A longitudinal study of the use of the Web by regional tourism organisations in the Asia Pacific region

Lois Burgess
*University of Wollongong, lburgess@uow.edu.au*

Joan Cooper
*University of Wollongong*

Carole Alcock
*University of Wollongong, caroleal@uow.edu.au*

Preeti Uppala
*University of Wollongong*

Follow this and additional works at: [https://ro.uow.edu.au/infopapers](https://ro.uow.edu.au/infopapers)

Part of the Physical Sciences and Mathematics Commons

**Recommended Citation**
Burgess, Lois; Cooper, Joan; Alcock, Carole; and Uppala, Preeti: A longitudinal study of the use of the Web by regional tourism organisations in the Asia Pacific region 2004.

Research Online is the open access institutional repository for the University of Wollongong. For further information contact the UOW Library: research-pubs@uow.edu.au
A longitudinal study of the use of the Web by regional tourism organisations in the Asia Pacific region

Abstract
The information-intensive nature of the tourism and travel industry suggests an important role for Web technology in the promotion and marketing of tourist destinations. With reports of travel purchases and reservations being one of the fastest growing segments of the Internet community (eMarketer, 2002), it is no surprise that the number of tourism operators on the Web has increased considerably over the past few years. This paper presents the results of a longitudinal study of the use of Web technologies by Regional Tourism Organisations (RTOs) in the Asia-Pacific tourism industry. The Websites of 195 RTOs in the Asia-Pacific Region were evaluated using eMICA over the period 2001 to 2004. The study revealed that over the three year period, all 195 RTOs had established more than a basic Internet presence. In 2001, there were 12 sites located within this stage. By 2004, the number of sites that had progressed from lower levels of functionality in the second stage of eMICA (promotion and online service and support) to higher level provision had increased from 36 to 113. Another significant finding is the increase in the number of sites offering full eCommerce facilities (an increase of 14 from the 2001 study). The results of the study add further support to the premise of the model, that is, in developing commercial websites, businesses in this industry sector typically start simply by establishing a presence on the Web and build on functionality over time, as their experience and expertise in the use of Internet technologies increases.

Disciplines
Physical Sciences and Mathematics

Publication Details

This conference paper is available at Research Online: https://ro.uow.edu.au/infopapers/3963
A LONGITUDINAL STUDY OF THE USE OF THE WEB BY REGIONAL TOURISM ORGANISATIONS IN THE ASIA PACIFIC REGION

Lois Burgess¹ Joan Cooper² Carole Alcock¹ and Preeti Uppala¹

¹School of Information Technology and Computer Science
University of Wollongong, Australia
E-mail: lburgess@uow.edu.au
carole@uow.edu.au
pu33@uow.edu.au

²Flinders University
Adelaide, Australia
Joan.cooper@flinders.edu.au

Abstract

The information-intensive nature of the tourism and travel industry suggests an important role for Web technology in the promotion and marketing of tourist destinations. With reports of travel purchases and reservations being one of the fastest growing segments of the Internet community (eMarketer, 2002), it is no surprise that the number of tourism operators on the Web has increased considerably over the past few years. This paper presents the results of a longitudinal study of the use of Web technologies by Regional Tourism Organisations (RTOs) in the Asia-Pacific tourism industry. The Websites of 195 RTOs in the Asia-Pacific Region were evaluated using eMICA over the period 2001 to 2004. The study revealed that over the three year period, all 195 RTOs had established more than a basic Internet presence. In 2001, there were 12 sites located within this stage. By 2004, the number of sites that had progressed from lower levels of functionality in the second stage of eMICA (promotion and online service and support) to higher level provision had increased from 36 to 113. Another significant finding is the increase in the number of sites offering full eCommerce facilities (an increase of 14 from the 2001 study). The results of the study add further support to the premise of the model, that is, in developing commercial websites, businesses in this industry sector typically start simply by establishing a presence on the Web and build on functionality over time, as their experience and expertise in the use of Internet technologies increases.

