Meeting the Challenges in Globalizing Electronic Commerce at United Airlines

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ABSTRACT

In today’s corporate environment, electronic commerce (e-commerce) has evolved to become widely recognized as a pivotal medium in managing the globalization of markets. Despite this recognition, however, many companies operating in multiple international markets are often challenged when it comes to engaging e-commerce to create and deliver localized online products and services in a globally consistent manner. In this case study, we examine why United Airlines has decided to globalize its e-commerce presence and what the corporate challenges have been in this process. We describe the alignment between e-commerce deployment efforts at United Airlines and its mission of "being recognized worldwide as the global airline of choice." We discuss how United Airlines has balanced the organizational needs for local autonomy versus central control of its e-commerce activities in various countries. We share information about United Airlines’ decision and implementation challenges related to globalizing its digital brand and focus particularly on Web site design and functionality issues. Finally, we present the best practice lessons learned in the process of going global with United Airlines’ e-commerce presence.

Keywords: United Airlines, global electronic commerce, challenges, globalization, Web site, digital brand, airline industry

INTRODUCTION

The airline industry has seen dramatic advances in information technology (IT) in the 1990s. On the consumer side, with the continuous falling cost of computing and increasingly easy to use desk/laptop/handheld computers, a growing number of people are using online devices to purchase air travel products and services. Today, airline tickets are one of the most popular items bought on the Internet worldwide, accounting for over a quarter of consumer online spending in the United States alone (Reidy, 2002). This trend coincides with several other important developments: the growing globalization of markets and the increasing mobility of consumers. Simultaneously, airlines are faced with continuously mounting pressure to control distribution cost while coping with consumer demands for lower priced fares and personalized services delivered in a globally consistent manner. As the number of Internet users and online spending are increasing in markets outside the United States, the question arises as to how companies can deal with the challenge of mastering the deployment of e-commerce and related businesses, processes, and technologies in their international expansion efforts.

Much of the published literature has focused on various e-commerce issues such as the motivators and inhibitors (Chan and Mills, 2002; Taraifdar and Vaidya, 2002), factors affecting adoption (Tan and Teo, 1998; Teo, Tan and Wong, 1997-98), success factors (Kraemer and Dedrick, 2002), myths and misconceptions (Grover and Ramanial, 1999; Rangan and Adner,
2001), and business models (Dai and Kaufmann, 2002; Weill, and Vitale, 2002). In addition, businesses which successfully deploy e-commerce are often described. Examples include financial services (Dotan, 2002; Pigni, Ravarini, Tagliavini and Vitari, 2002), bookshops (Loebbecke, Nitaus and Powell, 2000), travel agencies (Clemons and Hann, 1999; Standing and Vasudavan, 2001) and technology firms (Kraemer and Dedrick, 2002).

While there has been some research on global e-commerce (e.g., Palvia, Palvia and Roche, 2002), relatively less attention has been paid to the globalization of e-commerce in the airline industry. Hence, this paper examines the globalization of e-commerce at United Airlines. Specifically, the data came from the main author of the paper (a Product Manager at UAL Loyalty Services) who is responsible for managing United Airlines' international e-commerce activities. The main author of the paper also consulted with colleagues and other in-house sources to obtain additional data as and when needed.

In this paper, we specifically address five questions:

- What was United Airlines’ motivation to globalize its e-commerce presence?
- How did United Airlines deal with organizational issues such as creating an e-culture and deciding among alternative structures for global management (extent of central versus local control)?
- How did United Airlines manage to establish a unified global digital brand?
- What were the Web design and implementation challenges in managing Web site globalization?
- What were the insights gained from United Airlines' experience in globalizing e-commerce?

Although this paper focuses on the experiences of United Airlines in globalizing e-commerce, it is important to note that the lessons learnt are generally applicable to both public and private sector organizations. The insights gained from this study is useful to both researchers and practitioners in better understanding the important issues that need to be managed as well as the potential impact of globalizing e-commerce. Such issues may also provide important avenues for future research in terms of determining appropriate management strategies for dealing with them. For practitioners, knowledge of such issues will enable them to focus more attention and resources on key factors that may affect e-commerce success.

