

An Evaluation of PAN's Website and Technical Services

Michael Graham
*2422 Fairmile Road
RR 4, Kemptville, ON
K0G 1J0
(613) 258-2901*

*Evaluation Unit
International Development Research Centre
PO Box 8500, Ottawa, Ontario K1G 3H9*

March 2000

Acknowledgments

I want to thank everyone who helped me by making appointments for meetings, arranging transportation, and generously offering guidance and hospitality during my travel to Asia. Everyone I met (see Appendix 2) was generous with their time and ideas during the detailed interview process. Without their full cooperation and interest, this study would have been impossible. Thank you all very much.

Contents

Acknowledgments	2
Introduction	4
Content development	5
Communications	5
E-commerce	6
Program-related activities	6
Evaluation Plan	7
Purpose	7
Planning	7
Method	8
Evaluation Report	9
Discussion	10
Conclusions	19
Awareness and competence	19
Hosting and mirroring	19
Dissemination of research results	19
E-commerce	20
Future look of PAN website	21
Public awareness	22
Partner interactions	22
Future priorities	22
Appendix 1: Findings	24
PAN Partners	24
ASRO Staff	43
Regional Experts	50
NepalNet Partners	55
Appendix 2: Contacts	58
Appendix 3: Interview Guides	64
PAN Partners	64
Regional Experts	72
IDRC/PAN Staff	75

Introduction

The PAN program was initiated in 1994 to encourage developing countries in Asia and the Pacific to participate in the Internet, which was then beginning to take shape in the region. Since its inception, PAN has been building capacity in the countries of the region in an effort to help its partners to keep step with Internet developments and to experiment with, and apply, Internet applications and tools in their development work.

PAN's first step was to undertake a survey of networking possibilities in Asia. This study was conducted in 1994 and indicated that a high proportion of the development institutions and nongovernmental organizations (NGOs) in the region did not, and would not soon, have access to website facilities. On that basis, a decision was taken to make a Web server available to these institutions and to build the necessary technical infrastructure to be able to offer email, conference services, and technical support to help institutions develop networking and Internet skills and capability until such time as these were available locally.

The PAN Asia web server was developed in Singapore in partnership between IDRC and NetCentre, a private company that acted as technical consultants to the project. This partnership was transformed into an IDRC-administered project in 1997 (IDRC Project 97-8008). The original objectives of this project were:

- “to network as many key organizations in the Asia Pacific region as possible that are working in the area of development research and sustainable development;
- to assist these organizations in building up quality content on the PanAsia Mother Website;
- to foreground PanAsia's content partners' multimedia (video, audio, motion) products;
- to produce a first edition of the Pan Asia Networking Annual Survey and to run it on the PanAsia Mother Website;
- to reflect the content of the new PanAsia R&D Grants component programme;
- to run a quality Shopping Mall on the PanAsia Mother Website of the content contributed and developed;
- to focus on strategies to maximize the generation of revenue from the Shopping Mall;
- and to run two versions of the PanAsia Mother Website, a Multimedia version that is accessible through ATM (broad bandwidth) network and an Internet version.”

Four broad categories of technical services and support are provided through the PAN Asia web server:

- content development, which includes networking of key organizations as well as developing their capacity to develop content for the Internet;
- communications;
- experimentation and application in the use of electronic commerce by development organizations and NGOs; and
- program-related activities for the PAN program initiative.

Content development

PAN's partners are research and development institutions and NGOs in Asia that are involved in activities designed to resolve the development problems of the region. The initial strategy implemented by PAN was to build a web presence that would be a "one-stop location where people involved in Asian research and developing are networking." As basic Internet facilities have become available in most of the countries of the region, PAN's strategy has evolved and the vision for the PAN Asia website (<http://www.PanAsia.org.sg>) is that it would become a portal site. As a "global gateway to Asian development research," the PAN Asia website would host, mirror, and provide links to the websites of research and development institutions in the region. As of January 2000, the PAN website is marketing itself with the phrase "the development sector's e-commerce mall." At present, the PAN website hosts 33 main sites (these sites are counted as one site, but may include the web presence of many other local institutions), and 17 of these main sites are virtually hosted. In addition, there are 46 off-site links, which lead to content partners' sites.

Since 1997, the PAN Asia website has evolved to provide the facilities that were required to make the multimedia outputs of its clients more available. This has included the addition of animations, audio and music files, and REAL audio-video software to stream full-length videos. The broadband access to the Internet that has been available in Singapore since 1998 has enabled the development of these multimedia applications. Similar high-speed access is slowly becoming available in other countries of the region and is expected to become available in most countries within a few years. This development is analogous to the earlier provision of Internet access. PAN is making this multimedia facility available to the least developed countries now to enable them to develop applications and expertise, and benefit from these technological advances, although the technology is not yet available in their own country.

Communications

Web teleconferencing facilities as well as a listserv were developed and made available to PAN partners to provide access to the facilities necessary to organize and conduct electronic conferences. These facilities are also used for the management of communication between PAN Program Initiative (PI) members. More recently PAN has instituted WebCT¹ for discussions related to e-commerce.

E-commerce

In 1997, PAN started to examine how development organizations in the Asia and Pacific region might be able to use the Internet to buy and sell goods and services. PAN began research and development work in January 1998 on a prototype multi-merchant, single-checkout e-commerce mall that could be used by the region's development organizations. The e-commerce mall was launched in July 1999 and has facilities that allow two different types of transactions to take place:

- digitized material such as texts, graphics, video, and audio can be sold through secure credit card transactions and downloaded immediately via a personalized virtual web bookshelf; and
- physical development goods such as books, journals, village handicraft, CD-ROMs, and photographs can be purchased through secure credit card transactions or bank drafts and delivered by conventional means.

PAN conducted a regional training course in August 1999 for research and development organizations and NGOs that were interested in becoming PAN e-commerce merchants.² PAN staff expect that regional concerns over employment and revenue generation will lead to increased demands being placed on the PAN e-commerce site and will necessitate additional research to allow the PAN partnerships to continue to learn and tailor its e-commerce activities to the specific needs of the development sector in Asia.

Program-related activities

The PAN server is used for a number of technical support activities. For example, the website is used to manage and promote the PAN Research and Development Grants program. All of the proposals submitted for consideration for this PAN program are received through the website.

¹ WebCT is a tool that was developed by the University of British Columbia to facilitate the authoring and delivery of educational material over the World Wide Web.

² A workshop evaluation and partnership profile report has been prepared by Chin Saik Yoon on this e-commerce training workshop.

The website is also used to market the *PAN Asia Networking Yearbook*, which is produced by PAN to market its activities in the region. The PAN PI also uses the PAN Asia server to manage its program activities through the use of listservs and document archives.

Evaluation Plan

Purpose

The PAN Asia webserver and associated support activities were established in ASRO when the Internet was not yet available in several of the countries of the region. This situation has now changed, but Internet technologies and other information and communication technologies (ICTs) continue to evolve rapidly. As a result, developing countries continue to lag behind the North with respect to broadband applications, e-commerce, and other new Internet applications.

As it reviews its future program priorities, PAN must evaluate all of its activities, including the different modalities used to deliver its program. Decisions must be made with regard to the level of technical services that should be provided to partners to complement PAN's research-grant modality, which is the principal one used by IDRC. This evaluation was designed to provide input into the usefulness, necessity, and impact of the technical-service interventions that PAN has provided to its partners and to reflect on the need to continue the development of the PAN webserver for this purpose.