Keywords

Electronic Commerce, Regional Tourism, Destination Marketing, Internet, World Wide Web

INTRODUCTION

The commercialisation of the Internet has led to the widespread usage of online services and being connected to the Internet is a high priority for both large and small to medium size enterprises (SMEs). Doing business online provides new opportunities for business, as well as presenting new business opportunities, facilitating new forms of e-commerce across industries in both business to consumer and business to business markets (Burgess and Cooper, 2001). Estimates of total online sales for consumer markets in 2002 were $43.47 billion for the United States ($73 billion including travel), $28.29 billion for the European Union and $15 billion for the Asia-Pacific region (NUA Internet Surveys, 2002). There is no doubt, judging from these figures that it is imperative for any business to be part of this global e-commerce community. One industry sector that is poised to reap the benefits that e-commerce has to offer is the Tourism Industry.

With reports of travel purchases and reservations being one of the fastest growing segments of the Internet community (eMarketer, 2002), it is no surprise that the number of tourism operators on the Web has increased considerably over the past few years. eMarketer reports that the online travel market in Asia will increase dramatically in the future. In spite of this prediction, PhoCusWright (2004) report that in Asia, the online travel industry is still in its infancy. Globally, revenues from the online travel industry will rise to a predicted USD 13.3 billion in 2004. The travel market in the US alone is currently worth $190 billion. It is also predicted that by 2006, more than half of all tourism business will take place online (PhoCusWright, 2004).
Tourism and travel are unusual products, in that they do not exist when they are purchased. Tourism and travel exist only as information at the point of sale, and cannot be sampled before the purchase decision is made (WTO, 2003). Research contends that the search for information used to plan travel is likely to take longer and to involve the use of more information sources than the search for information about other consumer products (Fodness and Murray, 1998). The information-based nature of tourism products means that the Internet, which offers global reach and multimedia capability, is an increasingly important means of promoting and distributing tourism and travel services (cf. Walle 1996). The Internet is a potentially significant means of promotion and destination marketing for the Asia-Pacific tourism industry.

The tourism industry is characterised by offering complimentary business. For example, a tourist will use a range of travel products including air travel, car hire, accommodation and tour services. These services are typically provided by a range of different organisations. A well designed website can facilitate planning of a range of tourism and travel services and help ensure that the right choices are made, resulting in a more enjoyable experience for the tourist (Rita, 2000). It can also serve as a distribution point for all the services a tourist will need to plan their vacation. Tourism destinations “emerge as umbrella brands, hence, destination marketing organisations increasingly have to identify niche markets and develop their interactivity with potential tourists” (Rita, 2000, pg.2). Rita (2000) proposes that each tourist destination must have a major website acting as a gateway providing a “one-stop” portal to the destination rather than relying on a fragmented number of individual Web sites.

REGIONAL TOURISM

Tourism is an important driver for regional development. The extent to which new opportunities may be developed will depend on the type and quality of a region’s natural assets, the management capacities of regional tourism organisations and operators, and the degree of appropriate support from governments at all levels (Tourism White Paper 2003). Tourism also provides an opportunity for regions to develop in a sustainable way.

The tourism industry provides a wide variety of products and services, including adventure tourism, culture and heritage, transport, accommodation, retail and hospitality. Regional destination marketing organisations called Regional Tourism Organisations (RTOs) form part of the industry structure, and it is these organisations that are the focus of the current study. RTOs form an important layer between central government and the local tourism industry, potentially providing a coordinated and comprehensive marketing effort, and acting as a portal for visitor access to tourism operators and service providers.

Regional Tourism Organisations are typically Public Funded Organisations with the primary function of promoting tourism throughout a region. RTOs may take many forms, however they tend to be most commonly represented in the form of Tourist Information and Visitor Centres. In a broader sense however, any organisation which promotes a region in terms of tourism related goods and services could potentially be classified as an RTO. Traditionally RTOs have acted as an initial contact point for tourists / visitors and provide information on attractions, accommodation and services offered within that particular region. In recent years, there has been a trend towards supplementing the traditional ‘bricks and mortar’ RTO with a website offering services via the World Wide Web (WWW).

