

## EXPLORING THE INTERNET USE OF SMALL TOURISM ENTERPRISES: EVIDENCE FROM A DEVELOPING COUNTRY

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### ABSTRACT

This article reports the findings of research conducted within Malaysia Borneo. Using field interviews with small tourism enterprises (STEs) the study explored the use of the Internet by STEs; specifically, the authors sought to identify how STEs exploit the information, communication, and transactions spaces created by the Internet. This study improves knowledge on how small enterprises, specifically STEs, use and overcome typical hurdles to adopting the Internet. In contrast to previous studies in developing countries, the results show that amongst participants there is a sufficient level of Internet maturity and many enterprises view its use as the norm. Although quite a specific sample of small enterprises have been selected for this article, this article identifies lessons that may be applied to STEs generally in developing countries. Some strategies to assist STEs in developing countries to implement and maintain a web presence are suggested.

**Keywords:** Small business; tourism; developing countries; Internet; study

### 1. INTRODUCTION

Little literature exists on the Information Communication Technology (ICT) adoption and use amongst small tourism enterprises (STEs) in developing countries. Evidence from an investigation by Croes and Tesone (2004) in Nicaragua and Costa Rica showed that in Costa Rica email was the most widely used online activity, while advertising and selling or buying goods on the Internet were the least common uses. In Nicaragua, Internet usage was less common, with tourism enterprises engaging very little in Internet activities such as advertising and email.

In China, a study by Ma et al. (2003) found little ICT adoption was taking place amongst small and medium sized tour operators other than the use of a computer as a typing machine. Their study also showed that tourism enterprises in China still do business the traditional way. On the other hand, in a study on SMEs in Samoa that included tourism enterprises Purcell et al. (2004) found that STEs that were online and had web sites enjoyed increased business through the Internet, with one enterprise even having to build extra rooms to cope with the demand.

Malaysia Borneo is an interesting sample population for an investigation such as the one reported in this article. Recently, Malaysia has shifted towards a knowledge-based society and has emphasized ICT development. Nevertheless, within Borneo basic Internet facilities are lacking in many areas and Internet penetration is lower than in Peninsula Malaysia.

This article reports on research carried out using field interviews with STEs in Malaysian Borneo. Specifically, the authors sought to identify the different ways that STEs

use the Internet. Angehrn's (1997) model is adopted to categorize how STEs are exploiting the opportunities created by the Internet. Further, the article identifies the obstacles STEs face in exploiting these spaces. Although quite a specific sample of small businesses have been selected for the study, there are a number of lessons that arise during the investigation that can be applied to STEs generally.

## **2. ICTS AND TOURISM IN MALAYSIA**

### **2.1 Tourism Development**

Many studies have focused on the importance of tourism and its role in economic development (Briedenhann and Wickens, 2004; Gammack et al., 2004; Ghimire, 2001; Simon, 1995). Tourism is a major export in 83% of developing countries (WTO, 2002) and has been seen by governments in many developing countries as a way to invigorate economic growth. In Malaysia, tourism has long been a staple of the national economy, and within recent years tourism arrivals have grown from 10.22 million in 2000 to 15.7 million in 2004 ([www.tourism.gov.my](http://www.tourism.gov.my)) which has led to increased tourism employment (Gammack et al., 2004).

### **2.2 ICTs in Malaysia**

Previously known as the largest exporter of rubber and tin, through government involvement Malaysia has shifted to a manufacturing based economy over the last twenty years. As early as 1991, policymakers commenced the Vision 2020 in the attempt to achieve a 'developed nation' status by 2020 (Ramasamy et al., 2004). A key part of the strategy to transform the nation into a 'knowledge-based economy' is the Multimedia Super Corridor (MSC) – an ultra high-technology business city built near Kuala Lumpur. Policymakers have attempted to ensure that all the 'ingredients' are in place to contribute to the success of the development of a 'knowledge based economy' and has been described as one of the most aggressive ICTs plans in the world (Kirkman and World Economic Forum, 2002). This includes the establishment of proper infrastructure, business incubators, Universities, supporting services infrastructure, and recognizing the role of government (Ramasamy et al., 2004).

Malaysia was among the first countries in the region to privatise its government held telephone monopoly (Jabatan Telekom Malaysia) (Jussawalla, 1999) and as a result the Malaysian telecommunications sector has become one of the most competitive in the world (Mesher and Zajac, 1997). This has resulted in affordable access for many citizens. In Malaysia, Internet penetration is 38.6% with 17.4 telephone lines per 100 people (ITU, 2005), one of the highest teledensity levels within South East Asia. However, like most developing nations, Internet users are concentrated heavily in metropolitan areas and sparsely in semi-rural and rural areas. For instance, in Kuala Lumpur Internet penetration is 36.3% while within the states of Borneo, Sabah and Sarawak Internet penetration is a low 4% and 7% respectively (Alhabshi 2005 cited in Rathore and Alhabshi 2005). In fact, within Borneo basic ICT infrastructure is lacking in many areas (Rathore and Alhabshi, 2005).

Malaysia's position is quite modest in many e-readiness ranking tools - though higher than other countries in South East Asia. The Economist Intelligence Unit (EIU) (2005) ranked Malaysia as 35th in the world, and 8th overall in the Asia Pacific behind the likes of Japan, Hong Kong and Singapore, but ahead of upcoming economies such as Thailand, India and China. Similarly, Malaysia ranks 36th on the Network Readiness Index (Kirkman and World Economic Forum, 2002). While Tanburn and Singh (2001) classify Malaysia as a 'middle-level ready' country with the likes of strong economies such as Taiwan, Spain, and South Korea.

### 2.3 Small Enterprises in Malaysia

In most economies, small enterprises (including micro enterprises) represent an important part of the economy and play a major role in development (Bannock, 2005; Gammack et al., 2004; Hausman, 2005; Mead and Liedholm, 1998; Samitas and Kenourgios, 2005; Tabor, 2005). In Malaysia small enterprises (within the Services, Primary Agriculture and ICT sectors) are those with sales turnover between RM200,000 (US\$53,789) and less than RM1 million or full time employees between 5 and 19; micro enterprises have a sales turnover of less than RM200,000 or full time employees less than 5 (SMIDEC, 2006). Small and medium sized enterprises (SMEs) in Malaysia comprise more than 90% of the total number of businesses in Malaysia and are seen as playing an important role as Malaysia moves towards realizing its objective of becoming a developed country by 2020 (SMIDEC, 2006). Many government initiatives are in place to facilitate this, such as financial support to speed up IT resources in small enterprises (Gammack et al., 2004).