Planning

The overall objective of this evaluation was to assess the PAN Asia strategy of creating a PAN webserver to support the program objectives of the PAN PI and of IDRC in Asia. The evaluation was based on the "Outcome Mapping" model that the Evaluation Unit of IDRC has developed to report on the results of Centre-supported activities. This was the framework used to define outcomes and roles and data-collection needs.

ASRO staff and PAN Program Officers were expected to play a significant role in the evaluation. Their involvement included face-to-face and electronic discussions during the planning of the evaluation as well as interviews during data collection and electronic exchanges during data analysis and report writing.

Discussions were held with Ottawa and ASRO staff of the PAN PI during the design phase of the evaluation to define the specific purpose of the evaluation and the type of data that would need to be collected to help PAN answer questions about the future of its webserver and associated technical services. As well, PAN staff were asked what outcomes they had expected would arise from the activities related to the PAN webserver. The following outcomes were agreed upon:

- PAN would host several websites on its server to substitute for the initial lack of servers in developing countries;
- PAN would mirror web sites on its server because of narrow bandwidth in developing countries;
- PAN would initiate capacity development in research and development institutions to help them build websites for the dissemination of their research results and to develop other applications as they become important (e.g., e-commerce and distance education). These partners would build their new Internet capacities not in isolation but by learning from peers in the PAN network;
- PAN would create a network of research and development institutions and build a sense of “family” among these organizations to improve the exchange of information and the sharing of experiences among them. These partners would identify with this PAN family and be motivated to network;
- PAN would create an image for itself in the region that would be based on the PAN website. As a result, the PAN PI’s contributions to ICTs in the Asia and Pacific region would be manifest and visible;
- PAN would develop the capacity of IDRC staff to use and develop cutting edge technologies and applications of the Internet. These facilities would provide the PI with a tool that could be used to test, innovate, and teach;
- PAN would enable its partners to use software and services, which would be too expensive to acquire alone, to develop innovative applications;
- PAN would generate income through commission and charges on services offered (sales of publications mainly, fees for website hosting) to recover part of the expenses and sustain the server; and
- PAN partners would have models (provided by the PAN mother site as well as by the partners themselves) for using Internet technologies and systems.

As a pretest of the type of information that the evaluation was designed to collect, “false” results were presented to the Team Leader to determine if in fact such information would be useful in

allowing the PI to assess the significance of the webserver to PAN's programming and support activities and to make decisions about future priorities.

Method

Following this pretest of the data that would be collected, interview guides (see Appendix 2) were developed and pretested. Separate guides were developed and pretested for each of three categories of respondents: PAN Partners, Regional Experts, and IDRC/PAN Staff.

Interviews were conducted in India, Indonesia, Malaysia, Nepal, the Philippines, and Singapore, in the last week of October and first three weeks of November 1999. In total, 51 PAN Partners (representing 23 institutions), 5 Regional Experts, and 7 IDRC/PAN Staff were interviewed. In addition, several discussions were held with the PAN PI Team Leader. Each of the interviews with the PAN partners lasted between 1.5 and 2.5 hours (in some cases individual interviews were held with more than one person at the partner institution, in other cases group interviews were conducted). Interviews with the regional experts and IDRC/PAN averaged about 1 hour.

The data from the interviews were grouped into four categories (a separate grouping was made for members of NepalNet, see Appendix 1: Findings) and shared with staff of the PAN PI through the Team Leader and the Coordinator, Pan Asia Networking as well as with a representative of the Evaluation Unit. The purpose of this step was two-fold: to determine if additional data should be collected, and to allow for joint discussion and analysis of the data and the conclusions that might be forthcoming from the evaluation.

Following this initial presentation of data, a meeting was held with the PAN Team Leader, and it was concluded that no additional data collection was required given the volume of data that had already been collected and that PAN staff preferred not to be involved in the analysis or interpretation of the data (which had been part of the initial evaluation design).

Evaluation Report

This evaluation report starts by discussing the main finding of the evaluation in relation to the outcomes that were expected from the project. This discussion is followed by a presentation of the conclusions of the evaluation. Details of the data that were collected, a list of those who were interviewed, and the interview guides are presented as appendices to the report.

Discussion

The discussion of the findings of this evaluation have been organized on the basis of the outcomes that PAN staff agreed were expected from the project. The information upon which this discussion is based was gathered during interviews with 63 people who are familiar with PAN's activities in Asia (see Appendix 2). The data that were collected are presented in detail in Appendix 1: Findings.

- **PAN would host several websites on its server to substitute for the initial lack of servers in developing countries.**

Because PAN had its own server in Singapore, it could host organizational websites as well as provide unlimited technical support to its partners. PAN was able to introduce its partners to the Internet, guide them in thinking about how to use the Internet, and help them establish and refine their web presence. In almost all cases, this represented the first experience that PAN's partners had with the Internet. PAN now hosts about 33 "main" sites and includes links to 46 other partners' sites.

All of PAN's partners now use email on a regular basis and are generally satisfied with the level of service they now enjoy. Local Internet service providers (ISPs) are available in all of the countries that were visited. Rates of access vary considerably throughout the region. For example, in Singapore and Malaysia access is fast and reliable. However, in India, Indonesia, and the Philippines connections can be slow and access varies considerably with time of day. The main reasons that PAN partners use the PAN server to host their web presence is because they are provided with free and unlimited space, Singapore provides good bandwidth for access, and the PAN server provides access to e-commerce facilities. As a result of their involvement with PAN, most of the partners that were visited now have at least one person working full-time on maintaining their web presence.

Internet access is expanding rapidly in the region, and this trend can be expected to continue. Articles in local newspapers and magazines as well as advertisements point to the current commercial interest in the Internet and associated activities throughout the region. There is no longer a lack of servers in the countries that were visited; however, external access to these servers can be constrained because of the poor local telecommunications infrastructure.

- **PAN would mirror web sites on its server because of narrow bandwidth in some developing countries.**

In parallel with its hosting activities, PAN has provided a location where its partners can mirror their web presence. This facility allows partners to establish their website on a local server while maintaining a second “version” of their website on the PAN server. PAN partners value this service because it allows them to place their website on a server that provides faster access to their data by external users. These partners are also able to update and maintain the site themselves. Several of the partners are now considering establishing mirror sites in several locations around the world to both increase their visibility and provide easier access to their sites for users in various regions of the world. This expansion in their interest in using various Internet sites to promote their organization is a clear indication of the success that PAN has had in fostering the use of ICTs in these organizations. These organizations have benefited directly from the support and encouragement provided by PAN, but they are no longer totally dependent on the PAN server for their web presence. Nonetheless, PAN partners value being on a location that provides an appropriate development environment.

- **PAN would initiate capacity development in research and development institutions to help them build websites for the dissemination of their research results and to develop other applications as they become important (e.g., e-commerce and distance education). These partners would build their new Internet capacities not in isolation but by learning from peers in the PAN network.**

By using the PAN server (as well as complementary projects), PAN has been instrumental in leading its partners onto the Internet and developing appropriate content for institutional websites. Most PAN partners now use their websites to publicize their organizations, to share research results, and to communicate with others. PAN partners now feel they have a much broader range of contacts to whom they can provide quick access to information. When asked what support from PAN had allowed their organizations to accomplish, establishment of a web presence (and associated hosting and training) were rated as the most important. Associated with this web presence was the opportunity to explore the potential of an e-commerce facility for the selling and distribution of various products (books, CD-ROMS, photographs, video tapes, and data).