This capacity compliments the traditional RTO locations throughout the Asia Pacific and provides an alternative and more feasible contact point particularly for international visitors who increasingly research their holiday destinations before arrival. A particular benefit of web technology adoption by RTOs is seen as an increased ability for smaller businesses to compete online, enabling them to market their product to the global marketplace at a greatly reduced cost.

TOURISM IN THE ASIA PACIFIC REGION

The Asia-Pacific has been a vehicle for the exchange of cultures, ideas, crafts, beliefs, peoples and technologies between the East and the West. In 1991 there was a renewed interest in the region with respect to cultural exchange, trade and tourism (WTO, 2003). The number of tourists travelling to the region has grown rapidly. In the increasingly competitive tourism marketplace (with beach tourism forming a considerable sector within the industry), islands in the Pacific are capitalising on the economic benefits that accrue from the development of tourism.
It is likely that the Asia and Pacific region will continue to be the focus of the worldwide tourism industry in the future. Over the last decade, tourist arrivals and receipts rose faster than any other region in the world, almost twice the rate of industrialised countries (WTO, 2003). Between 1980 and 1995, tourist arrivals in the region rose at an annual rate of 15% (WTO, 2003). The WTO (2003) projects that by the year 2010, the region will surpass the Americas to become the world's number two tourist region, with an estimated 229 million arrivals. The region is now regarded as a major generator and receiver of tourism, this is attributed to a number of factors such as: strong economic growth, increase in disposable income and leisure time, easing of travel restrictions, successful tourism promotion, and a recognition by host governments that tourism is a powerful growth engine and generator of foreign exchange earnings (Singh, 1997).

Tourism is one of the most important sectors in the economies of Asia Pacific countries. Overall, the region has witnessed a general economic recovery which has led to an increase in domestic and international tourism activities. Marketing campaigns have been more focussed towards selected markets. Many of the countries in the region have benefited from assistance provided by the WTO. For example, Malaysia's Rural Tourism Master Plan, aimed at providing guidance for controlled development of rural tourism and consultancy assistance in the areas of policy direction, infrastructure development, marketing and training.

The World Tourism Organisation (2003) reports that high growth rates can still be found in the North-East and South Asian countries, most of which have fully recovered from their 2003 losses. The strong impact of SARS on destinations of North-East and South-East Asia like China, Hong Kong and Macau, Malaysia and Singapore has largely been overcome. Despite the SARS outbreak in the region, travel to most destinations has grown by over 15% in 2003, reaching over 100% during April. The region has witnessed a renewed interest in travel to and from China, while arrivals to the Philippines and Singapore increased by almost 25%. Other factors contributing to growth in the region include expansion of the Indian economy and rising tourism levels in Australia and New Zealand (WTO, 2003).

THE EXTENDED MODEL OF INTERNET COMMERCE ADOPTION (EMICA)

The Model of Internet Commerce Adoption (MICA) was originally developed for a study in the Australian metal fabrication industry (Burgess and Cooper 1998). The model proposes that in developing commercial web sites, SME organisations typically start simply by establishing a presence on the Web and build on functionality over time, as their experience with and expertise in the use of Internet technologies increases. In addition, as Web sites build on complexity, so will the number of functional components incorporated into the site increase. MICA consists of three stages, incorporating three levels of business process – Web-based promotion, provision of information and services, and transaction processing. The stages of development provide a roadmap that indicates where a business or industry sector is in its development of Internet commerce applications.

As sites move through the stages of development from inception (promotion) through consolidation (provision) to maturity (processing), layers of complexity and functionality are added to the site. This addition of layers is synonymous with the business moving from a static Internet presence through increasing levels of interactivity to a dynamic site incorporating value chain integration and innovative applications to add value through information management and rich functionality.

