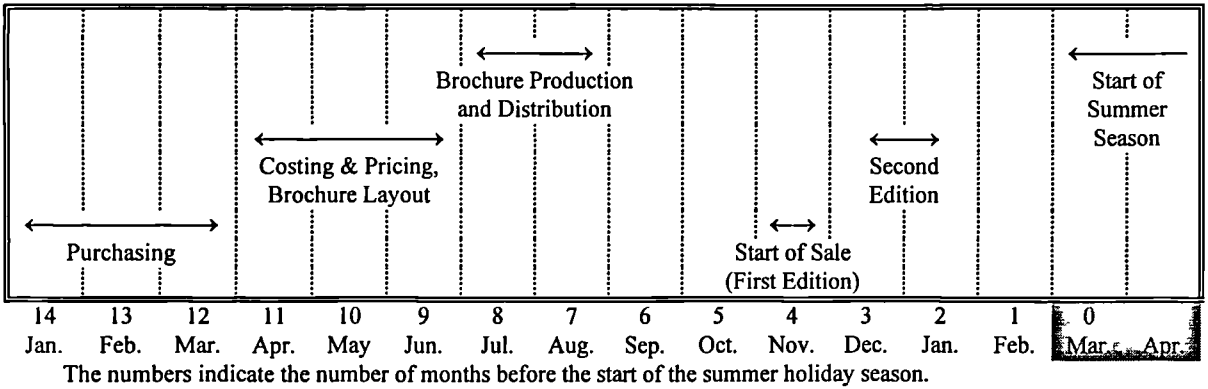
November 1994. In contrast, in Britain only some tour operators tended to agree on a joint launching date. The prices of the holidays stated in the catalogues were fairly fixed, though some discounting schemes were operated.

- Second edition: The second edition catalogues (with new prices for the holidays) typically went on sale around Christmas or during early January. They accounted for approximately 20% of the total number of catalogues printed for one season. Occasionally, additional brochures were printed thereafter, including possible third edition catalogues in Germany. Christmas and January have typically been the busiest months for booking package holidays in Britain and Germany. More recently, fostered through discounting schemes, August has also become an intensive booking month in Britain. Traditionally, it has been the aim in Britain and Germany to sell more than 70% of all summer holidays by the end of January.
- Start of summer season: This is the time the first summer holidays are taken by consumers.

Table 7.3 and Table 7.4 show the typical production and distribution, or operating, cycles in Britain and Germany, respectively, during the mid 1990's. In general, there is relatively little difference between the two operating cycles with the exception of the first edition launch date, which is discussed below.



**Table 7.3**  
 Typical Summer Season Operating Cycle in Britain



**Table 7.4**  
 Typical Summer Season Operating Cycle in Germany

Until 1992, the traditional first edition launch date in Britain used to be the end of September / early October, i.e. when most customers had taken their summer holiday and were planning their next year's holidays. In 1993, however, Thomson launched its brochures earlier, thus achieving higher sales volumes, whereas the other operators were not able to release their brochures quickly enough. In 1994, operators generally agreed to distribute their brochures on 11 or 18 August. After Airtours heard, however, that Thomson was planning to issue some catalogues on 4 August, Airtours decided to launch all of its brochures on that date. Thomson was not able to follow this move since not all of its brochures had been printed. Thus Airtours was able to sell several hundred thousand holidays and claimed that it gained an increased market share during that month. However, it was argued by some tour operators that early launches can be financially destructive, since they reduce the financially valuable last-minute market. Therefore, 1 September 1995 was generally agreed on as the next launch date. However, Virgin Holidays launched its Florida brochures at the end of July 1995, followed immediately by the Florida brochures of British Airways Holidays and Unijet Travel. This resulted in Airtours, Cosmos, First Choice Holidays and Thomson following suit and releasing their Florida as well as some long-haul catalogues during the first week of August. In 1996, most of the leading tour operators planned to launch their brochures on 1 August. Airtours, however, decided with short notice to launch on 4 July instead (selling an estimated 80,000 holidays during the first three days alone), which led to most other tour operators having to follow suit (Noakes et al., 1996).