The creation of a web presence has allowed PAN's partners to expand their range of development contacts and provided new audiences for public affairs activities, for advocacy efforts, and to a more limited extent for increased sales of products. Partners reported having developed new projects and activities as a direct result of their web presence. Almost all of those partners who were interviewed now use the Internet to disseminate and share research findings.

Some partners have used the Internet to sell goods and services since they started their websites. This activity, in general, involved a list of materials produced by the organization (usually publications) complete with prices and an email contact. Any sales that resulted were based on the client sending an email to place the order. Payment in advance of shipment was completed by cheque or money order. In some cases, however, buyers did send their credit card information by email to make the purchases.

The PAN e-commerce application that has been developed is much more sophisticated and allows secure credit card transactions to be made directly from the web site. At the request of PAN partners, the e-commerce site also includes the possibility of using money orders for payment. PAN has also responded to partner requests by modifying the way the system allows PAN e-commerce partner to charge for shipping. Partners can now partition the world into up to 200 zones and define up to 10 shipping methods to establish the exact shipping cost for each item. It is these types of modifications and customized features that make the PAN e-commerce software unique and well-designed for its intended users.

The work that PAN has done on e-commerce has been facilitated because staff had access to the server for experimentation as the software application was developed. Given the current interest in such applications, PAN and IDRC may wish to examine the possibility of licencing this software to Informix.³ However, it is important to note that other e-commerce options are available. One entrepreneurial PAN partner in India has recently established an e-commerce site to sell Indian handicrafts.⁴ As well, an array of e-commerce packages are now available from a

³ Informix is the database application upon which the PAN e-commerce application was developed. Informix has a web interface, but has no e-commerce module.

⁴ Located at <http://xlweb.com/indiashop/> this sites bills itself as "an exclusive non-profit Internet shop for Indian products." Proceeds of this online shop are used to implement projects that upgrade the primary education of under-privileged children in urban and rural areas in various parts of India. This site is hosted in the United States and accepts both Visa and MasterCard.

variety of vendors.⁵ These packages are generally designed for single-store operations (not multi-merchant malls); however, there are also services available on the Internet (US-based) that offer to be “storefront brokers”.⁶ These operations allow individual sites to sell products from a variety of vendors. Although also not the same as the PAN e-commerce operation, these innovations do illustrate the rapid changes that are taking place in this growing commercial sector.

PAN has been successful in developing a useful and unique software package that responds to the needs of small NGOs and development organizations. Part of this process was the negotiation of secure credit-card transaction facilities for its partners (some of whom might have been unable to do so themselves). The broader issue for PAN to consider is whether this multi-merchant model is the best one to use in the future given the rapid evolution in e-commerce options that are available to its partners. However, there is no doubt that PAN was instrumental in nurturing interest in e-commerce among its partners, and PAN’s partners now rate e-commerce as a very high priority for the future.⁷

Distance education is an area with which PAN partners have very limited experience. Only two partners reported any involvement with distance education or distance training. There is, however, considerable interest among PAN’s partners.⁸ Concerns were expressed about the bandwidth that will be required, the need for better computer access in rural areas, and the sources of the necessary course materials. PAN has added EVE (Enhanced Vocalisation Engine) to its website. The EVE Project enables English pronunciation to be taught over the Internet “by making use of cutting-edge graphics and content-generation techniques, the system provides a base upon which pronunciation can be accurately demonstrated.”

⁵ A recent issue of PC Magazine (16 November 1999), for example, dedicated an entire issue to buying and selling on the Internet and reviewed several software options.

⁶ Examples of such operations are: affinia.com, eseller.com, and vstore.com.

⁷ Of 19 PAN partners interviewed, 10 rated e-commerce as 4 out of 4 in importance and 5 rated it as 3 out of 4 in importance.

⁸ Eleven of the 19 partners interviewed rated distance education as either 3 or 4 in importance. These partners were from Singapore, the Philippines, Malaysia, and India.

PAN has been successful in developing the capacity of its partners to use the Internet and in developing new applications. However, it has been less successful in the second part of this outcome, that is in encouraging its partners to “build their new Internet capacities not in isolation but by learning from peers in the PAN network”. As they have developed their websites, only 4 of the 19 PAN partners who were interviewed said they had received assistance from, or learned from, other PAN partners, and 13 of 19 rated “exchanges of ideas or plans with other PAN partners during the planning or design of their web presence” as “not important”. Nonetheless, it was clear during the site visits that were made that the content development projects that have been supported by PAN have been very beneficial both in terms of developing content and in terms of creating a “community” of users in both the Philippines and Nepal.

The learning that has taken place to date has been based on a direct relationship between PAN and its partners. Little sharing or exchange has occurred directly between partners. This may, at least in part, be related to the fact that all of the partners were very new to the Internet and may not have felt able to offer help to others or did not see the other partners as sources of advice. Although they do not get help from each other directly, PAN partners do look “on occasion” at other PAN sites to get ideas. However, only 4 of the 19 partners interviewed can be considered regular visitors to the PAN Asia site (visit at least once every 2 weeks), the rest are “intermittent” users who connect very rarely. Partners do, on the other hand, maintain regular contact with PAN technical staff to ask questions about their websites.

PAN partners are looking increasingly to other on-line resources to learn about the Internet and how to take advantage of what it offers to them.⁹ As they become familiar with the Internet and what it can offer to them, they are undertaking “independent study” and are less dependent on others for help.

- **PAN would create a network of research and development institutions and build a sense of “family” among these organizations to improve the exchange of information and the sharing of experiences among them. These partners would identify with this PAN family and be motivated to network.**

⁹ Some of the sites that partners are using for learning include: efuse.com and webmonkey (hotwired.lycos.com/webmonkey/teachingtool/). As well, OneWorld has a “how to section” that OneWorld partners can use.

Most PAN partners (15 of 19) believe that PAN has been able to create a sense of “family” among member organizations. The methods that were mentioned as being most useful in building this family feeling were in order of importance WebCT,¹⁰ training sessions and meetings, the newsletter, email, and the website. The benefits that partners feel they receive from being part of this family include information sharing, being part of a development website, and receiving technical support and web space. As was stated earlier, the information exchange (related to Internet technologies and technical support) that is taking place is between PAN and its partners and this exchange of information is highly valued. Also appreciated is the fact that PAN is seen as one of the few development organizations that promotes information sharing using information and communication technologies. PAN staff are also recognized for their technical expertise and are seen as unbiased sources of information (in comparison to commercial vendors and ISPs).

Those who value being hosted on a development website feel it gives their organization better exposure. This desire for increased exposure is also leading PAN partners to explore other web-hosting (and mirroring) options to supplement the exposure they get through PAN.¹¹ This desire for partner to get better exposure for their websites also means that they believe that PAN should market its website more actively and enhance the features that are available on the site. This aspect is discussed later.