### 2.4 Small Tourism Enterprises

The vast majority of tourism enterprises around the world can be classified as small and medium-sized tourism enterprises (Buhalis, 1998; Gammack et al., 2004). Most of these are micro enterprises (less than 5 employees) (Gammack et al., 2004) that generate a small amount of revenue (Hall and Rusher, 2004), and are dominated by family businesses, particularly in rural areas (Getz and Carlsen, 2005). In developing countries, small enterprises are the dominant form of tourism enterprise and are the backbone of destinations tourism sector (Gartner, 2004; Purcell et al., 2004). However, STEs in developing nations have a great deal working against them (Gartner, 2004). STEs in these countries may suffer from factors that they have no control over. For instance, those without a strong domestic tourism market are susceptible to downturns in tourist numbers from factors such as disease (e.g. SARS), terrorism (Gartner, 2004) and more recently natural disasters.

In addition to this, small enterprises in general are characterized as:

- resource poor (Oyelaran-Oyeyinka and Lal, 2004),
- having basic technology needs,
- being informal in nature,
- family owned and relying on family labour (Bannock, 2005; Mead and Liedholm, 1998; Turner, 2003),
- operating in niche markets and not in direct competition with larger enterprises (Bannock, 2005),
- suffering from information scarcity (Duncombe and Heeks, 2001; Moyi, 2003), and
- being in an environment where managerial and financial factors can contribute to business failure (Al-Shaikh, 1998).

Furthermore, the situation of small businesses in developing countries is complicated by limited markets (Matambalya and Wolf, 2001) and often they are susceptible to harassment from criminal gangs and corrupt institutions (McIntyre, 2003; Turner, 2003). Moreover, the political environment is often not conducive to small enterprises often favouring larger businesses (Al-Shaikh, 1998; Montealegre, 1998). These characteristics suggest that small enterprises face many challenges to adopting new technology.

### **2.4.1 *Small Enterprises and the Internet in Developing Countries***

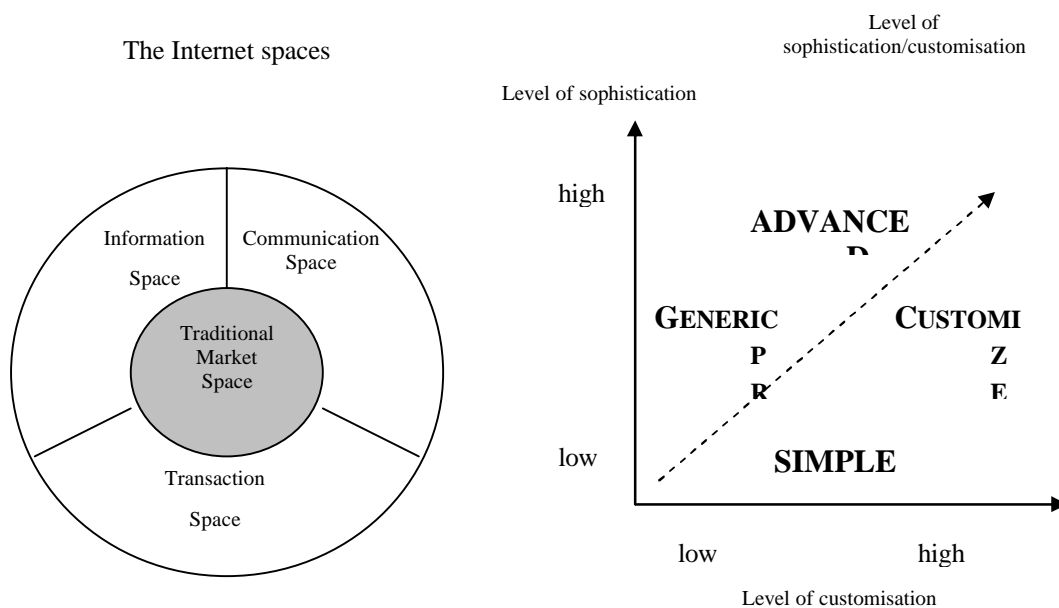
Literature that discusses the obstacles faced by small enterprises in developing countries to adopting the Internet has been well visited. For instance, at the macro level (and generally out of control of the small enterprise) some of these obstacles are the cost of technology (Best and Maclay, 2002; James, 2003), access to telecommunications infrastructure (Murelli and Okot-Uma, 2002; Salman, 2004), lack of timely and reliable systems for the delivery of physical goods (Costa, 2001; Hawk, 2004), low bank account and credit card penetration (Hawk, 2004; Murelli and Okot-Uma, 2002), lack of uniform payment system (Aljifri et al., 2003), governmental and regulatory systems (Murelli and Okot-Uma, 2002; Ranganathan and Kannabiran, 2004) and problems with security and trust (Aljifri et al., 2003). At the micro level or business level, challenges include a lack of financial resources and knowledgeable staff (Aljifri et al., 2003; Costa, 2001), security and legal issues (Cloete et al., 2002), lack of knowledge and skills (De Boer and Walbeek, 1999; Salman, 2004) and a general lack of knowledge of the full potential of the Internet (Moodley and Morris, 2004).

Faced with these challenges, how are STEs in developing countries exploiting the Internet? Evidence from a large survey conducted by the Asia Foundation in 2002 on SMEs in Philippines, Thailand, Sri Lanka and Indonesia, found that email communication between suppliers and customers, research and information gathering and to a lesser extent basic information web sites were the most common uses of the Internet. In support of this, various authors suggest that basic e-commerce activities such as email (Duncombe, 1999; Duncombe et al, 2004; Moodley and Morris, 2004; Palmer, 2000; Tanburn and Singh, 2001) the use of small advertisements (Zeitlyn and Barone, 2004) research and information gathering (Palmer, 2000; Tanburn and Singh, 2001) and the use of portals (Kuwayama, 2001; Lal, 2005) are the most common e-commerce practices adopted by businesses.