Since the original study in 1998, MICA was applied to the government sector (Boon 1999) and tourism industry (Burgess and Cooper 2000) in Australia, resulting in its enhancement as an extended Model of Internet Commerce Adoption (eMICA). The central tenet of the extended model is that while businesses develop Internet commerce applications in stages as proposed by the original version of MICA, complexity and functionality vary greatly between applications, and even between businesses in an industry sector. In line with this, the extended model proposes that a number of additional layers of complexity, ranging from very simple to highly sophisticated, exist within the identified main stages of MICA. Increased levels of interactivity are evident as sites progress through each of the stages/levels of the eMICA model.

The extended model (eMICA) adds several layers of sophistication of functionality and innovation within the three main stages, in order to accommodate the wide range of Internet commerce development evidenced in industries such as tourism. The eMICA model is summarised in Table 1 below.
### METHODOLOGY

The URLs of 286 Regional Tourism Organisation’s in the Asia Pacific Region were obtained from the following directories:

- Open directory regional Asia travel and tourism website [http://dmoz.org/regional/asia/travel_and_tourism/travel_guides](http://dmoz.org/regional/asia/travel_and_tourism/travel_guides);
- Google directory Regional Asia travel [http://directory.google.com/top/regional/asia/travel_and_tourism/travel_guides](http://directory.google.com/top/regional/asia/travel_and_tourism/travel_guides);
- Tourism Industry Association of New Zealand’s website [http://www.tianz.org.nz/tia/tia01.htm#rto](http://www.tianz.org.nz/tia/tia01.htm#rto)

Of the 286 Web sites identified for the purposes of the study, 195 were evaluated over a two month period from December, 2003 to the end of January, 2004. A number of the sites (91) were not evaluated as the URL was unavailable (80), they were listings only (7) or were under construction (4). The remaining 195 were evaluated and then categorised according to the Stages of the extended Model of Internet Commerce Adoption. The results of the study were then compared with the results of an earlier study of the Asia-Pacific Region undertaken in 2001 (Burgess et al., 2002).

### RESULTS

Table 2 below provides an indication of where the 195 sites evaluated fit into each of the stages/levels comprising eMICA.

<table>
<thead>
<tr>
<th>Stage of eMICA</th>
<th>Number of sites</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1 Level 1</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Stage 1 Level 2</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Stage 2 Level 1</td>
<td>5</td>
<td>2.56%</td>
</tr>
<tr>
<td>Stage 2 Level 2</td>
<td>60</td>
<td>30.7%</td>
</tr>
<tr>
<td>Stage 2 Level 3</td>
<td>113</td>
<td>58%</td>
</tr>
<tr>
<td>Stage 3</td>
<td>17</td>
<td>8.7%</td>
</tr>
<tr>
<td></td>
<td>195</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 2: Results of the 2004 RTO Web site evaluations
Of the 195 sites evaluated, all had established more than just a presence (Stage 1). The majority of the sites (83%) exhibited functionality consistent with Stage 2 of eMICA (provision). Sites developed at this stage are characterised by levels of interactivity and features consistent with all three levels of stage 2 as well as both levels of stage 1 of eMICA. The levels of sophistication exhibited on the sites developed to stage 2 varied considerably across the three levels. Functionality ranged from basic to high-level product catalogues, value-add hyperlinks and low-level to advanced customer support systems (online enquiry forms, FAQs, sitemaps). Industry-specific value added features such as multimedia presentations of the unique features of the region, virtual tours, static to interactive maps, chat rooms, discussion forums, newsletters and automatic email updates were also evident.

Of the 195 sites evaluated only 8.7% (17) sites were offering functionality consistent with Stage 3 development (ie. processing). Sites at this stage of development offered functionality ranging from interaction with corporate servers and databases (for information retrieval) to full e-commerce functionality including secure online bookings and product sales (souvenirs and other tourism-related products). This finding is consistent with our earlier studies.