PAN partners generally think that partners are more likely to share information with each other (particularly now that WebCT is being used), and this information is most often about the Internet and related technologies, rarely about the principal area of work of the organization. Partners reported that they are also more inclined to share information with people they have met at meetings and training sessions. It is not clear from the wording of this outcome whether PAN expected its partners to network and collaborate only with regard to the Internet and ICTs or also about development issues and concerns more generally. But, almost all exchanges that are taking place are technology-related. The differences in mandate and interests among such a diverse group of PAN partners makes exchanges on “content” unlikely. However, some of the PAN

¹⁰ WebCT is very much liked by the partners and was most often mentioned although it has only recently been instituted and is restricted for the time-being to discussions about e-commerce.

¹¹ This is a natural evolution for most organizations. Once they establish their initial web presence, they look for better exposure on other special interest portal sites and also on sites that provide more rapid access to their websites by their users.

partners (for example, APPROTECH and FOOD) have used their PAN experiences to try to establish “families” of their own with their own immediate partners. These affiliations have the advantage of being based on common subject-matter interests.

- **PAN would create an image for itself in the region that would be based on the PAN website. As a result, the PAN PI’s contributions to ICTs in the Asia and Pacific region would be manifest and visible.**

There are differences of opinion between PAN’s partners and regional experts and PAN staff on how well PAN is known in the region. PAN staff believe that PAN is between a 2 and 3 on a scale of 4 in terms of how well it is known in the region; whereas, partners and experts rate PAN as being more of a 1 or 2 on a scale of 4. PAN partners generally feel that PAN is not well-known in the region and believe that much more promotional work is required to promote PAN and its website. PAN is currently promoted by a variety of means such as the website, presentations at meetings, public affairs work conducted by the Regional Director, the PAN Asia Yearbook, and direct mail activities. PAN staff point to such evidence as the number hits that the website receives as evidence of its visibility, and ASRO staff see PAN and its activities as being an integral part of IDRC’s public affairs activities in the region. Most PAN partners were unaware of the level of traffic generated by the PAN website, and few had any information about how many visitors had visited their sites (although this information can be obtained from PAN, it is not sent unless requested by the partner).

PAN is, however, recognized in the region for the pioneering work that it has done with the development of ISPs and the support it has provided for web hosting and webpage creation. This recognition was confirmed by the “regional experts” who were consulted. As well, during my one-week visit to ASRO, two meetings were held between PAN staff and representatives of other donor organizations that were interested in learning from PAN, benefiting from the experiences of PAN staff, and investigating possible joint activities. ASRO staff also pointed out that other projects (such as IFAD) were attracted to ASRO in large part because of the PAN server and the expertise of PAN’s technical staff.

- **PAN would develop the capacity of IDRC staff to use and develop cutting edge technologies and applications of the Internet. These facilities would provide the PI with a tool that could be used to test, innovate, and teach.**

PAN staff have gained much valuable experience in the use of the Internet, the management and maintenance of a web server, the provision of technical support, the development of custom-

designed applications, and the marketing of PAN. These activities have allowed ASRO staff to develop a high level of technical competence that is recognized and valued among PAN's partners. PAN staff reported that they had learned about such aspects as marketing, server maintenance, software development, the use of specific software packages, e-commerce, html, webpage design and construction, and video and audio streaming.

Because the server was available, PAN staff had the opportunity to experiment with and develop applications such as the e-commerce facility. Without the server such development would have been more difficult and likely have taken longer. PAN staff were also able to offer conferencing facilities for PAN partners and manage the PAN R&D program on the server. Teaching and learning was also facilitated because the server was available. PAN's own staff have learned and, in turn, been able to teach others. Those who have been trained include other ASRO staff, PAN staff, and PAN partners. PAN staff noted that it was much more practical and feasible to organize the e-commerce training in August 1999 because the server was available and could be used for this training.

ASRO staff describe the server as "being integral to the entire PAN Asia program". The server provides the opportunity to offer hosting services, e-commerce, and conferencing facilities and gives PAN staff a chance to run "what if" and "show me" scenarios.

- **PAN would enable its partners to use software and services, which would be too expensive to acquire alone, to develop innovative applications.**

PAN has provided its partners with e-commerce and conferencing facilities and services that were at the time unavailable (in particular for the model of e-commerce mall that was adopted by PAN). The conferencing software that was provided, however, was used by only a handful of partners. The introduction of WebCT has stimulated more discussion related to e-commerce, and partners would like to see this facility expanded to include other topics. Training and technical support were provided to PAN partners and these were highly valued. The value partners see has two components. First the support and advice are free, but second and more important partners feel they can trust the advice they receive. It should also be noted that several partners noted that support from local ISPs is virtually nonexistent, is slow, or is costly. Provision of timely and reliable support, of the type provided by PAN, is critical to development of partners' sites and the ability of PAN's partners to manage their websites independently in future.

- **PAN would generate income through commission and charges on services offered (sales of publications mainly, fees for website hosting) to recover part of the expenses and sustain the server.**

PAN recovers about \$2700 US from hosting charges each year and has realized about \$3500 US from its commissions on sales of publications and CR-ROMS off the PAN website. An additional \$3700 US has been generated from the sale of the PAN yearbook, and \$3500 SGD has been generated from provision of leased line access to Cable Media Asia Pte Ltd. ENRAP also pays \$20,000 US per year for its hosting and access. PAN has been able to generate some revenue, but there was no target set as to how much (or what percentage) of the expenses of running the server would be recovered. PAN also attracted significant funding from the Singapore Government for the development of the multimedia aspects of the PAN website. This grant from Singapore One amounted to \$383,386 CAD, which included \$279,776 for ASRO and PAN staff costs. PAN has also received funding for contract research from the UNDP Special Unit for Technical Cooperation Among Developing Countries in the amount of \$214,971.

It is commendable that some revenue has been generated by the operation and maintenance of the website; however, it does not seem reasonable to use this as a measure of the value of the PAN server to the PAN PI program. If the PAN server was designed to return a significant amount on the investment made on it, one would expect that there would be a very different and more aggressive strategy adopted with regard to such things as marketing, charges for hosting and technical support, and the selling of advertising space. It appears more reasonable that the site be assessed on the other factors considered in this evaluation ... its value to PAN's (and IDRC's) clients in region and its contributions to the program objectives of PAN PI in the region.

- **PAN partners would have models (provided by the PAN mother site as well as by the partners themselves) for using Internet technologies and systems.**

PAN partners do not visit the PAN site on a regular basis, but they do depend on technical assistance and guidance from PAN's technical staff. Partners reported that they visit other partner's sites from time to time to see what they are doing and to get some ideas for their own sites, but this is occasional use, not a regular occurrence. Most partners (as might be expected) visit sites all around the world, and they are most likely to visit the sites of institutions with which they share some program or subject-matter interests. For this reason, partners would like to see the PAN site become more interactive, offer additional features such as those offered by other portal sites, and develop a new "look and feel".

These requests actually represents a clear indication of the success that PAN has achieved. Not only have PAN partners created websites, they have integrated web usage into their daily activities and have become more demanding of what they want. They no longer want to settle with being on a static “institutional” site, they want to be on a site that is dynamic and interactive. This will create a dilemma for PAN as it looks to answer an array of questions about the future of the web server. Will current PAN partners be satisfied with an “experimental” site? Does the site need to be expanded and improved to keep current partners happy? Should current partners be encouraged to migrate to other hosts to allow PAN to focus on organizations that have little skill in website development and limited access to the Internet? Should PAN focus only on e-commerce? Should the server and associated activities be recast as a cost-recovery operation?