## **2.5 Categorizing Internet Use**

Angehrn (1997) developed the ICDT model that categorizes the opportunities brought about by the Internet into four different virtual spaces. They are the Virtual Information Space, Virtual Communication Space, Virtual Transaction Space and Virtual Distribution Space. The four spaces are treated separately because they relate to different strategic objectives and require different types of investment, strategies and exploit different elements of the Internet (Note: as there are few physical products to distribute in tourism, the Distribution Space is excluded). Each dimension of these spaces can be further classified in terms of its technical sophistication and this will depend on the available resources or level of 'e-readiness' (Karanasios & Burgess, 2005). For instance a simple generic Information Space presence can be established by simply publishing advertising material related to a product or service on a travel portal site, while an advanced Information Space presence might include sophisticated business web site with multimedia presentations. Angehrn's (1997) model is adopted here to categorise the use of the Internet by participating STEs.

Figure 1 illustrates the ICDT Model and the different levels of sophistication and customisation. The diagram on the left shows the three Internet 'spaces'. The diagram on the right indicates that a business may move from a generic, simple Internet presence to a more sophisticated presence over time.



**Figure 1: The ICDT Model (Source: Adapted from Angehrn, 1997)**

### 3. RESEARCH METHOD

A qualitative research approach using semi-structured field interviews was used to frame the study, the unit of measurement being STEs in Malaysian Borneo. Following the direction of Purcell et al. (2004), the underlying principle used to select participants was to choose STEs that use either the Internet only or those that had developed a web site. Additionally, one of the authors was in the region of Borneo at the time of the interviews, so data collection could occur directly rather than through a research assistant. To satisfy validity and to gather a holistic picture rural, semi-rural and urban STEs were selected to participate in the study. Interviews, as opposed to surveys, were selected as the primary means of data gathering as interviews are valuable for micro-level investigation or face-to-face interaction (Neuman, 1997). Semi-structured interviews in particular allow for in depth probing and meaningful responses.

In this study the number of employees in an enterprise were considered as the principal criteria to select small enterprises, because of the difficulty in obtaining information such as sales turnover. The criteria for participant enterprises were:

- Must be less than 20 employees
- Must use the Internet for email, basic promotion activities or have a web site
- Be either an accommodation provider and/or a tour operator (these two categories of tourism enterprise were selected as they operate by bringing customers to them based on information provided).

Businesses were selected using carefully performed online and offline searches. This involved obtaining email addresses from the official tourism sites of Sarawak ([www.sarawaktourism.com](http://www.sarawaktourism.com)) and Sabah ([www.sabahtourism.com](http://www.sabahtourism.com)). Initially, these online searches were used to obtain an initial sample (as per (Sellitto et al., 2005)). In addition to this, other sources were used, such as commercial sites, the online tourism directory

www.wildasia.net, and traditional media such as travel guidebooks were also used. The reason for this multiple sample sourcing was that it was found that not all STEs that were listed on the official sites were in the travel directories and some STEs that had good write ups in the guidebooks were not found on the official web sites or other online directories. It was also necessary to have a larger sample to begin with as it was expected that the response rate would be low because personal introductions are an integral part of Asian culture (March, 1997).

Using this method, selected businesses with an email address were then emailed an invitation to participate in the study. The emailing of the invitations itself yielded interesting results. From a total of 133 emails sent, 28 did not reach their destination ('bounced back'). A small portion of the bounce backs was due to email servers being down, which could highlight the unreliable infrastructure. However, the main reason for email bounce backs was because of discontinued or invalid email addresses. (As most were using third party email addresses such as Hotmail and Yahoo a likely reason is that they have not accessed their account in the required period of time, typically monthly). This was verified using the online tool [www.dnsreport.com](http://www.dnsreport.com), which is a Mail Test tool that can be used to identify if an email address/domain is valid by connecting to the server, the tool can also discover delivery problems with that domain. Below, are two typical responses from the Mail Test tool:

mx1.hotmail.com. - 65.54.244.8 [Could not connect: Got an unknown RCPT TO response:  
550 **Requested action not taken: mailbox unavailable**

Or

mx.tm.net.my. - 202.188.0.213 [Could not connect: Got an unknown RCPT TO response:  
550 : **Recipient address rejected: No such user (xxxxxx@tm.net.my)**

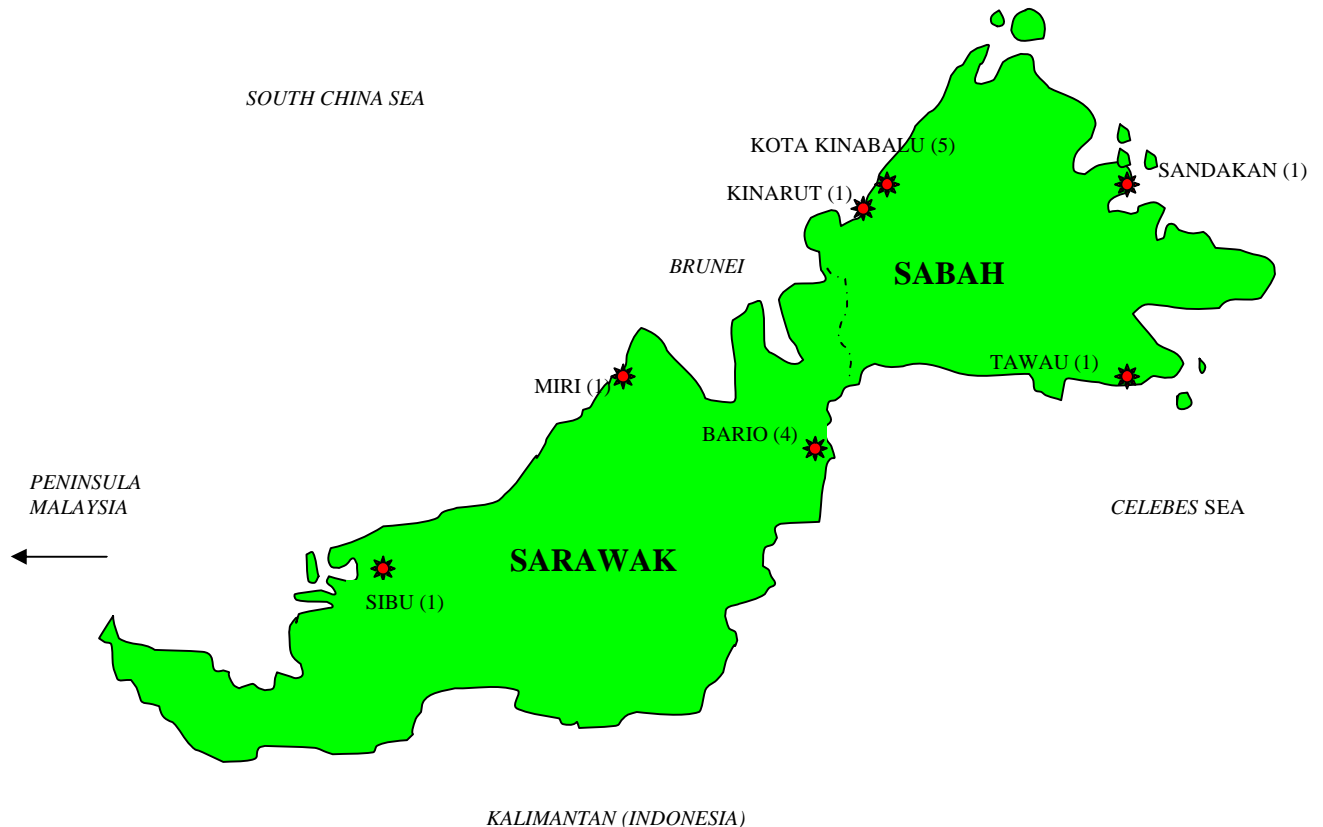
Further online searches to obtain a current valid email address of the enterprises yielded no other email address. This demands the question, why promote an email address that will not be maintained? Further investigation is needed to understand why businesses appear to have stopped using email, this is outside the scope of the study.