Since the launch dates of the first edition catalogues in Britain have moved closer towards the 'mapping times', British tour operators had to produce their catalogues according to strict time schedules. In addition, British tour operators have been forced to reduce their catalogue production times to respond quickly to the early brochure launches of competitors. Compared to an operating cycle in Britain in 1976 (Mill and Morrison, 1992, p. 483), for example, the operating cycles in the mid 1990's have in fact been shortened by several weeks. However, as a push towards

even shorter production and distribution cycles, but also due to the new low cost strategies, the new system strategies are reducing the operating cycles further.

The following developments are reducing the time span of each of the corresponding periods of the seasonal production and distribution cycles:

- **Purchasing:** Especially the introduction of standardised contracts and laptops for the contractors as well as direct links with suppliers reduce the time needed for this period.
- **Costing and pricing:** Automated and flexible costing and pricing functions are incorporated into the new tour operator systems to support staff during this period (Section 6.2).
- **Brochure layout:** The introduction of desktop publishing (DTP) software, the digital storage of pictures and direct data transfer between the tour operator systems and the DTP systems replace manual tasks and shorten the time span of this period.
- **Brochure production and distribution:** This period is reduced in particular through direct data transfer between the tour operators and the (external) printers.

More generally and more importantly, however, the concept of seasonal operating cycles is increasingly becoming less appropriate and relevant to tour operators. Some holiday destinations or type of trips, such as certain long-haul destinations and cruises, are relatively independent of seasons. Hence, the corresponding brochures were produced annually (or more often, if necessary, such as in the case of politically less stable destinations like Egypt) and launched at whatever time a tour operator regarded as most effective. An increased customer demand for individual and tailor-made holidays, regarding both range of components as well as flexibility in booking aspects (Level 1), especially in long-haul travel and business travel, is making even more holidays become less seasonal (Key Note Report, 1994b, p. 6). Therefore, tour operators are increasingly faced with extensive re-organisation of their production and distribution activities of package holidays, away from fairly rigid seasonal



operating cycles. (Tour operators also favour less seasonal operating cycles to have steady load factors of aircraft, hotels and other resources, which reduces costs.)

The new system strategies are assisting tour operators in making their operating cycles less seasonal. In particular the adoption of flexible distribution media, such as CD-ROMs and on-line direct booking media (Section 6.5.2), replace the need to produce paper-based brochures, lower the cost of distributing holidays and, overall, increase the flexibility through enabling the distribution of individually assembled and priced packages.

Flexible pricing and distribution of package holidays is also highly important for the financially valuable last-minute holidays market. Last-minute holidays in a strict sense are sold up to 14 days before departure, but more generally sold up to 8 to 10 weeks before departure. The last-minute, or late-sales holidays market has steadily increased during the recent years as a consequence of altered customer demand (Krämer, 1995). During 1994, TUI, for example, increased its last-minute sales from approximately 2% in previous years to 3.5% of total turnover, in particular by co-operating with late-sales specialist L'Tur Tourismus AG. This market is financially very important and crucial to tour operators, especially since monies have to be paid for most flight and accommodation components which are not returned before this period independent of whether they are sold or not. Equally, high demand allows tour operators to demand high prices with potentially high profits. In particular Airtours in Britain and NUR Touristic in Germany had aggressive pricing strategies, continuously adapting their prices to demand and supply during this late-sales period. Moreover, last-minute sales can also capture market size, for example when changed situations arise or competitors go bankrupt with short notice. For example, NUR Touristic decided within two hours in July 1991 to purchase 150,000 further beds outside the Middle East to cater for extra demand due to re-bookings as a consequence of the Gulf War. In mid 1993, NUR Touristic sold 300,000 last-minute holidays in total, several of which were due to some smaller German tour operators such as MP Travel Line going bankrupt.

