

1 INTRODUCTION

The great impact of Electronic Commerce (E-commerce) and World Wide Web are now visibly an imperative part of urban living. From a more interpersonal perspective, needless to say, these overwhelming notions have indeed contribute enormously in our daily surroundings and is projected soon to submerge as a basic living category in near future. From the macro altitude, one most affected are the businesses. From material to intangible productions, none not inspired by the swift changes of E-commerce and World Wide Web.

Although the fundamental E-commerce started since 1970s when electronic fund transfer was first introduced, but Web commerce only came in early 90s as medium of business conduct, not only for goods exchange, but also for customer servicing, business partners collaboration and electronic transactions within an organization (Turban, 2002). The ex-CEO of International Business Machines (IBM), Gerstner once noted, *"E-commerce is all about time cycle, speed, Globalization, enhanced productivity, reaching new customer and sharing knowledge across institution for competitive advantage"*.

In general, Web site, the infrastructure of E-commerce roles as a channel for information transfer, a platform for transacting, nothing simpler than an interface for providing customer service. It is basically represents the most visible instance of a networked customer service system (Piccoli, Brohman, Watsson and Parasuraman, 2003) that induce the transformation of buyer-seller relationship and tipping balance of power in favor of consumers. This channel with Interactive technology gives marketers a cost effective way of attracting consumers into one-to-one relationships fueled by multi-way communications.

Despite the increasing importance of the online channel, E-commerce has its threatening element if not managed strategically. Most often failures are induced from the inadequate online demand for creating sufficient marginal revenues in sustaining the high budget invested. Companies do not apply the same management insights and they either treat their online customers differently than they do offline customers, or not utilizing the full leverage of its virtual storefront.

Optimism on Web commerce has never held back, not even during the dotcoms bubbles burst. People still dial up. The warmth from consumer market has never decelerated. It is all depends on how marketers utilize it for good before others do.

While there are so many industries advantaged from Web commerce, this paper has specifically chosen airlines as subject of discussion. Being one of the most influential transportation modes made airlines an important role of nation, be it socially, economically or politically. In many countries, airlines are governed and gain tremendous support from government. The vital presence is not just simply an industry prepared thousands of job opportunities, breaking the barriers of mobility but more significantly is its success of being the minority economic segment in both virtual and real market. Airline Websites and travel Websites are the common Web commerce players, which simultaneously characterized few business models such as affiliate marketing, group purchasing, customization and personalization, and supply chain improvers. All these different methods help to position an organization in the value chain.

During the Aviation Industry Conference, 2004 in London Churchill, UK, the head of Marketing and Sales of Air Malta, Dale Keller quoted that in many ways, the low cost airlines have out-gunned the traditional airlines in terms of public relations and marketing. Scores of

industry analyst also think the phenomenon is largely base on the changing face of customer relation management that capitalized on its Web commerce strategy. No frills airlines outperformed with inventive ways to exploit the functional and technical capabilities of their reservations systems. More and more carriers today realize what they need is a customer-centric technology rather than pure software application in enabling these airlines to market themselves as an efficient carrier with excellent customer services.

Today, sustaining an effective Web strategy is part of the corporate mission, Websites have been transformed into global engines for sales and revenues, will continuously make over business value chain, and where only niche experts will be able to outperform in ways unknown to traditional cycle. Success of no frills airlines indicates the impact of Web presence seems strategically effective in achieving overseas market expansion and defensive move. Giving some live example, award winning Web sites like Rynair.com in the west, and airasia.com in the east, had successfully turn from a negative profit margin company to one of the most noteworthy inter regional economy contributor.

The following sub section shall discuss further the nature of the industry and how its close link with Web commerce deciphers strategic positioning.

1.1 AIRLINE AND WEB PRESENCE

In relation to Web commerce, airline business is naturally technology-driven as well. In fact, it was one of the earliest industry to operate globally by means of implausible technical achievement in processing capacity and attainable networking.

Started in early 1970s, technology revolutionized the industry by automated processing systems over copper wires and electronic check-in. Taking a decade later, in the early 1980s, global distribution systems (GDS) came aboard, the bonding between airlines and electronic commerce took off. Airlines begun to sell tickets online and every travel agent could easily access to airfares within clicks and widen the horizon of distribution channel.

