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The Impact of E-Commerce Technology on the Air Travel Industry

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EXECUTIVE SUMMARY

This case study examines the impact of online reservation systems and e-commerce on the travel industry. Two questions are examined:

1. How can competitive advantage be obtained from the exploitation of new information technologies—in particular, e-commerce technologies?
2. How has the role of travel agents changed because of the new information technologies being used to achieve competitive advantage in the air travel industry?

Initial discussion concerns the impact of the American Airlines SABRE system, as this has often been touted as giving American Airlines first-mover advantage in the industry. The wider impact of remote-access, computerized reservation systems, or Global Distribution Systems, and e-commerce access to online reservations in the travel industry is analyzed, using Porter's five-force model of industry competitive forces, to understand how the travel industry has shaped and has been shaped by information systems.

The case study concludes with a comparison of the impact of information technologies between the U.S. and European travel industries. It concludes that technology alone does not affect the roles of industry players, but the development of winning technologies exploits structural factors in the environment. Constant evolution of strategic information systems is critical to producing competitive advantage, but opportunism also plays a strong role.

BACKGROUND: THE USE OF INFORMATION TECHNOLOGY IN THE AIR TRAVEL INDUSTRY

In the 1960s, when air travel first became affordable for the individual, travel agents provided an essential service. A travel agent would find a suitable flight in the printed schedules published by individual airlines and telephone the airline-booking agent to make a reservation. At a later time, the airline booking agent would return the call to confirm the

reservation, or to suggest an alternative flight if no seats were available. The airline paid the agent a flat commission fee for the booking. The structure of the air travel industry prior to computerization is shown in Figure 1. The airline industry was regulated, so most routes were served by a single airline. Travel agents mainly served the individual travel market, while corporate travel was booked directly with an airline, to achieve corporate discounts (Clemons & Hann, 1999). The role of the travel agent was to advise clients on travel destinations and to act as an intermediary in the complicated process of arranging travel bookings.

The discussion below presents a case study of how the use of new technologies have affected the air travel industry, analyzing two waves of information technology that have had a major impact on the industry. The first of these is the development of direct reservation systems, such as the American Airlines SABRE system. The second is the development of online sales channels via the Internet.

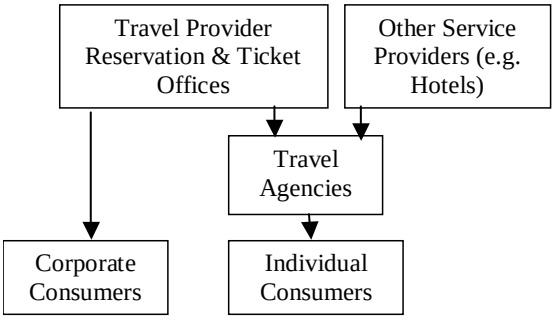
SETTING THE STAGE: THE DEVELOPMENT OF THE AMERICAN AIRLINES SABRE SYSTEM

American Airlines is a division of AMR Corporation, employing over 128,000 people worldwide and reported net revenue in 2000 of $19.7 billion. One of the largest airlines in the world, AMR Corp. operates American Airlines, TWA and American Eagle. In August 2001, American Airlines announced a competitive alliance with British Airways, allowing them to codeshare (run a flight-schedule jointly, for a certain route) across the entire breadth of their respective global networks and opening up a completely new range of destinations to their customers.

SABRE (Semi-Automated Business Research Environment) was developed by American Airlines in conjunction with IBM. Launched in the early 1960s, SABRE was the first computerized airline reservation system, serving American Airlines reservation counters from coast to coast in the USA and from Canada to Mexico by 1964. SABRE was expensive to develop and, when it came on-line, competitors filed lawsuits claiming that it gave American Airlines (AA) an unfair advantage (mainly because AA flights were listed first by the system). Other airlines rushed to develop their own reservation systems: United Airlines' system created the Apollo system, TWA developed PARS (TWA is now owned by American Airlines), and Delta developed DATAS.

Over 90 percent of the 40,000+ travel agents in the U.S. now connect into various direct reservation systems, but as the learning curve is high for a new system and space is limited,

Figure 1. The Pre-Computerization Air Travel Industry Structure



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