MOTIVATIONS FOR E-COMMERCE
United Airlines, with corporate headquarters in Chicago, operates over 1,800 flights a day and is one of the largest airlines in the world. Currently, a total of 21 international markets are served from various cities in the United States. With the launch of its Web site www.united.com in the USA in 1997, United Airlines moved into the airline e-commerce arena. This decision was largely driven by two factors.

1. The need to accommodate a growing demand for travel online services - Customers have come to appreciate several of the Internet’s unique characteristics including its a) ubiquity - allowing 24/7 access from anywhere, any time; b) interactivity - forming the basis for a two-way dialogue between the airline and customers; and c) customization/personalization - offering the possibility for tailor making the online experience based on the customer’s past purchase behavior and other travel needs/wants. By launching its own Web site product, United Airlines was in a position to enhance the relationship with existing customers while tapping into new market segments at the same time.
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2. The necessity for better control over distribution cost - Traditionally, in the airline industry, distribution in terms of 3rd party commission payments has been one of the highest cost categories besides fuel and personnel. By disintermediating the distribution chain for airline products and services and dealing with customers directly as opposed to through a 3rd party, airlines are in a position to realize distribution cost savings that can be passed on to the traveling public in the form of more attractive fares (Farhoomand, 2000).

Gradually, United Airlines realized that its Web site www.united.com with its focus on the US domestic market was not able to cater to the diverse online needs of international customers in various parts of the world and thereby was prevented from realizing revenue growth and cost saving opportunities offered by e-commerce. There was therefore a need to establish a localized Web presence in each of United Airlines’ 26 international markets outside the United States (Table 1) in order to compete more effectively as well as to provide customers with the necessary Web site tools to conduct their business and leisure travel activities online. According to Adam Levy, Director Product Management,

*As a worldwide carrier, it is imperative that we cater to travelers in each 'local' e-commerce marketplace. We conducted focus groups in our largest international markets to aid in building these sites. We listened to the needs and desires of our global customers. The feedback was very beneficial in designing price offerings, online booking bonuses, convenient shopping tools and other value-added features - all of which were of paramount importance to our customers (UAL news release, 2001a).*

<table>
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<th>Table 1. Worldwide Web Sites of United Airlines</th>
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<tr>
<td><strong>Home Site</strong></td>
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<td>United States</td>
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<td><strong>Worldwide Web sites</strong></td>
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What IS MEANT BY “GLOBALIZING” E-COMMERCE?
In order to understand the term "globalizing" e-commerce, it is essential to explain the conceptual differences among translation, localization and globalization. Translation is the task of changing text from one language to another. It is an important part of "globalizing" e-commerce but not the main one. A critical issue is to ensure that translation captures the nuances of the language as failure to do so can result in distortion and embarrassment. Localization goes beyond translation, assuring that Web site functionalities offered on a Web site are in congruence with local customer needs. Also, localization confirms that Web site text content and imagery featured are relevant to local customers and are culturally appropriate (Gareiss, 2000; World Trade, 2001).
In the context of e-commerce, globalization transcends translation and localization as it addresses the development and implementation of a business and technology strategy for offering e-commerce products and services in multiple international markets. Hence, globalization incorporates translation and localization of content as well as an overall business and technology strategy for global e-commerce. All international Web sites share a generic core of content and functionalities with a consistent digital look & feel across all target markets while being complemented by features for specific locales.

ALTERNATIVES FOR GLOBALIZING E-COMMERCE?
Different airlines have different practices with regards to globalizing e-commerce. Some airlines have no global e-commerce presence at all as they exclusively sell their products and services to online customers residing in their respective home markets. For example, through www.swa.com, Southwest Airlines in the US serves the US market. Likewise, with www.virginblue.co.au, Virgin Blue Airlines of Australia caters to customers in the Australian market. Then, on one end of the spectrum are carriers with a globalized e-commerce presence in the form of localized Web sites featuring in multiple international markets a) a consistent digital brand, b) native language content, c) functionalities to conduct online transactions related to bookings for air/car/hotel products, frequent flyer program, and flight status features, d) country currency for online transactions, d) local market relevant product offerings, and e) local customer support. Examples for this type of carrier include United Airlines with www.united.com/worldwide and Singapore Airlines with www.singaporeair.com.sg.