The miracle of technology did not stop just there, and it is not just meant to enhance operational efficiency. The Frequent Flyer programs introduced in late 1980s, had advocated 'loyalty' among valued passengers. Followed by the development of customer database and intelligent push agents, marketing channel was lifted to another new paradigm. The ability to distribute more effectively than competitors was a big advantage.

Now flash-forward to today's carriers, majority invested millions on its Web presence, transitioning business activities into a newer, faster, easier and lowest possible marginal cost platform of Web commerce. It is strategically too important in creating competitive advantages. Despite that, technology deployment poles apart between each carrier. Integrating the technology with other aspects of business effectively becomes a critical skill not to be missed.

Why is Web Commerce Crucial to Airlines?

Early this year, Customer Respect Group reported an notable online travel booking for the year 2004 worth US50 billions, and it is expected growing towards US90 billions in 2009. Adding to that, in IDC Internet Commerce Market Model forecast 2003 also reported worldwide Internet users are expected to surpass 1 billion by year 2007. In line with all these encouraging exponential development of Internet usage and communications infrastructures, airline companies realize Web selling is no longer marginal opportunity.

As dynamic as the factors surrounding the travel and tourism industry, carriers cannot afford to survive merely as a transaction-oriented business. Web sites has permanently reshaped customer interaction. The successful suppliers will recognize and accommodate a broader and more complex definition of interaction, one that focuses on creating customer centric and having profitable booking conversations with customers to meet their traveling needs.

Web site is the frontier, just like brick and mortal storefront, how it functions to users, is how it sending the welcoming message and premier class customer service to them. Buffer for flux is just not affordable, they might not come visit forever. The cruel fact, airlines that do not embrace Web commerce is for sure loose out in the race. But then again, Web commerce is not something just onboard, if web commerce phase 1 is to set up transactional presence, then phase 2 has to be safeguarding revisitations.

Undisputable, Web site not only changed the purchasing pattern and resulted in commercial revolution, at least in the airline industry. But having its own Web presence has encourage people making inquiries, direct booking, and save the millions of cost revenue sharing

with agent. It is estimated distribution cost reduced by 75% through the use of Internet reservations whereas conventional in practices, airlines has to pay travel agent in the range of 3-25% commissions, besides spending sizeable budget and resources on selling and issuing tickets by their own (Yang, 2001).

On the other hand, way of conducting business electronically using networks and Internet also get hold of great global support. Subsequent forums and airline congresses openly discussed the close relevancy about the carriers' brand equity; the net and cost. Truly, Web presence is not just about saving money.

Along with the good hearings of synergies created among airlines and web commerce, some theories anticipated Web site will flung carriers into dilemma from intermediaries to cyber-intermediaries issues. Soon, conventional travel agent will be out of job. But how true can that be? Would web sites only translate opportunities and not threat to airlines business?

1.2 ISSUES STATEMENT

What are the issues confronted by airlines in prevailing successful Web commerce? The Internet blessing to the airlines is just one side of the story, if not capitalized well it could dilute the strength of the company. Eccentrically, what could still be wrong when the economic driving forces are so properly aligned for the future of airlines' Web commerce?

Statistics tells us, expected results are not fully reflected. Some carriers succeeded with glory, some still facing both online and offline competition from the intermediaries. During the first quarter of 2005, a painful news hit the airlines web presence badly. A survey on airlines, hotel and resorts, online travel companies and passenger transporters was conducted by The Online Customer Respect Group (an international consulting firm that provides objective and scientific measurement of customer's online experience among Fortune 500 corporations). Result shows down side for airliners that only scored an average of 6.6 CRI (CRI is the online satisfaction rate, Customer Respect Index), comparing to higher score of 7.3 for online travel companies. Expedia, Orbitz, and Travelocity, in that order, were the top three ranked sites in the study, scoring significantly higher in terms of customer experience and conversion than any airline site with the exception of Southwest. Even though this statistics are merely implied on US-based organization but it did provide a reverberation to the rest of the industry players.