Conclusions

Based on the interviews that were held with a broad range of PAN partners, PAN staff, and regional experts, it can be concluded that the PAN website and technical services have successfully achieved almost all of the outcomes that were expected by PAN staff.

Awareness and competence

PAN has opened their partner's eyes to the possibilities that are presented to development organizations by the Internet. PAN has had success in encouraging its partners to take advantage of the Internet and provided the training, encouragement, and technical support necessary for its partners to develop organizational websites. In most cases, the sites that were developed were the first for these NGOs and development organizations.

Hosting and mirroring

PAN used its server to provide its partners with both hosting and mirroring services to compensate for the initial lack of local ISPs. The situation has now changed and local hosting services are available in all countries that were visited. However, partners still report that support from local ISPs is often lacking or inadequate, and the reliability and speed of local connections vary considerably between countries. This limit on the speed and reliability of access to local ISPs suggests the need for PAN partners to continue to seek mirror sites for their web presence. The question for PAN to address is whether it wants to continue to provide such services (for free or on a cost-recovery basis) or whether it should encourage those it has helped in the past to seek other mirror sites. If partners were encouraged to move elsewhere, it would mean the PAN server could continue to be used for the development of partner sites, rather than for ongoing hosting. This would mean the PAN “community” or “family” would become migratory not permanent.

Dissemination of research results

PAN has achieved success with regard to helping its partners use their websites to disseminate research results. All partners reported that they are now using their websites to disseminate research finding, or are planning to do so in the near future. Partners post information about their institutions and include some full text documents as well as lists of the various information products that they produce. A web presence has meant that most partners now receive requests for information from a broader geographic range of people and organizations.

E-commerce

PAN has used its server to develop e-commerce software and introduce its partners to the possibilities of selling goods over the Internet. Initially, PAN's partners posted lists of books and audiovisual products on their websites and asked for prepayment before articles were shipped. Recently, some PAN partners have begun to experiment with the PAN e-commerce mall, which is a true on-line commercial site complete with secure credit card payment facilities. PAN partners who attended the initial training session expressed concerns about the costs that this e-commerce system would add to their products and how they would be able to calculate shipping costs to various parts of the world. PAN staff responded quickly to these concerns by developing a new module for shipping cost calculations.

A fundamental issue for PAN to consider is the differences in philosophy among various partners. The PAN "family" includes some organizations that are more commercial or cost-recovery in their approach as well as others that see their mandate as one of advocacy or the provision of free information for the public good. For the latter group, charging for information is seen as a constraint to broader dissemination. Those who are concerned with revenue generation see real potential in the e-commerce application to supplement current revenue and open new markets. The other group of partners look upon the e-commerce facility more from the point-of-view of "electronic distribution" or "electronic advocacy". To them features such as the virtual bookshelf offer a clean and convenient interface for making products available to their target audiences. But, they view this facility more as a way to enhance "free" distribution than to sell products.

For this reason, it is important that PAN consider the "motivations" of its partners. Everyone who was interviewed is interested in the subject of "e-commerce" because it is so widely discussed and publicized now, but few are sure of what it can offer to their organizations. Many of PAN's partners are looking for help to develop "strategies" for how best to use their websites (including the e-commerce facilities) to help them fulfill their institutional mandates. Often, "commerce" is not part of their institutional culture. Other partners are anxious to benefit from the revenue they might realize from the Internet. These partners are now comparing PAN with other potential e-commerce options.

Given the differences in partner interests, PAN must decide whether it should (or can) continue to develop the PAN site as "the development sector's e-commerce mall". This is a large undertaking and further development in this direction will take PAN well beyond the

“experimentation” stage and implies that support and development costs will be covered for some time. If further development of e-commerce on a wide basis is pursued, presumably PAN would need to recover a significant part of its operational costs from revenue generated from the site, or interest others in helping to support its efforts. It should also be borne in mind that this is a rapidly evolving field and it will be difficult for PAN to stay on the “cutting edge” and keep up to commercial developments. Perhaps PAN’s niche is in helping introduce partners to e-commerce and giving them the experience necessary to take advantage of the commercial potential of the Internet.¹² The question to be answered is whether PAN and IDRC can really run an e-commerce site on a on-going basis.

Future look of PAN website

PAN partners are looking for alternative sites to enhance their web presence, and they are strong in their suggestions that PAN should restructure the current website to change its “look and feel” to make it more interactive and newsy. PAN has worked hard to create a sense of family among its partners, but the partners might be best described as an “extended” family. Because partners have many interests and mandates there is limited commonality in the subject or content of their products and services. PAN’s partners are a family with regard to their interest in using the Internet, but not a family with regard to their specific development objectives.

For this reason, as partners become more “web savvy” they are looking for sites to host or mirror their websites that not only provide good access but also provide them with exposure alongside organizations with similar mandates. This is the root of the suggestions that were made about the need for PAN to restructure its website to change its “look and feel”. Partners are not so much interested in sites that simply list institutions, they are looking for sites that present content by discipline or subject, are country-specific, are dynamic and interactive, that change on a daily basis, that highlight changes in content, and that offer such features as free email. Any move by PAN to respond to this suggestion would require considerable initial effort by PAN to reorganize and restructure the website as well as on-going full-time support to animate discussion, highlight content changes, and provide news updates on a regular basis.

¹² In this case, one might question whether a multi-merchant model is preferable to a single-merchant system. There are advantages to both systems, but if PAN is not interested in, or able to, guarantee long-term support for its server, is it in its clients’ best interests to make them solely dependent on a “centralized system” of e-commerce?

PAN may have to decide to work with its partners until they have developed sufficient experience and expertise to become more “demanding” and at this point help them identify and migrate to other sites that provide the environment they are seeking. This would be analogous to the “children” in the PAN family leaving home. As one possibility, perhaps PAN could work with an organization such as OneWorld to develop specialized sites with a regional focus. In other words, perhaps PAN could work with OneWorld (or another similar site) to develop “OneWorld-Asia” as a type of location where PAN partners could migrate after PAN has helped them develop their initial web competence. This would allow PAN to focus on its demonstrated strengths in training and initial web design as well as advocacy for the use of ICTs in development, and allow OneWorld to provide more long-term technical support and hosting, which they may be in a better position to do. PAN’s e-commerce and conferencing software might also be shared on such a collaborative regional site.

Public awareness

PAN’s partners do not feel PAN is well known in the region. Partners feel that PAN must do a better job of marketing itself both to current members and to potential new members and users (especially if PAN is to be a well-known regional portal site). PAN’s partners are generally unaware of the web statistics on usage of the PAN Asia server and few mentioned or use the statistics that are available to them. Once again this suggests that PAN may need to increase its investment in promotion and advertising if it is to satisfy the needs of its partners (and if it wants to become the development sector’s e-commerce mall) . Under the current funding situation, are such investments possible?