At the other end of the spectrum are airlines that although maintaining a global route network have a very fragmented Web site presence. Most often, the different country Web sites (if they even exist in a country the airline serves) neither share a common digital look & feel nor do they feature locally relevant content and functionalities. The Russian airline Aeroflot is an example for this group of airlines. In between this spectrum fall carriers that maintain a quasi-globalized Web presence. These carriers satisfy some of the features of a global Web site presence or have globalized their Web presence only for some markets they serve. For example, via www.qantas.com, Qantas Airways of Australia currently maintains a quasi-global Web site presence through 25 local country Web sites that feature content information relevant for these markets. Among these international Web sites Qantas maintains, only six are enabled to allow customers to interact with a localized online product in terms native language online transactions with country currency quotations, and customer support.

CHALLENGES IN GLOBALIZING E-COMMERCE
The challenges faced by United Airlines in globalizing e-commerce can be divided into organizational, Web design and implementation challenges.

Organizational Challenges
Existing structure versus new division/subsidiary: The effort to embark on e-commerce was seen as important enough for a new division to be created. Hence, in Spring 2000, United Airlines created an e-commerce division dedicated to maximizing the sale of travel products over the Internet and Internet-enabled devices. This division helped United Airlines better compete in the burgeoning e-commerce industry through dedicated management and staff resources focused on integrated e-commerce opportunities that enhance the company's online revenues. Doug Hacker, Executive Vice President and Chief Financial Officer states that:

> This organization will allow us to seize new opportunities in the rapidly developing e-commerce arena. The new team, made up of experienced

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professionals from United's e-commerce technology and business teams, will allow us to better serve the growing number of consumers who are taking advantage of new ways of buying travel (UAL news release, 2000a).

In other words, it was felt that a new division rather than an existing in-house department would be able to respond more effectively to market requirements brought about by e-commerce and changing customer demands. With the approval for this new organizational setting secured from United Airlines' senior management and Board of Directors, the focus was on challenges like finding new office space and hiring the appropriate mix of employees from both within the airline and the e-commerce job market. Hiring this very mix of "click & brick" employees with their comprehensive airline industry experience and e-commerce knowledge enabled United Airlines to compete more effectively in airline e-commerce.

The office location for the new e-commerce division was chosen to be outside United Airlines' headquarters. United Airlines' corporate headquarters are situated in a suburb of Chicago called Elk Grove Village, close to Chicago O'Hare International Airport. This approach was done for two reasons. First, this provided the new division with flexibility, independence, and speed to conduct its activities. Second, in order to attract people with e-commerce skills living in the city, it was important for the new division to geographically move closer to the downtown area to allow for an easier commute. The new e-commerce office set-up provided for plenty of open meeting areas plus special breakout rooms that help to facilitate quick interaction among employees from different departments and disciplines.

Further, the traditional top down hierarchy encompassing layers of management is transformed into a hyperarchical organization (see Figure 1). In this organizational setting, the traditional organizational hierarchy is replaced by an informal organizational structure that facilitates direct communication among various units as well as facilitates team-based collaboration at work (Evans and Wurster, 1997). The aim is to recapture an entrepreneurial spirit that had normally been associated with dot-com start-up companies where one typically finds very little to no formal hierarchy. As a result, cross-departmental communication among employees is extremely facilitated and hyperactive resulting in condensed timeframes for decision making and implementation processes. The focus is on the day-to-day management of this new division.