Subsequently, industry expert, Dr. Bonny Brown, Keynote Systems, Director of research and public services also commented that greater selection is the major inherent advantage for online travel agencies and they are doing a better job in creating a cut above overall

online experience. The airlines are just not fully capitalizing on their loyalty programs and direct ties to the customer.

In venture for the leverage of web synergy, these facts and remark really isn't heartening in the stance of shareholders. What's more there are still arrays of proposals for infrastructures and technology expansion in pipeline for budget approvals.

Before stepping into further unproductive investment, there needs to be the means for airlines to measure how successful their Web strategies are if they are to be able to assess the satisfaction from users effectively. A critical call for issue identifications and benchmarking is urgently required. What is the airlines Web site effective level in general?

Worth of note, a phenomenon with possible opportunities suddenly conveys threats than ever.

Creating and Defending Market Share

An unavoidable challenge is related to market evolution. Under the fascinating growth of World Wide Web users globally, not just the number of users increases, but the experience accumulated caused users' taste evolve and greater demand for new cool pages, unique interface and quality come following. Airlines is precarious with the intriguing predicament for majority in asking how should they attract visitation and new coming of Web users, prompt their interest, and close successful transactions with them? What are the strongest and weakest areas airlines Web site portraits in its value delivery?

Although Web site is good communication channel with customers, but also can be more difficult for the airlines to realize how

many unsatisfied customers they have because they would not struggle at ticket counter to relief their frustrations. The web presence basically tarnished unrealized. Unhappy customers will simply browse competitors' URL, or online travel hub such as Travelocity to check if that web site can meet their needs more efficiently.

Need for Evaluations

Web commerce suppliers like airlines have to follow closely with the mentioned changes and filling the supply-demand gap in terms of online quality. But it is likely that a significantly smaller proportion really know how successful their sites are. The measurement of business activity is part of the business life cycle and should persistently applied in E-commerce nature too. However, the difficulty lies in how to measure e-business activity accurately and meaningfully.

Although organizations are becoming aware of the potentialities of Web technologies and passionately invested millions dollars onto the online storefront, many organizations today are still reserve in disbursing additional resources for evaluation purposes. Largely depends on common market guide or web analytics software application to cover the loop. Unfortunately, these easily obtained statistics such as hits, page views, visits, visitors and sessions are too basic to measure the success of a Web site, and some might no longer valid in today's Web commerce environment and industry-need. Many of today's evaluation done by carriers have ignored competitive analysis. Majority survey and research on single airline company are targeting on the users and potential users. Without knowing how well competitors are doing, it is impossible to gauge the benchmark of its competitors' marketing efforts compared to its own.

Even so, definition of quality takes account of multiple aspects like usability, credibility, efficiency and satisfying experience. Having single surface of investigation can never be adequate to derive constructive solutions. Nonetheless, Web commerce is not something just onboard after all, somehow overcrowded theories, approaches and statistical data, created even more confusion of which is comprehensive and helpful in understanding the real cause and effect (Turban & Gerhke, 1999; von Dran et al., 1999; Aladwani, 2002). Generally, at present, evaluation metrics used are too basic and widely disperse, while the approaches recommended by scholars are too complex, not to mention standards for industry centric is even clueless (Selvidge,1999). Considerable effort needed are knowledge among the management on approaches and metrics for ascertaining and quantifying the components of Web site interaction value as perceived by customers, as well as studies focusing on providing specific managerial guidance to organizations for maximizing the return from their Web site investments. (Piccoli, 2003)

Within this context, there is always a reason to know, are worldwide airlines Web sites perform as an effective tool in meeting customer needs?

Controversial of statistics

Yet, controversial rise among research data in determining crucial evaluation criteria. Among example are the Web site credibility project conducted by Stanford Web Credibility in year 2002; apparently consumers themselves did not evaluate a Web site's credibility base on the attributes they suggested beforehand. In actual fact, there are

many other examples of inconsistency found and the irony had worsen the credibility of entire evaluation purpose. Then again, how to ensure accurate measures?