DISCUSSION

Although the number of registered RTO sites increased from 226 in 2001 to 286 in 2004, the number of “inaccessible” sites had risen by 60 by 2004. Exploring the reasons why so many of the sites were not accessible is not within the scope of the present study. Since the 2001 study was undertaken the RTO Web sites in the Asia Pacific region have progressed from a basic presence to higher levels of development consistent with Stages 2 (provision) and 3 (processing) of eMICA. This lends support to the contention (proposed by Burgess and Cooper, 2000) that businesses in this industry sector typically begin simply by establishing an Internet presence and move to higher levels of development (characterised by greater sophistication, functionality and interactivity) as they become more familiar and experienced with the technology and the value that can be derived from its use as a promotional tool. This is evidenced in the following:

- In 2001 there were 12 sites in Stage 1 of eMICA, six in each of the two levels comprising this stage of development. In 2004, there were no sites located in this stage.
- In 2001 there were 68 sites situated in level 1, Stage 2 of eMICA By 2004, this number had dropped to just 5;
- Between 2001 and 2004, the number of sites developed to Stage 2, level 2 dropped from 86 to 26, while the number of sites developed to level 3 rose from 36 to 113; and
- The number of sites situated in Stage 3 of eMICA rose from 3 in 2001 to 17 in 2004

Although the number of sites offering Stage 3 functionality increased during the three year period from 2001 to 2004, development has been at a much slower rate than that evidenced from the promotional (stage 1) to provision (stages 2) stages of eMICA. This may support findings from other studies ie. that businesses perceive the barrier between Stages 2 and 3 to be a much “harder” barrier than that which exists between Stages 1 and 2 of eMICA (see for example Lawson, 2003).

Another important observation is that the Pacific Island sites progressed to much higher levels of development within eMICA during the three year period, than the Australian, New Zealand and East Asia sites. This finding lends support to the notion that beach tourism is forming a considerable sector in the Industry and the Pacific Islands are active in capitalising on the economic benefits stemming from the development of tourism in the region.

The information-intensive nature of the tourism industry fits particularly well with interactive media like the Web, and indications are that tourism Web sites are constantly being made more interactive (Goodrich 2000a, Gretzel et al. 2000, Hanna and Millar 1997, Marcussen 1997, WTO 2003). Moving from simply broadcasting information to letting consumers interact with the Web site content allows the tourism organisation to engage consumers’ interest and participation, increasing the likelihood that they will return to the site, to capture information about their preferences, and to use that information to provide personalised communication and services. The content of tourism destination Web sites is particularly important because it directly influences the perceived image of the destination and creates a virtual experience for the consumer. This experience is greatly enhanced when Web sites offer interactivity (Cano and Prentice 1998, Gretzel et al. 2000, Legopherel et al. 2000; Burgess et al., 2001; Doolin et al., 2003).
Interactive Web site presentation runs a spectrum from information provision, through brochure ordering and inquiry services, to booking and payment online (Marcussen 1997). A summary of the key features of 25 “best practice” destination marketing organisations, evaluated by the World Tourism Organization, is presented by Goodrich (2000b). These features include navigational assistance and branding on the home page, multiple means of communication (including the use of colour, photographs, maps, symbols, and multimedia), interactivity, rich information on a wide range of topics, the use of managed and updated databases, and multilingual support. Standing and Vasudavan (1999) used a similar list of functions in their evaluation of Australian travel agents’ Web sites. Features of travel agent Web sites include provision of product, service and destination information, transaction capability, customer interaction and feedback, and links to value-added information sources. Although Standing and Vasudavan were evaluating travel agencies, it is interesting to note that relatively few sites provided higher levels of interactivity such as online booking, payment and value added customer service.