Discounting invalid email addresses, the response rate was 21%. However, a number of these respondents were unsuitable for the study because they did not meet the selection criteria or were unavailable at the time of the study. Therefore, the final participant response rate was 13%. Where an interview could not be performed face-to-face due to time restrictions or logistical reasons, it was performed over the telephone (four interviews were conducted in this manner). Before each interview was conducted background research was performed on that STEs web presence to determine if they had a web site, if they could be contacted via email, and how many portal sites they were listed on. The participants were either owners or managers of the enterprises and all interviews were conducted in English. Five rural, one semi-rural and eight urban STEs participated in the study. All five rural enterprises were family owned and run, which as observed earlier is a typical characteristic in rural areas. They were also all micro-sized firms (less than 5 employees), another four micro-sized firms participated these were from city areas. The remainder of the participants had between 10 to 20 employees, these included back-office staff, counter staff, tour guides and cooks and cleaners etc. Two different rural areas were involved in the study, one enterprise 20km from Miri and four enterprises from Bario, the enterprise near Miri is accessible by road, on the other hand, Bario is one of the most remote communities in

Sarawak and the only practical way of reaching it is by a one hour twin otter flight from Miri (Gnaniah et al., 2004). One capital city was represented in the sample, Kota Kinabalu, and three other smaller cities, Tawaua, Sibiu and Sandakan (refer to Table 1 for break down of STE location, Figure 2 for graphical representation of the geographical dispersion of STEs and Table 2 for basic statistics on Malaysia).

Location	Number of employees	Services	Urban, rural, semi-rural
Sibu	4	Tours and ticketing	Urban
Bario	Family run	Accommodation	Rural
Barrio	Family run +2 emp	Accommodation	Rural
Bario	Family run	Accommodation	Rural
Bario	Family run	Accommodation	Rural
Kota Kinabalu	16	Tours	Semi rural
Kota Kinabalu	17	Tours/Accommodation	Semi rural
Kota Kinabalu	3	Tours	Urban
Kinarut	18	Accommodation	Semi rural
Kota Kinabalu	20	Accommodation	Urban
Miri	Family run + 2 emp	Accommodation/tours	Rural
Kota Kinabalu	5 employees	Accommodation	Urban
Sandakan	3 employees	Accommodation	Urban
Tawau	15 employees	Tours	Urban

**Table 1: STE Profile**



**Figure 2: Location of participant STEs**

	Population	Internet Penetration
Sabah	1.7 Million*	4% **
Sarawak	2.01 Million*	7% **
Kuala Lumpur	1.4 Million*	36.3% **
Malaysia	26.13 Million <sup>o</sup>	38.6% <sup>+</sup>

**Source**

\* Lonely Planet (2004)

° Department of Statistics Malaysia (2006)

+ ITU (2005)

\*\* Rathore and Alhabshi (2005)

**Table 2: Malaysia Borneo statistics****4. FINDINGS: STE USES OF THE INTERNET:**

The interview data was analyzed to discover and categorize the main uses of the Internet using Angerhn's (1997) framework. The findings of the study are discussed in depth in the following paragraphs.

**4.1 Information Space**

This space refers to the different ways a business can provide information online. Exploiting this space means providing basic information that customer's would need, such as product and business contact details. In the developing country context businesses are exploiting this space in three simple ways: basic business web sites, the use of portal sites and to a lesser extent the use of small ads (Asia Foundation., 2005; Kuwayama, 2001; Lal, 2005; Zeitlyn and Barone, 2004). Two reasons why this space is important in the context of tourism and developing countries is that, tourism is an information-based and information-intensive industry (Inkpen, 1994; Poon, 1993; Sheldon, 1997), and has become one of the most popular mediums for researching and planning trips (Collins et al., 2003). The second reason is that trust is a barrier to e-commerce in developing countries (UNCTAD, 2004), with small enterprises seen as a risk to international customers, as such, a business can address this issue by presenting information about themselves online.

All participants in this study were exploiting this space. The main application was to use it as a vehicle to promote the business and to provide information to potential customers. Participants also saw the exploitation of the information space as an approach to saving costs on traditional advertising. As one STE commented "the Internet provides a very low cost means of advertising/promotion rather than printing brochures which is expensive". Along these lines, Purcell et al. (2004) found that one of the key opportunities for SMEs in Samoa is cheaper advertising. It was typically felt that customer's especially international customers use the Internet heavily to research and plan their trips and it was commonly felt that using the Internet to offer information online was the norm. In this study the main ways that this space was exploited was through the development of a web site and promotion through other third party web sites such as travel portal sites and official tourism sites.