Response times of tour operators' reservation systems have also become an important competitive feature, especially due to last-minute bookings which demand high processing times given that most holidays have already been sold and alternative options have to be searched for or newly assembled. Rapid systems avoid dissatisfaction from travel agents and consumers who would otherwise have to wait, and also allow travel agents to serve more customers. Tour operators were aiming with the new system strategies to increase their processing speeds, which is important for busy booking periods such as late-sales periods. In fact, both Airtours and TUI alleged that, apart from gaining technical know-how, their early tour operator systems have given them a competitive edge during the early 1980's through the performance of the systems overall and the speed and handling of the systems' front-ends in particular.

*Strengthening of the (vertical) position in the business / reduction of the threat of disintermediation:* Particularly new technologies and booking systems, combined with more individual customer demand, are threatening to lead to disintermediation, or by-passing, of tour operators in the distribution chain for holidays (Section 1.1). It is argued here, however, that major tour operators have been realising these threats, and have been reacting to them, in particular through the implementation of new system strategies (Chapter 6). These system strategies, especially combined with the positioning strategies of low cost and increased product range (Level 1), are enabling tour operators to 'add value' to travel and tourism products. Obviously, the more 'added value' tour operators provide, the more they enforce their roles as intermediaries in the distribution chain for holidays.

'Added value' is, for example, achieved through low prices gained from bargaining power in price negotiations with suppliers and commission negotiations with travel agents. The new systems assist tour operators in increasing their bargaining power by having detailed information on competitors, suppliers and buyers stored in their databases, which can be used in negotiations, for holding hotels accountable for over-

bookings and to observe the performance of travel agents. The automated scanning of comparative offers can also increase the bargaining power of tour operators. DER-Tour, for example, was able to automatically scan offers on Amadeus, Worldspan and Utell International in parallel. The new systems in fact impact on and improve the resource base of tour operators, effectively improving the 'intelligence' of the organisations (Schwaninger and Flaschka, 1995), thus making it more likely that they remain in the business. More specifically regarding consumer market relationships, processes are re-designed through the adoption of new ICTs such as interactive multimedia information systems (also Dustdar, 1995a and 1995b), providing users with improved or new accessibility, for example at home through television or PC access, therefore serving these customer needs.

Moreover, Van der Heijden (1996; also Van der Heijden and Wagenaar, 1995) points out that technology can increase complexity which thus can strengthen the position of intermediaries who reduce this complexity for customers. Increased complexity of products through modularisation, individualisation and customisation is indeed a result of the new system strategies of tour operators (Section 6.1). It could be argued that tour operators increase the complexity of products and then offer customers a reduction in complexity by tailoring the products to their demands, thereby securing their own position in the business.

Electronic market systems (EMSs) and other booking systems and technologies, which initially appeared as a threat to tour operators (Chapter 2), can, therefore, instead be seen as an opportunity. Due to this new 'added value' and given the flexibility in linking to external systems, tour operators can in fact use EMSs and other media to their advantage by using them as distribution systems, rather than being by-passed by them.

## 7.6 Level 5 Consequences

At Level 5, the new system strategies may lead to several long-term developments in the travel and tourism industry.

*Developments in the airline sector:* In Britain, the largest five charter airlines are wholly-owned by the largest five tour operator groups (Table 5.3). Although their ownership structure is more complex, most of the major German charter airlines are also either directly or indirectly partly or wholly-owned by the major tour operator groups (Table 5.4). Therefore, it can be argued that the system strategies of British and German charter airlines are part of, or at least closely linked to, those of the major tour operator groups. With minor exceptions (Table 6.3), all airline systems of the major British and German charter airlines were stand-alone systems, with the exception of LTU's since LTU operated some scheduled flights.

With tour operators increasingly needing to book individual airline seats in contrast to whole blocks as in the past, and combined with 1993 European Union legislation (Code of Conduct for Computer Reservation Systems, 1 August 1989, revised 1993) allowing the display of charter airline seats on computerised reservation systems (CRSs) (Jegminat, 1992a; Lange, 1993, appendix II), several of the major charter airlines in Britain and Germany have started to link their airline systems either directly to the systems of tour operators or indirectly to them via national and global reservation systems (Table 6.4 and Table 6.14). However, not only can tour operators now automatically book single airline seats on these charter airlines, travel agents and consumers are also being able to conduct these bookings. An immediate consequence of this development is an increase in competition in the airline business, with charter airline seats being displayed next to scheduled airlines seats.