The e-commerce division, led by Scott Praven as President (he had 21 years of experience at United Airlines with his last position that of Vice President Revenue Management), includes a cross-functional team of today about 150 employees covering both business and technical disciplines. This team devotes their attention exclusively to e-commerce and is United Airlines' first online sales organization that is responsible for managing the carrier's many partnerships and relationships with new and existing online travel sites, as well as generating additional online revenues. For example, United Airlines formed partnerships with priceline.com and hotwire.com to market unfilled seats. This helps generate additional online revenue and mitigate channel conflicts since buyers specify the destination and day of departure but not the choice of airlines. This division was subsequently established as a subsidiary known as United Airlines Loyalty Services (ULS), which serves to be the main controller of e-commerce at United Airlines.
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Figure 1. From Hierarchies to Hyperarchies

From Hierarchies at United Airlines...

... to Hyperarchies at United Airlines Loyalty Services

Legend:
Electronic Customer Service: Handles the customer support for United Airlines' Web sites via telephone, email, regular mail, and fax.
Personnel: Human resource department
Partnerships: Department managing both the acquisition of and ongoing relationship with third parties, mostly e-commerce related.
Q & A: Quality & Assurance testing. This group engages in various testing cycles of product prototypes before their implementation to the market place.
Marketing: Manages cyberspace marketing campaigns involving United Airlines' Web sites as well as third party Web site properties.
Network/Hosting: This group manages the technical architecture with a focus on network maintenance and hosting configurations. This also includes online security.
United.com Product: A group of product managers dealing with the online sales/marketing and product development for the US domestic site.
United.com International: Product Manager focusing on online sales/marketing and product development for international markets outside the US.
Strategic Architecture: A group dealing with the analysis/developments of United Airlines' future Web site architecture.
Wireless: A group of product managers coping with the analysis, development, and maintenance of wireless products such as cellular phones and PDAs for online applications.
Balance control versus flexibility: United Airlines has currently operations in over 20 countries outside the United States. In globalizing e-commerce, it is important to take into account the operating conditions and varying degrees of Internet penetration in different countries. In order to deal with this diverse spectrum successfully, United Airlines adopted a management structure which is a hybrid of centralized and de-centralized control. This hybrid structure enables operational efficiencies (due to centralized control) and flexibility (due to decentralized control) (Brown, 1997). In turn, this enhances the ability of United Airlines to be more responsive to the needs of the various international markets it serves. Under this scenario, ULS in close coordination with other key departments including marketing, sales, pricing, IT, and outside third parties provides for a central framework of guidelines for the localized Web sites. Within this framework operates an international network of “Web champions” – local employees that are responsible for managing their respective market content/functionality and quality control. Country Web champions come from the local sales or marketing department. Their core competency and responsibility for this position is to liaise between ULS's headquarters in Chicago and the country sales, marketing, and airport managers for the development, implementation, and maintenance of online products and services. A comprehensive sales and marketing background paired with an understanding of e-commerce technology issues is essential. There is one Web champion per country.

The Web champions are the key liaison between corporate headquarters and local management. Without their involvement and support, United Airlines’ global Web presence would be impossible to maintain.

Michael Hanke, Product Manager, International e-commerce

The management hybrid structure of “Centrally Managed/Locally Executed” enables United Airlines to achieve global consistency for its digital brand while accommodating local management input from relevant Web site stakeholders. Thus, an appropriate balance between the competing organization models of “Centrally Managed/Centrally Executed” and “Locally Managed/Locally Executed” has been successfully implemented (see Figure 2). In deciding on the appropriate global management model to adopt, it is important to consider both advantages and disadvantages of decentralization versus centralization. Decentralization drivers (e.g., the need to respect local cultures, provide autonomy to international managers) must be weighed against centralization drivers (e.g., the need to centralize technological policies, reduce redundant and costly front-end/back-end operations, and assure consistent global site and brand consistency). Finally, the desire to serve content quickly to local audiences must be considered along with security issues, cost and reliability.