Competition from Intermediaries

The airline industry is a service segments that experiencing extreme competition from travel agents which used to be their business partner. In midst of leveraging direct distribution sales and agency, it is indeed a great challenge for the airline companies to balance quality on both channels.

A Delphi study done by McCubbrey, 1999 indicates panel members has high beliefs that airlines web services has more competitive advantage compared to cyber intermediaries under both high and low transaction frequency and complexity level. But in E-commerce, sense of semi-monopoly does not exist for airlines like it used to be when offline. There are no guarantees a particular supplier free from competition (Srivihok,2000). According to the theory of competitive rationality, once a firm in the industry has pioneered and introduced a dominant Web site design (i.e., a competitive move) direct industry competitors tend to replicate it because of its highly visibly Web presence (Piccoli et al., 2002).

Having said so, popularity among online travel hub is irresistible majority, why and what causes the trend? Question is do the airlines Web designs meet general expectations?

The shortcomings for airlines are users who preferably research for itineraries and comparative pricing, then make reservations over

free toll call center or their travel agents. Cybermediaries have several advantages than airline web services as they permit travelers to book on almost any airline, allow itineraries and price comparison, giving greater flexibility. Some airlines that realized the worrisome element had started reaction by integrating with more external business partners and value add services, whereas the incompetent ones are still searching solutions to combat the online travel agents.

In fact this study will further conclude that most airlines firms are very comfortable providing general information and basic transaction support, but find it difficult to provide extensive personalization and interactive service. The complexity of functionalities beyond basic services and the current limitations of development resources seem to be responsible for the limited qualities characterizing current Web sites.

Bottom line, dependency on prudent management planning and enormous investment in infrastructure is just injudicious if its Web site is not making best use of it for potential benefits. Needless to say, resources are also wasted. As high can an aircraft bring its passengers up, it should also be able to fly up its own success through this incredible mode of online transport.

In quest to enlighten the uncertainty revealed above, the next section will outline how this research can contribute in achieving the objectives.

1.3 RESEARCH OBJECTIVES

The objective of this research is to perform empirical study to examine the impact of using two different instruments on evaluating distinctive perspectives of the airlines Web sites that undergo stiff competition from intermediaries.

This paper is purposively documented to emphasize the importance of accounting for all aspects of Web characteristics in studies that assess effectiveness level, for example to compare the interface designs between an objective and subjective manner. Effectiveness is often difficult to measure in a robust way. This may be the reason why several studies involving complex tasks refrain from accounting for effectiveness and settle for basic efficiency instead throughout the interaction process. These studies rest on the assumption that an efficient interaction process indicates that the user also performed well in terms of crucial effectiveness indicators such as solution quality. (Frokjaer, Hertzum & Hornbaek, 2000)

In quest for facilitating such evaluation, this paper explores the interactions between Web features (design) with a set of criteria (quality). Consistent testing and refinement of instrument is in fact the soul of research, to create a specific, industry savvy measurer to accurately reflect the virtual site of airline business. Detailed examination of each Web site will be conducted to make meaningful and constructive suggestion on how to improve, maintain and challenge the existing Web sites against vigorous competition from other carriers and intermediaries. In addition, general interlocking marketing and operational weakness and strength can also be detected from this electronic storefront.

Both Web features review and user evaluations responses are sought to answer the following five questions posted in previous sections:

1. Do worldwide airlines Web sites perform as an effective tool to meet its customer needs?
2. Do the airlines Web designs meet general expectations?
3. What are the strongest and weakest areas airlines Web site portraits in value delivery?
4. What is the airlines Web site effective level in general?
5. What is the most accurate way to measure airlines Web presence?

Through identification of these possible success factors that differentiate one Web site from others in the same industry (Schubert & Selz, 1999) airline can improve their offerings by understanding what is demanded from consumer side. Improve customer services and quality control for winning competitive advantage.

The propose instrument will be valuable to researchers and practitioners interested in implementing, designing, managing Web sites. Business need to evaluate current and potential Web functionalities, and take decisions and maximizes ROI, by ensuring customer receive high value when suing Web sites. Such evaluation is especially critical given rising importance of supplementary services and widespread adoption of Web in interacting with others.