### 4.1.1 Exploiting the Information Space through Web Sites

The primary way of exploiting this space was through the development of a web site. This was not a new phenomenon, in fact, most enterprises had had web sites for over five years (Table 3). This suggests a level of Internet maturity amongst the participating STEs, and suggests that the participating STEs are not lagging behind their counterparts in the developed world here. For instance, a study of Australian STEs found that most STEs had established web sites in the last 3 to 5 years (Sellitto et al., 2005).

Number of years	Number of STEs
Less than one year	1*
Two to four years	2
Five to seven	2
More than eight years	4
No web site	5

\*Enterprise had been operating for less than one month

**Table 3: Number of Years with Web Site**

All the web sites were static in nature. That is, they were basic web sites, developed and updated infrequently. The types of information provided on the web sites were business contact details, descriptions of tours and accommodation, images and reviews. This suggests that despite many participants having a web site for more than five years, they are at the 'early' stages of web site development. Two enterprises said that they were considering completely revamping their web sites in the next year. Also one urban and two rural enterprises were considering developing a web site.

#### *Web Site Development*

A mixture of approaches was used to develop the web sites: using family members or friends, developed by the owner, or using an external web developer. All but three of the participants in this study who had web sites used friends or family members to develop their web site or developed the web site themselves. When queried why this was the case a common response was that "that's the way it is done in Asia" referring to the use of services of family and friends. This supports Gartner's (2004) argument that tourism enterprises in developing countries experience cultural obligations such as hiring family and friends. However, in this case it was also seen as a way to overcome the cost of paying for and dealing with professionals who may 'oversell' their services. One enterprise that paid for the development of his web site saw overselling as an issue. Another enterprise that used a family member to develop his web site claimed that external expertise is expensive, with consultants asking for RM1000 (US\$268) just for yearly maintenance.

Of the three enterprises that used external professionals such as consultants, two commented that it is difficult to find a consultant that can "do what you want". This was not so much on the technical side of things (the look or operation), but in making a web site a successful venture for the business. One enterprise in particular was displeased with the return on his website (he had paid a lot for the development of the site), the amount of bookings and queries that he had received from the site was insignificant – and the owners main concern is still "how to be found" on line. One enterprise was satisfied with consultant and had been using the same one for over 12 years. On the flip side, one enterprise said that they would move away from using a family member to develop the site to using a European consultant who better understands the requirements of the business and customer mind-set.

### *Web Site Hosting*

One enterprise was hosting their site for free using a free hosting service, and another two businesses hosted their web sites for free when they first developed their web site. These were free hosting services such as [www.geocities.com/your business/](http://www.geocities.com/your_business/) or [www.fortunecity.com/your business/](http://www.fortunecity.com/your_business/). Once the benefits of the webs sites materialized, the enterprises moved onto paid hosting with an Internet Service Provider (ISP) under their own business name. For the eight enterprises that paid for hosting, in all but two instances this was with a local provider, and most participants commented that there is an abundance of such services, suggesting that the supporting services were readily available. Two enterprises hosted their site abroad. In one case this was because the enterprise was unaware of the presence of local hosts. The other enterprise that used overseas host said - "it's a jungle out there" referring the local IT market - this participant also opted to use an overseas host because of his disagreement with government policies on Internet censorship.

### *Enterprises without Websites*

Five enterprises did not have web sites. One enterprise manager explained that she did not have a web site but was considering developing one, and that she would use a friend to develop the web site, as she will be able to negotiate the price with them. Another two enterprises were considering developing low cost and maintenance webs sites, though one of these was unaware of how to approach this venture. For these enterprises using third party sites as a means to exploit the information space was essential. The next section describes how participants used third party sites for to exploit the Information Space.

#### ***4.1.2 Exploiting the Information Space through Third Party Sites***

In addition to using web sites to exploit this space, the majority (12) of the STEs were using third party sites such as tourism portals and directories to promote themselves. Only two enterprises did not promote themselves with a third party site. One enterprise said that this was because they (the third party sites) had not been in contact with her. A few enterprises had used so many third party sites that they were unaware of how many sites they were currently listed with. These were almost exclusively tourism portal or directory sites, though in some cases they were also eco-friendly sites or other niche sites. Referring to the importance of these third party sites an operator commented: "It is important and successful; if only there were more people wanting to come to the country!". Only a small amount (4) of enterprises paid for promotion on third party sites, and they reported that the affiliation with these sites were important to the business.

The typical types of information on these sites were: details of products, business details, images of the business and activities and reviews. In some instances, the enterprises email address would be listed, though in most cases customers would have to make a booking or send a query through a form on the third party site. Third party sites proved to be important for STEs for a number of reasons:

- they ranked higher in search engine results
- they offer booking engines that the STE would otherwise be unable to have access to
- they allow the enterprise to 'piggyback' on the name of the third party's brand
- they afford the STEs greater online exposure, and
- they can result in increased bookings directly through the third party site

In the case of Bario, all the STEs that participated had listings with the e-Bario site ([www.ebario.com](http://www.ebario.com)). e-Bario is a joint pilot project undertaken by the Universiti Malaysia

Sarawak (UNIMAS) and the local community in Bario and offered the STEs a way of exploiting this space. In addition to this two enterprises also promoted themselves with another local web-portal initiative. However, all enterprises in Bario did also list with other third party sites and described these as important for exposure and for receiving bookings. This highlights the importance of third party sites in enabling remote STEs to exploit the information space.

#### ***4.1.3 Exploiting the Information Space through Official Tourism Sites***

Other studies have highlighted the importance of official tourism sites or Destination Management Organizations (DMOs). These entities provide tourists with pre-trip and in-trip information, helping tourism enterprises in particular those without web sites to promote themselves to a worldwide audience (Ma et al., 2003; Purcell et al., 2004). In this study, the official government sites [www.sabahtourism.com](http://www.sabahtourism.com) and [www.sarawaktourism.com](http://www.sarawaktourism.com) offered STEs to opportunity to exploit this space. In Sabah all but two enterprises has listings on this site. The Sabah tourism site displays categorized information and published business contact details such as e-mail and URL, as well as location and number of rooms etc. (The Sarawak site [www.sarawaktourism.com](http://www.sarawaktourism.com) was under construction at the time of the investigation). Many STEs explained that this was important to exploiting this space, while some were still in the process of getting a listing with them. This was important because it was seen as a starting point for potential visitors. One enterprise that was in the process of being listed with the official site for Sarawak, commented that it is also important to be “recognized as a bona fide business”.