An example to illustrate the division of labor between central and decentralized units is given as follows. ULS engages in renewing its privacy policy on the international Web sites. While the overall framework of policies would be provided by ULS headquarters, the Web champions would become involved in adjusting these very policies to be in accordance with local laws and regulations. Besides country specific ad-hoc correspondences via phone and email, there are bi-weekly conference calls between ULS headquarters and the different country Web champions. In addition, face-to-face meetings occur on a quarterly basis with the top five markets. In general, reporting relationships are organized in matrix form. The country Web champions report to the local sales or marketing manager while also featuring a dotted line to the International Product Manager at ULS headquarters.
Deciding on the United Airlines digital brand: When United Airlines headquarters in Chicago decided to globalize www.united.com and make it available in a localized version in its international markets, they found out that some countries had already initiated local e-commerce activities in varying degrees. For example, Japan and Singapore had finished the implementation of a local Web site; Germany and the UK were going through a revision of their Web design; the Latin America markets were in the process of launching their regional Web site; while the Netherlands and Belgium had no Web site presence in their respective markets.

Customer feedback in focus groups provided evidence that United Airlines' various Web sites look-and-feel were not associated with the airline brand as presented in the offline world. Two focus groups (of 15-20 persons each time) were conducted in each of the key markets including Japan, UK, and Germany. For each focus group, half of the participants were chosen from United Airlines frequent flyer mileage program and are known to be very frequent travellers. The other half invited typically comprises travellers that are known to fly on competing carriers. The aim of the first focus group is to identify customer needs and wants for United Airlines products. Based on this information, a prototype Web site was built. A second focus group was carried out to obtain customers' feedback on the prototype Web site. The Web
site was refined based on customers' feedback. In addition to focus groups, United Airlines also engaged in surveys and questionnaires to develop a better online product.

The choice of colors, text, and overall arrangement of information resulted in poor grades in terms of online customer satisfaction. Thus, it was decided that a re-launch with localized Web presence and global digital brand would provide for improved customer feedback, thus growing online revenue as well.

**Digital brand consistency across different countries:** In order to overcome the inconsistency in its global Web site presence in the shortest time frame, United Airlines decided to pursue a two-step strategy. First, equip all country Web sites with the same digital look-and-feel. Second, introduce similar contents and functionalities on all Web sites. Table 2 shows the situation before and after the launch of the new Web site design in conjunction with booking functionalities. Figures 3a-3c show the sample Web sites of the United States, Brazil and Japan to illustrate the consistency in digital look-and-feel. Deciding on the digital brand and appropriate contents/functionalities as well as the associated Web site navigation on all international sites are major issues.

**Deciding on appropriate Web site content:** It is crucial that content provided is appropriate and useful for customers. Inappropriate content may dilute global branding of Web site while less useful and irrelevant content will dissuade customers from revisiting the Web site. Hence, United Airlines decided to leverage existing content on local Web sites and accommodated it within the re-launched international Web site products.

In order to better cater to customers' needs, United Airlines defined four types of content on [www.united.com](http://www.united.com). This work was accomplished with significant inputs from comprehensive customer focus group testing. These categories aim to guide the customer through the site and to the information they seek. In each page, the information is organized into four categories:

- **Introductory text:** This provides an introduction to the section and/or pages that the user is about to view. Every section, such as the Mileage Plus® segment, contains an introductory text explaining what the following pages are about and advises users on the activities they can perform and where to obtain information.
- **Defining text:** This explains the content of the page. This is useful when the boxed link title of the section is not self-explanatory or contains information that the user does not expect. Defining text can be used to point out quick facts. For example, there is a brief paragraph specifying carry-on bag size and weight limits, leading on to the full content of the page.
- **Articles:** This provides detailed information for customers about various topics.
- **Promotions:** Promotional page highlights special offers, products and services, and information on new promotions, located in the right side bar of the page.

**Facilitating ease of navigation:** Since the United Airlines' home page is the starting point for the online experience, it is United Airlines' aim to establish a strong brand positioning up-front. This includes not only the design of the homepage but also how customers can intuitively move about the Web site. To facilitate navigation, the Web site is defined into four key content groupings in each site. In each of these groupings, United Airlines provides travellers with related information to fulfil their needs.