Moreover, in the long term, the distinction between the charter and scheduled airline sectors will increasingly become blurred. Obviously, there have been legal differences between charter and scheduled air traffic in the past, such as the operation

of 'outgoing' flights at foreign destinations and the carrying of air cargo. Given a continuing liberalisation of international air traffic, these regulations are likely to become relaxed, if not eliminated (Key Note Report, 1993, p. 66). In autumn 1995, for example, the charter airline Balair/CTA AG, Switzerland, was dissolved by its parent company Swissair Schweizerische Luftverkehrs AG, and its operations were integrated into Swissair and its other subsidiary Crossair (NZZ, 1995b). Swissair argued that a distinction between charter and scheduled airline businesses was no longer necessary, with only the areas of long-haul flight operations, covered by Swissair itself, and short-haul flights, covered by Crossair, remaining.

*Developments in the accommodation sector:* Similar to the charter and scheduled airline sectors, the accommodation sector can be split into the sector of international hotel chains, being predominantly utilised by independent and business travellers, and into the package hotel sector. While international hotel chains were bookable via CRSs, hotels catering for the package holiday business were predominantly not linked to any reservation systems (Section 6.5.1; also BTW Briefing, 1995b and 1996). However, in particular through the new corporate networks of tour operators (Section 6.3.2), their hotel subsidiaries are becoming bookable on-line by travel agents and consumers. With for example Club Med and TUI ranking among the top hotel operators in the world (Table 5.2), this will increase the competition in the global hotel sector and, in the long run, is likely to blur the distinctions between the package and the independent / business accommodation sectors.

*Developments in the tour operator and travel agent sectors:* While there are some legal differences between tour operators and travel agents (Hildebrandt, 1994a), their roles nevertheless often overlap (Section 1.4). These roles are likely to blur further (also TTG, 1995c), since tour operators are increasingly providing tailor-made holiday packages, a role traditionally filled by travel agents, and are selling more packages directly to consumers (Section 6.5.2)

Finally and more generally, the adoption of new system strategies in the package holiday business is leading to first, second and third-order effects, as detailed by Malone and Rockart (1991, pp. 128, 130, and 1992). As a first-order effect, new ICTs are replacing 'old' ICTs, such as by substituting manual information and communication functions with electronic functions. As a second-order effect, the overall co-ordination between the organisations in the package holiday business is increased, with the organisations communicating individual customer details. Finally, as a third-order effect, new co-ordination intensive economic and social structures are emerging (also Ribbers, 1994), with consumers demanding flexibility and a wide range of travel and tourism products and booking aspects, and travel and tourism organisations supplying more complex products via electronic market systems and other distribution media.

## **Chapter 8. Research Conclusions and Recommendations for Further Research**

### **8.1 Research Summary and Conclusions**

The research presented in this thesis supports (rather than rejects) the main hypothesis that major European tour operators are reinventing their business activities both in the production and the distribution of holiday packages, in particular by enhancing their systems or installing new ones, to strengthen their strategic position in the package holiday business.

An extensive empirical survey was conducted as part of this research, during which ten of the top twelve European tour operator groups were interviewed. The countries Britain and Germany were concentrated upon, being the two largest European markets according to number of package holidays sold. 44 tour operators were interviewed, ten of which in-depth, which controlled over 65% of their respective national market shares. In addition, key tour operator associations and charter airlines were interviewed.

A theoretical framework was developed and is proposed, which was used for the preparation and conduction of the empirical survey as well as for the analysis and presentation of the data obtained. This framework was chosen in order to gain a systematic insight into a whole industrial sector.

“... The focus of the analysis of industry structure, or ‘structural analysis’, is on identifying the basic, underlying characteristics of an industry rooted in its economics and technology that shape the arena in which competitive strategy must be set“ (Porter, 1980, p. 6).