Partner interactions

PAN has been successful in creating a sense of family among partners. However, most of the collaboration and information exchange has occurred between the individual partners and PAN Asia. There has been very limited exchange or networking among individual partners. When partners do exchange information it is most often on Internet related topics. Only in the in-country content development projects is there evidence of direct sharing among partners. Partners who have used it, like WebCT. They see this initiative as a very good way to encourage more dialogue among partners and would like to see PAN expand the topics under discussion beyond e-commerce. Some partners noted that a web-based format made it difficult for them to participate because of their slow access, and others suggested that development work on e-mail based conferencing tools would be very useful.

Future priorities

PAN should continue to explore distance education and conferencing tools. Few partners are currently involved in distance learning or training, but its partners encouraged PAN to continue to explore this area of research. Electronic conferences have been used very little by the partners and only a few have ever participated in any. There is a feeling that they might be useful, but partners are not sure of exactly how to use them or really sure of what opportunities exist to use such conferences in their work. These topics, combined with partner desires for more interactions, suggest that PAN could play an important role in using its server facilities to experiment and develop ways and methods to make the Internet a real forum for active discussions on the use of the Internet for development purposes.

Appendix 1: Findings

PAN Partners

Types of organizations:

In-depth interviews were conducted at 19 institutions in India, Indonesia, Malaysia, Nepal, the Philippines, and Singapore. Included in this sample were 15 PAN partners as well as 4 members of PAN's in-country content providers in the Philippines. In addition, more general interviews were conducted with 4 NepalNet partners. Input from these Nepalese respondents is reported separately because the input was more directly related to the activities of NepalNet. This sample represents a diverse mix of institutions involved with the PAN server.

Number of staff:

The number of staff in the institutions visited varied from a low of 2 to a high of 600. Seven institutions had less than 10 staff, five had from 11 to 20 staff, only one institution had between 20 to 100 staff, and six had more than 100 staff.

Internet access:

All of the institutions visited use email (in one case, email is limited to connectivity to 4 of 7 field offices). When possible, attempts were made to retrieve email from my HotMail account to test rates of access. Connection and download speed varied greatly from country to country, and was so low at some of the institutions in Indonesia, India, and the Philippines that checking mail took almost half an hour or was impossible.

Six of the institutions now have their own server; whereas, 13 depend on dial-up access. In all of the countries visited, local ISPs are now available (number of ISPs varies from 2 to 200).

Conclusion: PAN partners now use email on a regular basis, and local ISPs are available although connection rates are variable.

Users were asked to rate their overall level of satisfaction with service they now have. The rating was based on a scale of 1 to 4, with number 1 representing "not satisfied" and number 4 "very satisfied". The responses were:

	Rating	Number of responses
not satisfied	1	0
	2	2
	3	12
very satisfied	4	5

Conclusion: PAN partners are generally satisfied with the service they now have.

In terms of price of access, users were asked to rate the cost on a scale of 1 to 4, with number 1 representing "very reasonable" and number 4 "very expensive". The responses were:

	Rating	Number of responses*
very reasonable	1	8
	2	5
	3	4
very expensive	4	1

* One user did not know the price.

It is worth noting that the cost of access includes both the cost for connection to ISP as well as the cost of the local phone connection, which adds to the users' cost of access.

Conclusion: Generally speaking cost of access appears to be "reasonable".

In terms of speed of access, users were asked both for the speed of their connection and also their subjective rating of the speed on a scale of 1 to 4, with 1 representing "very slow" and 4 "very fast". The responses were:

Speed	Number
14.4	2
28.8	8
33.3	4
56.6	4
128	1

	Rating	Number of responses
very slow	1	2
	2	7
	3	9
very fast	4	1

For those with slower speed access, a common complaint was that access speed was greatly affected by the time of day. It is quite common for staff to come in very early or remain late at night to obtain better connection speeds. The PAN partners who rated speed of access as a 3 or 4, were from Singapore (4), the Philippines (3), Malaysia (2), and Nepal (1). Those who provided a rating of 1 or 2 were from Indonesia (2), the Philippines (3), and India (4).

Conclusion: Access speed is variable and about equally split between slow and fast.* However, if Singapore and Malaysia are excluded, the results suggested that access is still quite slow in the countries that were visited.

* My own experience downloading HotMail (which is web-based) would indicate even slower access (often to the point of not being able to access my mailbox.)

Users were also asked how reliable their current ISPs were on a scale of 1 to 4 with 1 representing “not reliable” and 4 representing “very reliable”. The responses were:

	Rating	Number of responses
not reliable	1	0
	2	3
	3	7
very reliable	4	9

Those reporting a rating of 2 were from Indonesia and India.

Conclusion: Most PAN partners feel that current connections to local ISPs are reliable.

Web presence:

Five of the 19 PAN participants use a local ISP to host their web presence. Of these five, one was in Singapore (and is planning to move to PAN), and 4 were in the Philippines and hosted on the Department of Science and Technology server (part of the PAN content development project). Those that use PAN mentioned cost (free), bandwidth, e-commerce, and availability of unlimited space. Two of the PAN partners (both in India) are using hosting services in the United States. (This is a consideration that others mentioned as well. As more “free” sites are developed, PAN partners are exploring how these might also be used to augment their web presence.)

Conclusion: PAN is used for web hosting because it provides free and unlimited web space, provides good bandwidth for access, and provides e-commerce facilities. As PAN partners increase their web involvement, they are increasingly exploring alternative web-hosting arrangements.

In terms of the number of staff involved in maintaining their web presence, two institutions currently have nobody, 8 have one person, 3 have 2 people, 2 have 3 people, and 4 have more than 3 people.

Training has been received locally by staff in 17 of the 19 institutions visited. Six specifically mentioned the importance of self-study and on-the-job training (often using on-line resources). In

two cases, respondents mentioned the questionable “quality” of the training that was locally available. Some of the local training has been provided as part of PAN support.

In all cases, PAN participants reported that over the last 2 to 3 years there are now more local sources of trained staff either to hire as permanent staff or to engage as consultants. This was qualified, however. There are shortages in some fields and staff are very mobile and thus can be hard to retain (often leaving for overseas jobs or jobs with commercial companies). A hiring freeze for government organizations in the Philippines has also resulted in staff shortages. One Indian respondent mentioned that there were more trained people available than can be hired.

Conclusion: Most partners now have at least one person dedicated to maintaining their web presence and local sources of trained staff are becoming more accessible. Self-study and the use of on-line resources are important ways for PAN partners to improve their skills.

These institutions use their Internet presence for a variety of reasons. The reported uses were:

Public Affairs	Email	Intranet	Share research results	Sell products and services	Collect information	Other
19	19*	3	18	13	11	6

* fewer actually mentioned email, but in earlier questions all reported the use of email.

Among the “other” uses of their web presence were: a “marketing tool”, mailing lists, conferencing facilities, and the use a “game” to gather response from users. A review of the PAN website before the interviews were conducted indicated that of the 49 institutions that were listed on the PAN site, at least 26 listed publications and other materials that were available or for sale (some did not include prices).

Conclusion: Most PAN partners are using their web presence to publicize their organizations, share research results, and communicate with others. Selling products and services and collecting information are less frequent, but common, uses. Many PAN partners are using the Internet to sell products and services (and did so before the PAN e-commerce facility was established to provide a mall atmosphere and secure credit card facility).