The Web sites of the Asia-Pacific RTOs display the same range of functionality as these earlier studies, and can be distinguished on the basis of the level of interactivity they offer to the consumer of tourism information and services. In fact, the eMICA model uses interactivity as the primary means of establishing the various stages of Internet commerce adoption. This study further confirms the usefulness of Web site interactivity for this purpose. The results of the study support our earlier studies (Doolin et al., 2003; Burgess et al., 2002), suggesting that in the tourism industry, major milestones in Internet commerce development are:

1. moving beyond a basic Web page with an email contact, to providing links to value-added tourism information and the use of Web-based forms for customer interaction;
2. offering opportunities for the consumer to interact with the Web site through (a) value-added features such as sending electronic postcards or recording their experiences and reading others’ experiences in Web-based guest books, and (b) the provision of online customer support via internal site search engines and searchable databases;
3. the beginnings of Internet commerce transactions with the acceptance of online bookings for accommodation, travel, and other tourism services;
4. full adoption of Internet commerce, where consumers are able to complete transactions online through secure Internet channels.

Only 17 of the Asia-Pacific RTO sites displayed interactivity at this last transactional level. Perhaps, as Burgess and Cooper (2000) note, this is not an unusual finding, given that the organisations in this industry sector are in the business of promoting regions, their unique features and offerings primarily through the provision of value-added information and services. RTOs interviewed during the course of an earlier study, stated that the primary reason they had not progressed to Stage 3 (full online e-commerce transactions) was the difficulty envisaged with refunding purchases for accommodation and other tourism products obtained from third party providers. The RTOs further stated that while it was viable proposition to take bookings on behalf of its members, they did not have the facilities or experience required to deal with cancellations and refunds. On this basis, they were acting as a “referral” agency only for third party products. Those RTOs that had progressed to stage 3, were mainly operating at low transactional levels, selling souvenirs and maps of the region online. Further adoption of Internet commerce is likely to depend on the future role taken by RTOs in the region. However, there is potential for development on the supply side in facilitating the provision of more sophisticated services to tourism operators in their region (Doolin et al., 2003). This would involve the deployment of more sophisticated Internet and Web technologies, such as intranets, extranets, electronic marketplaces and mobile applications.

CONCLUSION AND FUTURE RESEARCH

This paper has presented the results of a study that evaluated the Web sites of 195 Asia-Pacific Regional Tourism Organisations. The RTOs generally displayed a high level of interactivity, consistent with their role in providing comprehensive destination marketing for geographic regions in which many individual local tourism operators lack an Internet presence. However, almost all the RTOs stopped short of offering consumers the capability to complete their tourism and travel transactions online through the RTO sites. Progression beyond this point is likely to depend on the overall maturing of Internet commerce use by domestic and international consumers, or a change in the role of RTOs.

The outcome of the research provides further confirmation of the staged approach to development of commercial Web sites proposed by the extended Model of Internet Commerce (eMICA). Further, the results of the longitudinal study suggest that regional tourism organisations in the Asia-Pacific are at a relatively sophisticated
stage of development and are leveraging the opportunities that the Web presents as a viable tool for promotion of the region.

Further research is required to address the following research questions not addressed by the current study:

1) What are the reasons that so many RTO sites fall short of providing full e-commerce functionality consistent with Stage 3 of eMICA? Is this due to a perception that a “hard” barrier exists between stages 2 and 3 of eMICA?
2) What role does the Web play in the overall marketing strategy of RTOs?
3) Are there any major differences in RTO perceptions of the role of the Web in destination marketing? Does this account for differing levels of development of RTO Web sites?
4) Is there a potential for B-B e-commerce development in this sector?

REFERENCES


Burgess, L, Cooper, J, Alcock, C, McNamee, K and Doolan, B "Use of the Web for Destination Marketing by Regional Tourism Organisations in the Asia-Pacific Region" IFIP TC8 Conference, Copenhagen, Denmark, June, 2002.


**COPYRIGHT**

Lois Burgess, Joan Cooper and Carole Alcock © 2004. The authors assign to ACIS and educational and non-profit institutions a non-exclusive licence to use this document for personal use and in courses of instruction provided that the article is used in full and this copyright statement is reproduced. The authors also grant a non-exclusive licence to ACIS to publish this document in full in the Conference Papers and Proceedings. Those documents may be published on the World Wide Web, CD-ROM, in printed form, and on mirror sites on the World Wide Web. Any other usage is prohibited without the express permission of the authors.