- **Planning travel** - special fares, special offers, create itinerary, find a flight or hotel, request an upgrade, view past itineraries, route maps.
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- **Travel support** - flight paging, check flight status, review baggage requirements, inflight services, get information for special travelers, airport services.
- **Mileage Plus** - check miles, learn more about mileage plus program, update profile, promotions, partners, other programs.
- **About United** - products and services, contact United, check job openings, star alliances, links to United Airlines’ worldwide sites.

### Table 2. Creating a Global Identity

<table>
<thead>
<tr>
<th>Before Web Site Globalization (Fragmented Global Presence)</th>
<th>After Web Site Globalization (Unified Global Identity)</th>
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<tbody>
<tr>
<td>5 different Web designs in 22 international sites</td>
<td>Consistent look-and-feel in all countries</td>
</tr>
<tr>
<td>4 countries with no Web site presence</td>
<td>Most Web sites in at least 2 languages</td>
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<tr>
<td>Inconsistencies in digital look-and-feel</td>
<td>Very similar in content</td>
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<tr>
<td>Dramatic differences in content</td>
<td>English/Native language booking engine</td>
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<td>Redundancies within the Web sites</td>
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<td>No booking engine</td>
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### Figure 3a. Web Site for the United States

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Figure 3b. Web site for Brazil

Figure 3c. Web site for Japan
Implementation Challenges

In-house system development versus outsourcing: Most of the system was developed in-house. The motivation for this approach was to maintain the confidentiality and security of the Web site architecture. The maintenance for the static portion of the Web site (Home page and other Web pages) is done both in-house and with the assistance of third party local content providers. The United Airlines Web site booking tool for fare products was built by an outside company. Its maintenance and updates for new features were provided by a third party as well. The decision whether to engage a third party was governed by whether the activity was considered within or outside the core competency of United Airlines. For example, the maintenance of foreign language Web site content or the building of technology devices such as online booking tools was considered outside the core competence of United Airlines. Hence, a third party was engaged. This approach is consistent with the past literature that found that selective outsourcing is more common that total outsourcing (Lacity and Willcocks, 2000).

Prioritization of implementation schedule: Upon successful completion of Web site prototype testing for the new digital look-and-feel as well as booking tools, United Airlines took into account country specific revenue importance and other strategic factors like Internet penetration rates for determining in what order the implementation would occur. The re-launch of United Airlines international Web site digital brand was accomplished during the first quarter of 2000. From March 2000 starting with the UK, the roll-out of booking tool functionalities was managed in a phased manner and completed in December 2000 with India. There was no deviation from the original implementation schedule which even included highlights such as the launch of a Japanese language booking tool (see Figure 4) making United Airlines the first foreign airline in Japan to do so.

Figure 4. Implementation schedule (March-December 2000)
INSIGHTS FROM GLOBALIZING E-COMMERCE

Several important insights can be gained from United Airlines' experience in globalizing e-commerce. These insights are described below.

Alignment between Business and Technology
Traditionally, United Airlines has realized the importance of aligning IT with the company's business strategy and overall mission of being the "global airline of choice". This holistic view of business-IT partnership has become entrenched in its culture since the early days where computerized reservation systems were used as competitive weapons. Hence, there were no gaps in vision and mission between the business people and the IT people. The e-commerce initiative was made known early to all and there was no resistance from staff. This is due to strong top management support and clarity of purpose which helps to focus efforts in leveraging the Internet to tap global opportunities such as reaching out to potential customers and reducing distribution costs.

Setting Up of Separate Division to Implement E-commerce Initiatives
United Airlines realized that opportunities offered by the fast-paced world of the Internet could not be effectively harnessed if decision making requires approval from several layers of hierarchy. Further, staff who are involved with both the physical world and the digital world would be torn by differing priorities. Consequently, a decision was made to create a separate division led by an experienced senior staff together with "click & brick" manpower dedicated to tapping into opportunities offered by e-commerce. This decision proved to be wise and correct as the new division was able to implement e-commerce more rapidly and better able to respond to environmental changes and competitive pressure from other airlines' e-commerce systems.