Therefore, an analysis of the behaviour of and the relationships within a sector enables a better understanding of the strategies of individual firms. A broad framework was chosen to allow the analysis of complex factors and the relationships between them. A broad framework also had to be selected to elaborate on factors whose inter-relationships and impacts were not obvious at the outset.

Three sub-hypotheses are outlined, which combined support the main hypothesis of the study:

The first sub-hypothesis is that without an alteration in business activities, tour operators are threatened with a weakened position and even disintermediation in the travel and tourism industry. This sub-hypothesis is supported in Chapter 5 by identifying and exploring the main reasons for tour operators to reinvent their business activities, especially by developing new ICT-based system strategies. Main threats imposed by competitors, suppliers, buyers and other industry forces are discussed (Levels 4 and 5), as are major disadvantages of various positioning strategies (Levels 1 to 3).

The second sub-hypothesis is that tour operators are implementing new systems which are more flexible with regards to automated production and distribution of packaged holidays and which allow them to re-engineer their business activities. This sub-hypothesis is supported in Chapter 6 by presenting and analysing new system strategies of tour operators and corresponding tour operator systems. In particular, the new systems' main functions are compared to those of previous systems, which were enhanced or replaced.

The following main developments were found and discussed:

- Tour operators are developing and implementing more flexible tour operator systems with regards to data storage, retrieval and processing (Level 1).
- Tour operator groups are developing and implementing corporate networks, are linking offices and subsidiaries worldwide, and are improving their in-house data display (Level 2).
- Tour operator co-operations are creating joint initiatives for the establishment of sector-wide (and industry-wide) electronic communication standards (Level 3).
- Tour operators are developing and implementing on-line program-to-program links between their systems and other information, communication, reservation and booking systems within the package holiday business and other sectors of the



travel and tourism industry, and are improving their external data display (Levels 4 and 5).

These individual system strategies combined allow tour operators in particular to automatically and cost effectively assemble and distribute individually tailored holiday packages.

The third sub-hypothesis is that the 're-engineered' activities of tour operators are reducing the threats imposed by new technologies and altered customer demand and, thus, may well secure their position in the business in the long-term. This sub-hypothesis is supported in Chapter 7 by identifying and exploring the main consequences on the strategic position of tour operators and on the structure of the package holiday business as a whole, arising from the implementation of the new tour operator systems.

In particular, the following consequences and strategies of tour operators are discussed at the different levels of analysis:

- Strategies of low cost and increased product range / product innovation (Level 1)
- Strategy of horizontal integration (Level 2)
- Strategy of forward vertical co-operation with travel agents and consumers (Level 3)
- Strategy of strengthening the business position (Level 4)
- Developments in the airline, accommodation, tour operator and travel agent sectors (Level 5).

This study contributes to research in a number of ways:

- The empirical aspect of this study provides a systematic, extensive and detailed insight into the package holiday business. For academics, this empirical focus adds to research on the travel and tourism industry by exploring a key sector in great detail. For practitioners, it is hoped that this academic research will assist them in their strategic business planning.

- The theoretical aspect of this study contributes to research in the travel and tourism industry, and moreover may contribute to general research on industrial organisation of whole sectors and industries (see Section 8.3).
- The methodological aspect of this study provides academics and practitioners with detailed information regarding practical considerations in the conduction of an empirical industrial sector study.

## **8.2 Recommendations for Further Research into the Package Holiday Business**

The research presented raises a number of issues and opens up further directions into which research could be conducted. Suggested further research is described in the following. (Further areas of research are also mentioned in Chapter 5, such as research on human resources and governance forms of tour operators, which had little relevance to this study, but may be of relevance to another related or more detailed study of the tour operator sector.)

A follow-up study of co-ordination and especially system strategies of tour operators (Chapter 6) could be carried out. Such a longitudinal study would enable the investigation of tour operators' strategies over a period of time and could result in interesting insights into their long-term strategies.

Similarly, a more detailed and/or follow-up study of the consequences of the new systems strategies (Chapter 7) could be conducted, in particular with regards to:

- the Level 1 strategies of low cost and increased product range / product innovation
- the Level 2 strategy of horizontal integration
- the Level 3 strategy of forward vertical co-operation with travel agents and consumers
- the Level 4 strategy of strengthening the position in the business

- Level 5 developments in the airline, accommodation, tour operator and travel agent sectors.