#### ***4.1.4 Success and Benefits of Exploiting the Information Space***

Enterprises in this study saw their web sites as an important part of the business in terms of reaching international audiences, and described it as a cheap means of advertising, with one enterprise suggesting it was a “blessing”. One respondent commented that a small newspaper advertisement could cost about RM300 and that developing a web site was a fraction of the cost of advertising through traditional means. You can update it as often as you like and it is cheap to update. Only one enterprise did not increase their visitors by having a web site. The use of third party sites were seen as an essential method of promoting their business, in some cases this even resulted in direct bookings through these sites. Even the enterprise that was dissatisfied with the success of his own web site reported that he received a small amount of bookings through a tourism portal site.

However, some participants were frustrated with the difficulty of being found amongst the proliferation of web sites. Two businesses reported that in the late 1990’s they enjoyed much more exposure on the Internet due to the fact that their many of their competitors were not online. In fact, despite the newness of the Internet at this time they received a greater number of visitors, which they attributed to their web exposure through their web site. One enterprise reported that as a result of the proliferation of competitors, tourism intermediaries and online directories his online presence has suffered, with his web site becoming difficult to find. One enterprise, was quite concerned that his web site was not easily found amongst the proliferation of sites, and was disappointed in particular because he had paid for the development of the site. Another enterprise, was quite satisfied with how he was found online by customers. Using his own strategy, he was able to be listed directly (through his own site) or indirectly (on third party sites) on every hit on the first page of a typical search engine search for accommodation in that area.

## 4.2 COMMUNICATION SPACE

This space refers to the exchange of information with the various stakeholders: their suppliers, customers, and strategic allies. Unlike the Information Space, information in the Communication Space may flow both ways. That is information can travel asynchronously between two parties. Many authors suggest that e-mail is the most widely adopted e-commerce tool adopted by small businesses in developing countries (Duncombe, 1999; Duncombe et al., 2004; Moodley and Morris, 2004; Palmer, 2000; Tanburn and Singh, 2001). It is also the most cost effective and easily adopted ecommerce activity (Payne, 2002).

The primary method of exploiting this space was by using email from within the business premises (Table 4 shows how long enterprises had been using email, and Table 5 shows the type of Internet connection). All of the participants other than those located in Bario had access to the Internet internally (from within their business premises). This was usually broadband called Streamyx, which is a broadband service that provides speeds from 512kb up to 2mbps. While three enterprises used dial-up, one was using Streamyx previously but reverted back to dial up after being charged extremely high monthly fees (RM1080) for using Streamyx.

Monthly access fees were typically cost RM80 one enterprise paid as low as RM28 while the most paid was RM188. However, the cost of the Internet connection was not seen to be an issue for any the STEs. Broadband (Streamyx), was available to all of the urban and semi-rural participants. However all but one enterprise claimed it was unreliable and often interrupted, particularly between 8am to 10am and 4pm to 6pm. Nevertheless, while this was seen as an issue, it appeared to inhibit the businesses in only minor ways. In fact, they all had grown quite accustomed to working around it. One enterprise had a backup ISDN connection that they used when their broadband connection was down, but found to be this was costly and used it only sparingly.

In Bario, the Internet is accessed through the local telecentre. The telecentre connection is made available through Very Small Aperture Terminal (VSAT) satellite dishes that run on solar energy, with a diesel-powered generator serving as the backup source of power. Enterprises in Bario paid RM3 per hour for their Internet connection and the cost of using the Internet was not seen to be an issue by any of the participants.

When the telecentre was initially developed the connection was very unreliable. However, since Engineers Without Borders (a UK organization who facilitate development through engineering) had improved the infrastructure it had become much more reliable and outages are less common. One participant from Bario referring to using the local telecentre said that "the Internet is good and bad" as it was time consuming (because he had to walk 45 minutes/ or short drive to use it and sometimes it was closed) yet he realized that it did offer many benefits. Another rural enterprise (in Miri) that was using dial up described connectivity as a large problem and commented that he suffered regular outages and this sometimes forced him to drive into town (20km) to use the Internet.

Email represented the primary use of the communication space. For all of the enterprises interviewed, it was seen as a cost effective medium that allows communication across time and geographical borders. This supports other authors who claim email is the most widely adopted Internet activity adopted by small enterprises in developing countries (Duncombe, 1999; Duncombe et al., 2004; Moodley and Morris, 2004; Palmer, 2000; Tanburn and Singh, 2001). Many enterprises found that once they adopted email that online tourism intermediaries began to contact them to develop a partnership. This suggests that adopting email can open doorways for STEs to gain even greater exposure through dealing

with online intermediaries, and may be attributed to the fact that online intermediaries prefer to do business online with enterprises to reduce costs (Gupta et al., 2004).

Number of years	Number of STEs
Less than one year	1*
Two to four years	4
Five to seven	3
More than eight years	6

\*Enterprise had been operating for less than one month

**Table 4: Number of Years Using Email**

Type of Internet access/connection	Number of STEs
Telecentre / central access point	4
Dial-up	2
Broadband	8

**Table 5: Type of Internet connection**

#### 4.2.1 Communication with Customers

The main business activities in this space involved communication with customers. That is, answering queries and receiving bookings. Five enterprises were able to disclose the percentage of bookings that they received via email. This ranged from 60% to 90% which, represents a significantly high proportion of bookings. The remainder of the enterprises commented that adopting email had increased their number of customers. Only one enterprise reported that the number of enquiries and bookings he receives via email is negligible. Another enterprise that had been using email since 1998 mentioned that initially he enjoyed higher numbers of booking from email. However, recently with more and more competitors becoming online these numbers had dropped. Overall, this highlights the importance of email as a communication tool for STEs. As one enterprise commented: “for me, it is very good and convenient”. All the STEs in Barrio reported that they had increased their number of visitors significantly since adopting email. One enterprise in Barrio even said that once he started using email he ended his dependence on travel agents for customers.