Type of support received from PAN:

PAN Server

Eighteen of the 19 people interviewed reported that they were familiar with the PAN server. Of these 18, 2 reported only that they “knew it existed” and “know a little”. Eighteen of the 19 people said they had connected to the PAN website [the one who had never connected was a PINS (PAN Information Networking and Services) partner]. Four are regular visitors (almost daily, almost everyday, two to three times per week, every 2 weeks). Two were from India, and one each from Indonesia and the Philippines.. The other 14 are intermittent users. Their

responses were typified by replies such as: once in a while, just to get to know about it, last year, really only once very quickly, only use occasionally, have connected about three times, not often, visited a few times, on occasion, and one time in the last three months. Among these occasional users, connections were usually made either to look at the newsletter or (more recently) to use WebCT. From the input received, the WebCT interactions can be expected to encourage others to connect on a more regular basis. Contact is also maintained with the PAN webmaster to get information and update webpages.

Conclusion: Few of the PAN partners are connecting to the PAN website on a regular basis. About 75% of those interviewed only visit the PAN website occasionally, although partners do contact the webmaster more frequently for technical support and help with web pages). More contact may be anticipated from the use of WebCT.

In terms of usage of the services that are available from the PAN server, the results were:

Hosting	Mirroring	E-conferences	E-commerce	Search for information	Other
10*	3	5	8**	12	4

* Four of the Philippine partners are hosted on DOST as part of a PAN project (PINS). Although not hosted on PAN they are receiving hosting services through PAN. Therefore, this represents 10 of 15 respondents for whom the question was applicable.

** E-commerce for most of these respondents is just starting or is planned.

Hosting is an important aspect of the service provided by the PAN server. E-commerce may become more important as more of the partners have an opportunity to become involved (training was provided in August and some institutions are still making decisions about their involvement) because 13 of the 19 partners reported that they were selling products and services on the Internet. This level of participation in sales raises the question of whether an e-mail is critical for PAN partners to sell on the Internet (but, the responses in the following table provide a high rating for e-commerce). The large number of users who reported searching for information does not seem to correlate with the few users who report visiting the PAN website on a regular basis, but may reflect the fact that on the occasions that partners do visit they are seeking specific information about other PAN partners (or that they answered the question thinking about general use of the Internet as opposed to using the PAN server directly).

Under “other”, mention was made of WebCT and also the opportunity to learn about Internet technology and to receive updates on the application of information and communication technologies for development purposes, especially in noncommercial terms.

Participants were asked to identify the top three reasons (rated as 1, 2, and 3) they used the services provided through the PAN website. Their responses were:

	low cost	unlimited web space	reliable connection	high speed	technical support	increased visibility	e-comm	e-conf	no local ISP	lack technical skills	other
number selecting	5	4	8	7	6	9	6	2	---	1	---
average rating*	2.2	1.8	1.5	2.1	2.5	1.9	1.8	2.5	---	1	---

* the lower the value, the more “important” the reason.

Increased visibility for the organization was selected most often followed by a reliable connection; whereas, obtaining a reliable connection was ranked as the most important reason followed by availability of unlimited web space and access to e-commerce facilities.

Conclusion: Hosting is important for three quarters of the PAN partners. The most important reason is that it gives them access to reliable connections (without which their web presence, and thus visibility, is much less accessible to others). E-commerce (although very new) was tied in importance with the availability to unlimited web space.

Of the 19 organizations, 8 reported that they had received support from PAN in the form of a project; whereas, the other 11 had not.

In terms of what support from PAN had allowed the organizations to do that they could not do before, the most often mentioned change was related to their initial creation of a web presence and increased public relations or visibility. This was mentioned by 12 of the PAN partners interviewed. Six of the partners cited e-commerce. One respondent noted that even if they had not generated much sales to date, the “experience was very valuable because we can’t do it yet ourselves in the Philippines”. Another felt that without PAN we “could have never have done e-commerce ourselves”. Without PAN backing, some NGOs and development agencies might be unable to acquire access to secure credit card facilities because they might not be able to qualify for “merchant” accounts. Participation in electronic conferences and in telecentres were each mentioned once as new things that PAN support had allowed organizations to do.

Those that had received project support from PAN had used this support to improve networking among their own subject-matter partners, to establish information programs and information centres, and to develop “content providers” for the PAN network (in the Philippines and Nepal). These projects were developed by PAN staff from Ottawa as well as by PAN Asia staff.

Conclusion: Establishment of a web presence (and associated hosting and training) have been the most important contributions associated with the PAN server. E-commerce using secure credit card transactions is important to some partners who might not qualify locally for such

facilities (if they are available). In addition, PAN project support has been used to extend the “reach” of the investments in the PAN website and to develop local skills in content development.

When asked to select the ways in which PAN had allowed them to establish their web presence, the participants gave the following responses:

project	training	hosting	mirroring	technical expertise	samples	other
7*	12	8**	3	11	4	2

* Eight received project support, but one was to help others not to establish a website, which they had already.

** Two who had earlier reported receiving hosting services did not mention it here. This figure represents 8 of 15 partners (because four are hosted via DOST in the Philippines).

Training and provision of technical expertise were the most common ways for partners to have received assistance from PAN, followed by hosting services. (If the number of partners hosted on DOST is considered, all three forms of assistance are about equally common). In the additional comments that were made, participants noted that they knew nothing of the Internet before receiving PAN support and that the training had been critical to their development of a web presence (on the PAN server) and now to the exploration of the potential of e-commerce.

Conclusion: PAN has been an important source of training and technical expertise for its partners. This input has allowed them to develop their initial web presence, host it on the PAN server, and explore the potential of e-commerce.

The respondents were also asked why they used PAN to host or mirror their web presence. Of the 11 respondents who reported that they were either hosting or mirroring their site on the PAN server, free or low-cost hosting, technical support (better, more rapid, and more “friendly” than that available from commercial sites), and being in a development/Asian environment were each cited 4 times. Speed of access and unlimited space were each mentioned 3 times, and training and e-commerce were mentioned once each.

Conclusion: The availability of free web space as well as “unlimited” high-quality technical support (especially compared with commercial sites) are valued from a technical point of view. Being in an appropriate development environment is equally important. (Interestingly, access speed and space were mentioned less frequently than in earlier questions).

In terms of disseminating research findings, 16 of the 19 respondents said they were now using their websites for this purpose. Two of the three not doing so said that this was planned for the future. The third indicated that the main use was to attract donors and to advertise events and conferences.

Sixteen of 19 participants reported that their web presence had allowed them to reach new audiences and 11 reported that they were now able to more effectively reach their traditional audiences. The most common response was that they now had a much broader range of contacts who were seeking information or purchasing books. Provision of quick access to information was also mentioned as being something new and important. Evidence of reaching new audiences was reflected in comments that the partners have received about their websites and in some cases in sales of publications to new clients outside Asia. One partner pointed to the increase in the number of hits from 40,000 per month when the website was established to 183,000 now (about 13,000 to 14,000 user sessions).

Conclusion: Creation of websites has expanded the range of contacts and provided access to new audiences for these PAN partners. This has offered new opportunities for public affairs and advocacy as well as some potential (to date, limited) for increased sales of products.

As they have developed their web presence only 4 of the 19 respondents reported that they had received assistance or learned from other PAN partners, and two of these were partners involved in content development activities. The partners were also asked how important exchanges of ideas or plans with other PAN partners were during the planning or design of their web presence. The rating was on a scale of 1 to 4, with 1 representing “not important” and 4 “very important”. The responses were:

	Rating	Number of responses
not important	1	13
	2	1
	3	4
very important	4	1

The partners who provided a rating of 3 or 4 were from the Philippines (2 PINS partners), Malaysia (2), and India (1).