For example, with regards to the Level 1 strategy of increased product range, a quantitative analysis could be made, studying the number and variety of holidays on offer. This could, for example, involve a comparison of the annual publications of TID Reisespartenübersicht (RSÜ) (for example see TID RSÜ, 1994), which list the destinations offered by tour operators operating in Germany.

A detailed and mainly quantitative study could be conducted investigating the development over time of proportions of allocations (i.e. stock) and extra assembled components and packages. The more allocations used by tour operators, typically the more 'product-driven', or 'supply-driven', is their business. In contrast, the more extra components have to be purchased and the more extra packages are sold by tour operators, typically the more 'customer-driven', or 'demand-driven', is their business. The relationship between allocations and extra purchases reflects the asset specificity of components as well as the flexibility and adaptability of consumers and the various operators in the package holiday business. This study would give insights into key dynamics of the package holiday business. If the system strategies and corresponding co-ordination strategies of the tour operators investigated in this thesis are successful as planned by the tour operators, such a study would reveal an increased proportion of extra purchases as a consequence of these strategies.

Further studies into the package holiday business could also be conducted from a perspective other than that of a tour operator. For example, co-ordination, positioning and system strategies could be investigated for charter airlines, accommodation suppliers, leisure travel agents and consumers. Each perspective is likely to reveal interesting aspects of different sectors of the package holiday business.

### 8.3 Implications of the Theoretical Framework for the Study of Other Sectors and Industries

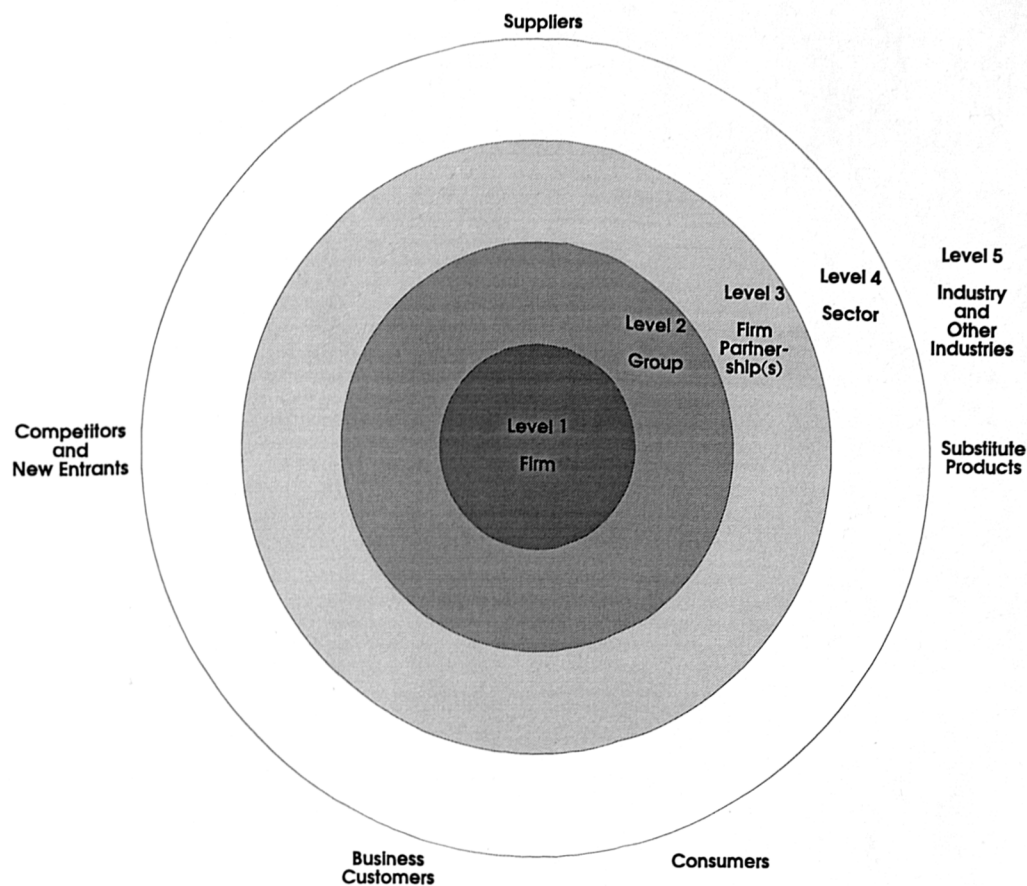
While the proposed theoretical framework (Chapter 3) was specifically developed for the study of the package holiday business, implications of the framework for the study of other sectors and industries are discussed in this section. The proposed positioning model is based on frameworks (especially Porter, 1980 and 1985, and Reve, 1990), which have been developed for the study of any sector or industry. This generalisability is mostly preserved in the proposed model. Therefore, the proposed framework can be re-presented relatively easily to be applicable also for the study of other sectors and industries.