##### *Email Addresses*

The ICT infrastructure was an issue for many of the enterprises in this study. Four enterprises indicated that this meant that they needed to have more than one email address in case their mail server was down –which occurred often (this refers to ISP or other external mail servers, no enterprise had their own internal mail server). The following two extracts from two participant e-mail signatures highlights this:

*“Please note that if we didn't reply your message within 3 days time, please forward your e-mail to xxxxxx\_tours@hotmail.com or give us a call. Sometimes, the server could be down. Sorry for the inconvenience!”*

And,

\*NOTE\* Due to the unreliability of our mail server, please send your messages to all three addresses below:

<mailto:xxxxxx@tm.net.my>

<mailto:xxxxxx@hotmail.com>, and

<mailto:xxxxxx@hotmail.com>

One enterprise even had six email addresses, and three of those email addresses are forwarded on to a single address. As observed in the previous section, this further highlights that the unreliable infrastructure is an issue. At the same time however, it shows the awareness and innovativeness in developing a strategy to overcome one problem resulting from an unreliable infrastructure.

#### **4.2.2 *Communication with Other Entities***

One use of the communication space that is not well supported in literature is that of increased interaction with other entities in the tourism chain. By adopting email, STEs are able to better exploit the communication space and communicate with other tourism players. Many enterprises commented that once they adopted email, online tourism intermediaries began to contact them to forge alliances. In most cases the intermediary would ask whether the enterprise would like to be listed with them and for some details of the business. As observed earlier, there are many advantages to using third party tourism sites. One enterprise expressed concern in dealing with the third party sites, "it has helped, but of course you lose immediate control over it and end up providing a fixed price service for someone else". Only three enterprises said that no online intermediaries or directories had contacted them since adopting email. However, one of these had contacted an intermediary himself to promote his business further and had received a small amount of bookings through this online intermediary. Another enterprise was planning on forming an alliance with an online intermediary in the very near future.

Email communication with other suppliers and partners such as local travel agents or tour operators was another common use of this space, although this was on a much lesser scale than communication with customers. One enterprise commented that email was the only way he could communicate with overseas agents. Some enterprises still preferred to use telephone or fax communication as a medium to communicate with local entities such as travel agents as responses were immediate.

#### **4.2.3 *Success and Benefits***

As observed, the main use of this space was as a communication medium with customers. This was important for enterprises as email bookings now represented a large portion of bookings. Using email also allowed enterprises to reduce their communication costs and also as a convenient way of communicating. Only in one case had email not made a successful impact in terms of increasing customers and another enterprise that had been operating less than a month had not had received a significant amount of emails from customers.

The other benefit that materialized for STEs from using email, was the increased contact with online tourism players such as online tourism intermediaries. This led to greater exposure and in some cases increased bookings.

### **4.3 *Transaction Space***

The main use of this space is to carry out payments online. Small businesses in developing countries face many obstacles to offering online payments, and are still very rare in Asia (Asia Foundation., 2005) . Portals have been used as a way of overcoming these barriers (Kuwayama, 2001), though little evidence came out of this investigation to support the claim that portals can be used to exploit this space. One enterprise used a popular portal to 'sell' rooms. In this case the customer would make a booking, and make a 10 per cent deposit online with the intermediary as a guarantee, the customer would then pay the remaining 90 per cent upon arrival. While this has resulted in sales, none of the online transacted money would go to the STE. Typically, enterprises saw this space as something that may be exploited in the distant future. The general view was that at the moment this activity was not

appropriate or the volume was simply not there to warrant the investment into this feature. There was also some confusion, on if and how transactions could be performed online. One enterprise believed that local banks were not prepared to handle online transactions and that a US based bank would need to be utilized for this purpose. Another enterprise is looking at offering online payments in the near future but first he is waiting for a global payment system that is supposedly materializing from Hong Kong. Only one enterprise is in the process of applying with a local bank to be able to offer online transactions.

#### **4.4 Barriers & Strategies to Exploiting the Spaces**

Only one enterprise commented that cost was a barrier to developing a web site. This enterprise paid RM1200 for the development of the site (which was received back via a special tax exemption). However, this owner saw the ongoing cost as a minor issue. The obstacle of cost appears to be overcome by using a family member or friend to develop the web site, and hosting the site for free (or at least hosting the site for free until the benefits materialized). Using this strategy the business needs very little capital. The cost of the Internet connection did not represent an issue for participants, as they considered the Internet as critical to their operation. In support of this a finding from the Asia Foundation surveys was that cost is not a prohibitive factor and that SMEs are willing to pay for the cost of the Internet if they see benefits and they believe that it satisfies customer needs.

The cost of accessing the Internet from the telecentre was only a minor issue for one enterprise in the case of the STEs in Bario (as previously the Internet was free). Though overall, enterprises saw the cost of accessing the Internet as insignificant considering that they were receiving a steady flow of emails from customers.

The literature suggests that there is a lack of awareness and know-how of how to use the Internet. In this study enterprises showed awareness of how to use the Internet and overcome traditional obstacles, though some enterprises did express that they thought their lack of knowledge to be an issue. Nevertheless, many enterprises saw ways around overcoming challenges to using the Internet and understood the importance of having a web presence, which suggests a reasonably high level of awareness. In fact, many enterprises saw using the Internet as the 'norm'. One rural enterprise saw the development of a web site as the next step, but was unsure of the best way to develop one without incurring the cost of developing and hosting the site. While one urban enterprise was concerned at his unsuccessful web site, he hoped to gain more knowledge to help overcome this.

Internal capacity was an issue in a number of cases, one rural enterprise said that it was difficult to find employees that were able to take care of the Internet side of things, such as corresponding with other tourism entities and customers and taking bookings. English language was a minor issue - the main issue was finding employees with Internet know-how. This was because of the 'brain drain' - most young people left the area to find work in city areas. One rural enterprise said that if he was not around to reply to emails then no one was able to perform this task and one metropolitan enterprise said finding reliable employees with good English and good Internet skills was difficult but not a major issue. Another metropolitan enterprise said that she replied to emails even if she was away on holidays. The suggestion was that this was not because she could not find skilled employees, but because she preferred to correspond with customers herself.