Establishing Clear Strategic Direction
United Airlines realized that in order for the new subsidiary ULS to be effective, it is crucial to establish clear strategic direction in terms of goals to be achieved. Hence, one of the key goals of ULS is to expand United.com and execute its strategic direction to have a localized Web site presence with key functionalities in every single international market in its route network. This goal was accomplished in December 2000 and actually has put United Airlines into an industry leadership position. These Web sites offer localized features such as native language content relevant to local customers, fare pricing in local currency and local contact information and simultaneously emphasize global consistency in digital branding. Thus, international customers are presented with a Web product of consistent digital look-and-feel across different markets allowing them to purchase in local currency and learn of country specific services and contact information that are available in those markets where United Airlines operates. Customers are not required to be a resident of the country where they choose to buy their tickets. Thus, the point of sale concept as valid in offline distribution channels does not any longer apply to e-commerce: what counts is the point of departure.

Think Global, Act Local
The management model for various Web sites attempts to balance the advantages offered by decentralization with that offered by centralization. Hence, United Loyalty Services (ULS) and several other departments from United Airlines' headquarters set guidelines and provide central control. In turn, each country office has a local Web champion who will ensure that guidelines are followed and that each individual Web site is customized for that region. This customization includes not only providing local links but also providing services in the local
language and currency. This strategy is in line with previous research findings which show that consumers are more likely to engage in electronic transactions when they are addressed in their native language in a Web site that is customized to suit local market conditions and customer needs (The Industry Standard Grok, 2000-2001). Further, Forrester Research reports that visitors will stay with the Web site twice as long if it contains native language and culturally targeted content (Silberstein, 2000).

Create an E-culture
In establishing a new division, it is important to create an e-culture that is responsive to changing needs (Travers, 2000). The new division, comprising about 100 employees, simplifies and facilitates cross-departmental communication due to its hyperarchical organization where traditional formal hierarchy is eliminated. In order to ensure its success, the division also recruited appropriate personnel from other United Airlines divisions as well as from outside the airline company. The key is to have a balanced mix of “click & brick” people as they bring with them invaluable experiences from the digital and/or physical world that are crucial in leveraging the potential of the digital world and overcoming the constraints in the physical world. The compensation package offered is designed to attract talent from the marketplace that would traditionally not necessarily be compelled to work for an airline company.

Continued Innovation
Information systems are often implemented with the goal of improving the company’s primary business functions and providing value (benefits) for customers. The barriers to imitating such a strategy are not unbreachable. Hence innovation and product differentiation through new products and services are critical in sustaining a significant competitive advantage (Porter, 2001). In line with this, United Airlines recognizes that m-commerce (mobile commerce) provides for new opportunities of accommodating customer needs for information and service. United Airlines has already embraced wireless technology by providing various WAP (Wireless Application Protocol) services on its Web site. In fact, United Airlines was the first US carrier to offer booking and ticketing through wireless-enabled PDAs.

We recognize the tremendous penetration of PDAs amongst our business and leisure travelers who depend on easy interface and convenience of wireless devices for both business and personal transactions. Our new PDA booking capability is an ideal fit for this mobile lifestyle. As the first domestic airline to offer WAP booking back in November 2000, and again being the first to offer PDA booking, United Airlines continues its commitment in providing its customers the ability to complete their travel booking experience anytime, anywhere.

Steve Orr, Wireless Product Manager
(UAL news release, 2001b)

Further, in March 2002, United Airlines introduces Easy Update - a new service that adds new features and functionality to its wireless suite of services. This service enables customers to receive a wide variety of travel-related information through various wired and wireless devices.

United EasyUpdate takes the airline's Proactive Paging service a large step forward by giving our customers the ability to tailor our service to meet their specific needs and allows customers to receive information via voice or text.