The five levels of analysis are re-stated in Table 8.1 together with the corresponding organisational and industrial levels when studying any sector. A sixth level is added which would be of value when studying an entire industry, rather than a sector as in this thesis.

Level of Analysis	Type of Relationships	Corresponding Industrial or Organisational Level
Level 1	Core business relationships	Firm
Level 2	Ownership relationships	Group
Level 3	Co-operative trading relationships	Partnership(s) of firm
Level 4	Competitive trading relationships	Sector
Level 5	General industry trading relationships	Industry
Level 6	General trading relationships	Other industries

**Table 8.1**  
Levels of Analysis

The proposed strategic positioning model for the tour operator business (Figure 3.5) can then be redrawn as a positioning model for any firm as shown in Figure 8.1. (A sixth level can be added when studying an industry.)



**Figure 8.1**  
Proposed General Strategic Positioning Model

The corresponding model with positioning strategies (Figure 3.6) and the model with threats and disadvantages of positioning strategies (Figure 3.7) can equally be re-designed for the study of sectors and industries in general. These general models can similarly be applied as suggested in Section 3.4. Furthermore, this general theoretical framework can be extended, as discussed in Section 3.5, so to include Klein's (1995a and 1996) research framework, consisting of the study of co-ordination strategies and the four elements of 'structure', 'governance forms', 'transaction and relationship attributes', and 'resource base'. The generalisability of the extended framework (Section 3.5) applies given that Klein's framework (1995a and 1996) was developed for the study of co-ordination strategies in any industry.

Similar to the application of the proposed theoretical framework to the study of the package holiday business, this proposed framework for the study of sectors and industries in general could be used to:

- structure (primary and secondary) data
- assist in the preparation of empirical surveys
- assist in the analysis of collected data.

The implications of this proposed theoretical framework for the study of any sector or industry are potentially far reaching. This framework provides researchers with a tool to analyse and gain insights into little researched and/or complex sectors and industries. Depending on the individual research objectives and previously published information, the framework enables researchers to explore sectors and industries in differing detail and to varying extents as a consequence of the framework's flexibility. Both previous research as well as newly acquired data could be arranged and structured using the framework. Therefore, the framework provides the researcher with a powerful and flexible methodology for investigation of sectors and industries according to the researcher's needs.

## 8.4 Final Comments

A tour operator's co-ordination strategies are shaped and influenced by numerous contingencies imposed by the tour operator itself (Level 1), the tour operator group (Level 2), its partnerships (Level 3), the tour operator sector (Level 4) and the travel and tourism industry (Level 5). System strategies are determined by, for example, 'barriers of will', 'barriers of finance' and 'barriers of ability' (Whitaker, 1987). Since contingencies change over time, a tour operator's strategies have to be adapted accordingly to allow best performance in the business.