Bario represented an interesting case in capacity building. Before the introduction of the telecentre only one enterprise had Internet skills. The other three had never used the Internet before, but realized that the Internet played a major role in tourism and built their skills using a mixture of local training and self capacity building. One enterprise said that

learning to use the Internet and computers was quite a shock to him, and although he is still learning he is confident enough to deal with emails.

Connectivity was seen as problematic by the STEs in this study. This was highlighted by the numerous email addresses held by some enterprises. Also, as observed, many enterprises suffered from unreliable Internet connections. The issue seemed to be the large amount of traffic on the network during 8 to 10am and 4 to 6pm resulting in intermittent connectivity. Despite this however, they managed to use the Internet to increase their number of customers. In fact, even the enterprises that were using dial up or using a telecentre were able to receive online bookings that comprise up to 90 per cent of total bookings. This, again highlights that even where the infrastructure is poor small enterprises can gain significant benefits from using simple e-commerce activities.

## 5. IMPLICATIONS OF THE FINDINGS

The findings suggest some interesting issues for small enterprise research in developing countries. Using Angehrn's (1997) model to categorize the online activities and the level of sophistication of the activities of the participating STEs, it is reasonable to suggest that their web presence can be categorized as a "simple generic presence". In other words, the main use of the Internet is as a communication tool and information publishing medium. This investigation further supports the importance of simple online activities. In other words, overall the Internet is used as an open information exchange, using low maintenance and low cost activities - that in most cases yielded significant benefits. In this article the areas that can be exploited were categorized into the information and communication spaces. The more 'sophisticated' space that was not being exploited was the transaction space. This is consistent with other observers who suggest that small enterprises in developing countries should focus on simple entry-level activities (Duncombe et al., 2005).

This study also highlights the importance of the role that online tourism intermediaries or tourism portals play in providing a platform for resource poor small tourism enterprises. These online enablers give STEs greater web exposure and also provide them access to resources that they would otherwise have no access to.

In line with other studies, there appeared to be a high level of awareness amongst the participants of how the Internet can be used, and awareness of the strategic value of the Internet (Grandon and Pearson, 2003). There was also a high level of awareness of strategies to overcome hurdles such as cost, for instance, using the brand name, booking engines and marketing power of third party sites to promote their business, and avoiding the cost of developing a web site by using friend or family member for free or discounted price, or hosting a site for free. Along these lines, a study of enterprises in least developing countries found ways of circumventing local infrastructure shortcoming and keeping costs down (Wresch, 2003).

While literature suggests that small enterprises struggle to adopt the Internet in developing countries, in this study enterprises saw it as the norm. In fact, all enterprises except for the recent start up, had been using either email or been promoting their enterprise online for over three years. This is different from the results from other studies of small tourism enterprises and the Internet in a developing country context that suggest little Internet adoption is taking place (Croes and Tesone, 2004; Ma et al., 2003). However, even though Malaysia is a developing country, it's strong commitment to addressing the digital divide and building a knowledge-based economy appears to have been successful in providing a conducive e-commerce environment for STEs.

## 5.1 Lessons for STEs

As observed, the main use of the Internet was as a communication and information publishing tool. This provides an important lesson for STEs generally in developing countries. It suggests that even where the infrastructure is poor that STEs can derive significant benefits from adopting the Internet by using simple online activities – in this investigation these were found to yield significant benefits. Further, this investigation suggests that offline STEs can adopt the Internet with minimum outlay and that they do not need to be concerned with sophisticated online activities. Evidence from Bario suggests that even where the Internet is not available internally (from within the business) enterprises can increase their bookings by using email from a shared access point for as little as under a dollar an hour. Other simple strategies to circumvent typical hurdles to adopting the Internet such as using family members or friends to develop a web site, hosting a web site for free (or least until benefits materialize), and the effective use of third party sites should be considered by STEs looking to adopt the Internet.

It is unclear what the next step is for STEs in this investigation and the area of the study in general. It is unlikely that STEs will advance to adopting online transactions or sophisticated web sites. There appears to be a trend towards STEs utilizing the booking engines of third party sites – which as observed this provides enterprises functionality that they would otherwise not have access too. Nevertheless, the most likely scenario is that STEs will continue to use what has worked for them over the last eight years. That is, email and basic web publishing.

## 5.2 Generalisability

A limitation of the study is the small sample size, while 14 STEs represents a small percentage of small tourism enterprises in Malaysia Borneo, the intention was to explore Internet use using in-depth interviews with a small number of participants. Therefore, specific aspects of the findings may not be representative beyond STEs in Malaysia Borneo.

There is also a limitation of this study when making comparisons to ‘small enterprises’ in general. Tourism enterprises operate in a global market and all the participants sell their products mostly to international customers (the selection of enterprises that target overseas customers was unintentional). Therefore, caution is made when making comparisons to small enterprises in other industries that do not operate in a global market. Nevertheless, this investigation does add the growing body of literature in small business and e-commerce in developing countries. Many of the issues discussed here are relevant to STEs in many developing countries. Many of the strategies suggested in the previous paragraph can be applied on a generic level to STEs in many developing countries. Also, in future studies comparisons could be made with developing countries where tourism is not a large export, where English isn’t widely spoken within the country and where all the ingredients that make up the enabling environment are not in place.

## 6. CONCLUSION

Although quite a specific sample of small enterprises have been selected for this study, this article presents number of lessons that can be applied to STEs in developing countries generally. The STEs enterprises in this study performed modest Internet activities, and in line with other studies, email was the most commonly used tool, and yielded the most benefits, mainly terms of bookings, but also by allowing themselves to be conducted by other tourism players and reducing communication costs. This suggests that STEs that do not use email place themselves at a considerable disadvantage. The main use of the information space was

to develop a web site, as observed many low cost options exist to developing a web site. Also third party sites such as tourism portals and directories and having a listing with official tourism sites were seen as important to exploiting this space. There was no evidence of the transaction spaced being exploited.

The results of this study suggest that STEs in this developing country see the use of the Internet as the norm, and in fact, most enterprises had now had a web or been using email for more than three years. While the infrastructure was seen to be an issue and in some cases there was a lack of knowledgeable employees STEs owners had the awareness to overcome these challenges. This provides an important lesson to STEs in developing countries considering adopting the Internet, as it confirms that through simple e-commerce activities significant benefits can materialize and that STEs that are not online are placing themselves at a disadvantage.

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