Chris Bowers, Senior Vice President of Marketing and Sales

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(UAL news release, 2002)

Crisp Design and Intuitive Navigation of Web Design
United Airlines firmly believes that Web design plays an important role in persuading customers to visit and spend time on the Web site. The basic philosophy is that the Web site must make customers perceive that United Airlines is "easy to do business with" as emphasized by Zemke and Connellan (2000). Through continuous feedback by customer focus groups, much attention is given to ensuring that appropriate and useful content are available and that the Web sites are easy to navigate. Ease of navigation, which is closely linked to good design, enables customers to move about the Web site in a simple, logical and intuitive way. Fanciful graphics and animations which take a long time to download are avoided. Note that it is important to balance speed with "getting it right" in the initial development. In fact, the trick is to get the important things right the first time and then iteratively enhance the Web site based on customers' feedback and suggestions (McMahon, 2000).

Offers Comprehensive Web Site Products that Enhance the Online Customer Experience
In order to enhance the users' experience, the Web site aims to offer users choice, control and convenience.

- **Choice** - Users can access a wide variety of information from flight schedules, requesting flight paging or special meals or even wheelchair assistance; frequent flyer promotions, airport maps, and recommendations for selected restaurants to common travel phrases in over 70 languages among others.

- **Control** - Users can choose the information they wish to receive and specify the method of notification.

- **Convenience** - Users can access the information from anywhere in the world - from their homes, offices or offshore areas at anytime of the day.

Establish a global digital brand identity
Although each local Web site also has some flexibility in customizing content for their market, the central guidelines help secure consistency in United Airlines’ global Web site presence for the 26 international markets (outside the United States) that United Airlines operates as it helps to ensure consistency in look-and-feel of the various Web sites. Consistency in brand is important as diversions in Web site design can be a disruptive experience for international customers.

Be Clear on Value Proposition and Provide Incentives for Customers to Book Online
In order to support the shift to the Web as a low cost distribution channel, United Airlines provides for a first-time and every time booking bonus, thus offering customers additional incentives to gain extra miles. Also, United Airlines’ online value proposition has always been to feature every day fare products at price points that are at least at the same level (if not below) as that offered through offline distribution channels like the airline’s customer reservation center or travel agencies. Obviously, the cost savings realized from the disintermediation of the distribution chain allow highly competitive pricing since cost savings are passed on to customers. In doing so, United Airlines demonstrates their commitment to customer satisfaction. In fact, the Web site helps customers search for lowest fares online and customers can even choose their seats.
Globalizing e-Commerce at United Airlines

Impact of Globalizing E-Commerce
Despite the airline industry problems post September 11, 2001, United Airlines has managed to generate over $1 billion in online revenue in 2002. This revenue volume – even in comparison with other industries - is a tremendous achievement and underlines the significance of e-commerce activities at United Airlines today and for its future. Also, since 2000, United Airlines has received several awards for its Web site (UAL news release, 2000b). Among the awards are the Internet Site Honors in Gomez Advisors' Spring Airline Scorecard. Also, Peppers and Rogers Group, a leader in the one-to-one marketing field ranked United Airlines as among the top 25 Web sites out of a list of over 400 Web sites. In addition, the Web site was ranked 17th on InformationWeek's Innovation 100 and placed 32nd in the Smart Business 50 (the highest among the airlines). Finally, in Spring of 2002, Travel Weekly, a travel industry magazine distributed throughout Asia, recognized United Airlines Web site in Singapore as the best airline and travel Web site in Asia.

CONCLUSION
Rapid advances in technology change the way business activities are conducted in this information technology age. The Internet and IT have become an integral part of business operations and are being leveraged to enhance business efficiency, effectiveness and competitive advantage. The travel industry and particularly the airlines have embraced IT both for business-to-business (B2B) and business-to-consumer (B2C) type of e-commerce. By doing so they have been able to strengthen their customer focus and improve the quality of products and services. The products and services offered by major airlines are reaching a state of little differentiation. Almost all major airlines are providing flight information, allowing booking of flights and planning of itinerary on the Web. It is evident though that United Airlines has adopted a global approach in organizing and managing the on-line sites through the respective country Web champion. This “part global, part local autonomy” provides economy of skill as well as localized flavor in the respective Web sites and is one of the key success factors. With the focus on existing products and services to attract and retain customers, and at the same time embracing and implementing global e-commerce, United Airlines has effectively leveraged on the Internet to maintain a competitive edge in the fiercely competitive travel industry.

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