Vice versa, a tour operator's strategies also impact on and shape the tour operator itself (Level 1), the tour operator group (Level 2), its partnerships (Level 3), the tour operator sector (Level 4) and the travel and tourism industry (Level 5). For example, as a consequence of the new co-ordination strategies of tour operators (Chapter 7), more flexible trading relationships between the various organisations in the tour operator sector, i.e. more flexible co-ordination strategies at sector-level, are likely to emerge, similar to other industries (for example Barnatt and Starkey, 1994; Borman, 1994 and 1995; Driver and Gillespie, 1993; Shapiro et al., 1992).

Therefore, since contingencies for and strategies of tour operators change over time, the strategies discussed in this thesis are only relevant for a certain period in time. Examples of major changes in co-ordination strategies of two of the interviewed tour operators, Kuoni Fernreisen GmbH and ITS, which have occurred since the time of the interviews, are discussed in the following. These two examples are related since they are a result of decisions of their (ultimate) joint parent company Kaufhof Holding AG. Kaufhof Holding changed its co-ordination strategies in early 1995 by disposing of most of its travel and tourism subsidiaries, in particular ITS and its stake in Reisebüro Kuoni AG, Switzerland. These two examples show that new contingencies, which were imposed by Kaufhof's sale, effectively over-ruled the strategies of Kuoni Fernreisen GmbH and ITS and rendered them irrelevant. Therefore, while both Kuoni Fernreisen and ITS had implemented advanced new

system strategies, these strategies were no longer appropriate for the now altered situation.

Kuoni Fernreisen GmbH was founded in early 1994 by Reisebüro Kuoni AG, Switzerland, and ITS, Germany, and started trading on 1 August 1994. For ITS, Kuoni Fernreisen was a strategic expansion into the markets of long-haul, premium and more individually arranged holidays. For Reisebüro Kuoni, Kuoni Fernreisen was a strategic expansion into the German tour operator business. After the sale of Kaufhof's share in Reisebüro Kuoni AG in early 1995, and after the subsequent break-up and sale of ITS, Kuoni Fernreisen GmbH ceased trading on 31 October 1995. The then renamed Kuoni Reisen Holding AG returned to operating only as a travel agent in Germany, with all of Kuoni Fernreisen's activities being discontinued.

Similarly, the renamed ITS Reisen returned to producing and distributing its rather mass-market orientated holiday packages. Consequently, ITS' system strategies were also changed. In fact, 1 August 1994 had been regarded by some employees of ITS as too early to ensure proper functioning of the new system ITOS. Indeed, a number of problems (both technical and due to the culture of the organisation) occurred during the first months after the installation of the system. Finally, in May 1995, it was decided to replace ITOS with the standard Blank system since Blank was successfully tested and used by other tour operators, was less complex as well as cheaper to operate and maintain, and was regarded as being sufficient for ITS' (now less 'ambitious') uses (Niedecken, 1995). ITOS was largely replaced by the Blank system on 7 August 1995. Parts of ITOS were kept only in as far as they supported the communication between the tour operator ITS Reisen and its new sister company Atlas Reisen GmbH's travel agent outlets.



Kuoni Fernreisen GmbH and ITS are examples, where two system strategies, which were advanced at the time of the interviews, were rendered unimportant as a consequence of altered contingencies in ownership. Therefore, the system strategies (Chapter 6) and corresponding co-ordination strategies (Chapter 7) of tour operators have to be seen within the context of various contingencies (such as those described in Chapter 5) and within a corresponding period of time. Consequently, any tour operator considering to 'copy' and implement any of the strategies described in this thesis needs to assess the relevance of these strategies to its own circumstances and the contingencies present at that time.

Finally, the data collected revealed few differences between the British and German package holiday business. Some differences are investigated, for example in legislation (Levels 5 and 4 in Chapter 5), ownership structure (Level 2 in Chapter 5), national distribution systems (Level 4 in Chapter 6), backward integration (Appendix 9 and Appendix 10), travel agency relationships (Levels 4 and 2 in Chapter 6), and brochure production (Level 4 in Chapter 7). As a consequence of, in particular, European Union legislation and due to the international aspect of the business, these differences are likely to increasingly diminish. Instead, it is shown that in general little differences existed between the co-ordination, positioning and especially the system strategies of British and German tour operators.