The respondents were also asked what sources they had used to find out, learn, or copy from as they had developed their web presence. In this case, PAN was cited 7 times, things on other PAN partner sites 9 times, and general input from the Internet 13 times. In terms of helping others (not necessarily PAN partners) to create their web presence, 7 reported that they had done so (3 of these were content-development partners); whereas, 12 have not (those who reported that they had not helped others pointed out that they were just learning themselves and were not really yet in a position to help others).

Conclusion: Learning has been based on a direct relationship between PAN and its partners; little sharing or exchange has occurred among PAN partners. Although they may not get help

from other PAN partners directly, partners do look at each other's sites to see what can be done and get ideas. However, partners do not limit themselves to PAN-related sites as they look for ways to improve the design of their web presence.

Partners were asked if they thought that PAN had been successful in developing a "feeling of family" among PAN's partners. Fifteen of the 19 said yes, 4 said no. The methods mentioned most often for building the family feeling were:

	Number of times mentioned
WebCT	8 (although very new)
Training sessions/meetings	5
Newsletter	5
Email	4
Website	2

During the discussions it was mentioned that the feeling of family was difficult to develop because the partner institutions had different professional interests. It was also noted that although WebCT was good, an email-based system would help include those with slow connections. Partners also suggested that it would be useful to expand the WebCT discussions to include topics other than e-commerce.

Conclusion: Partners feel that there is a sense of family among PAN partners and that WebCT is a good forum for information exchange. They would like to see WebCT expanded to stimulate discussion on a broader range of topics. As well, experimentation with email-based tool could benefit some partners.

In terms of the benefits that partners feel they receive from being a member of the PAN family, three groups of responses were most common:

	Number of times mentioned
Information source/sharing*	7
Part of network/development website	6
Technical support and web space	4

* Information sharing included such things as information on the Internet and exchange of technical expertise; therefore, there may well be overlap between information sharing and technical support.

A source of information on Internet-related technologies and technical support are seen as the most important benefits received by PAN family members. Additional comments indicated that partners see PAN as “one of the few organizations that promotes information sharing using information and communications technologies.” One partner offered that PAN’s efforts to “promote international understanding by helping countries get connected and create their web space are brilliant.” Another noted that PAN was different because “it is not a technology producer it is more concerned with applications ... and it debates issues from a developing country perspective for development purposes.”

The importance of being part of a development website (or portal) was important to those who felt that PAN provided better exposure for their websites. The desire for increased exposure is leading some PAN partners to seek affiliations with other web-hosting facilities in different development settings (for example, OneWorld). Partners feel that being part of a gateway to development activities in the region is important, and as one partner noted “we are proud to say we are part of PAN.” At the same time, others noted that there is a need for much more promotion of PAN to make it better known (and by extension increase their own exposure through the PAN website).

Only 5 respondents said there were disadvantages to being part of the PAN family. Some of the concerns raised were “technical,” such as difficulties with updating websites on the PAN server, the high rate of commission on book sales and the need to send book by airmail, and the need to include .sg in the domain name of the organization. Some of these (having to send books by airmail and the domain name concern) were in fact due to misunderstandings, which have subsequently been addressed by PAN directly with the partners concerned. The other concerns that were raised were more broad and related to the overall approach taken by PAN. It was suggested that PAN must become more concerned with helping partners develop “business models” related to how to use websites to maximum benefit (including e-commerce activities). One person noted that the PAN business model “needs to be social not commercial and that PAN itself needs training on how to be entrepreneurial.” Another person was concerned that the site must become more “interactive,” that it “must become a busy discussion site.”

Conclusion: The PAN website and associated technical inputs are valued because they provide unbiased, non-commercial, technical information and advice and present and discuss issues from a development perspective. The PAN website is also valued as a gateway to Asian information. To enhance its effectiveness PAN may need to help its partners develop and examine their “strategic” approaches to their websites. PAN may also need to place greater emphasis on marketing and promoting its own website if it wants to maintain its presence as a portal site to Asian research and development activities.

The respondents were also asked whether they thought that PAN partners might be more likely to share information or experiences with other PAN members compared with non-members. Eleven thought so, 6 thought no, and 2 said they did not know. Some of those who did not think there would be greater sharing noted they did not limit their information exchange to any one group.

Those who felt that more information would be shared among PAN partners pointed to the use of WebCT and also to the fact that it was easier to share information and experiences with people who they had met personally at meetings and training sessions. Others suggested that because PAN partners work in different disciplines, opportunities for sharing are somewhat limited. This “discipline” related bias is also reflected in the fact that participants suggested that if information was exchanged it would be most often related to Internet technologies (9) compared with the principle areas of work of their organization (3). Five felt both types of information would be exchanged and two said they did not know.

Conclusion: PAN partners are more likely to share information with those they have met personally. Given the differences in the mandates of the organizations, the information that is shared is more often related to Internet technologies than to the principle areas of work of the organizations. The use of WebCT has recently encouraged more information exchange about e-commerce among partners.

PAN's visibility

Respondents were asked how well PAN was known or recognized in Asia among development organizations and organizations interested in ICTs. Responses were based on a scale of 1 to 4 with 1 representing “not well known” and 4 “very well known.” The responses were:

	Rating	Number of responses
not well known	1	6
	2	8
	3	3
very well known	4	1

The one partner that selected a rating of 4 limited this to PAN partners. That same person provided a rating “of not more than 2” for other organizations in Asia. Two people who were interviewed did not feel they could make a judgement. It was pointed out that IDRC may be more widely known than PAN, but that PAN is probably better known in countries where it helped establish ISPs. It was also suggested that additional promotion and advertising were needed to raise PAN’s profile. One person noted that although PAN might be quite well known among international development agencies in the region that are interested in information and communications technologies, smaller NGOs cannot be expected to know PAN partly because these organizations do not have Internet connections.

Conclusion: PAN partners feel that PAN is generally not well known among development organizations in the region and feel that more promotion work is necessary to promote the PAN website. If additional promotion was undertaken, a mix of media types would be needed to reach those who currently do not have electronic access.

In terms of awareness of other web-based networks among development organizations, the respondents were almost evenly split. Nine of the partners knew of other networks (1 partner in Singapore, 4 in the Philippines, 2 in Malaysia, and 1 in India), 10 did not know of any other similar networks (3 in Singapore, 2 in Indonesia, 2 in the Philippines, and 3 in India).¹³

Conclusion: Some national initiatives are starting, and some of the international initiatives cited are funded at least in part by IDRC. It is important to note that the partners credited PAN for being the first development organization to promote information sharing over the Internet and they noted that other development organizations are just now becoming involved. However, about half of PAN's partners are unaware of other similar activities.

Nine people interviewed said that new projects or activities had resulted from their web-presence in PAN. Six said none had occurred and 4 did not know. Of those who reported new activities or projects, 4 people mentioned such things as more communications activities (e.g., requests for publications or general information or improved communications with their own partners or members). One PAN partner showed their site to someone from another organization and then helped that organization to establish a website. The remaining 4 organizations indicated that they had in fact developed new project activities as a direct result of interactions that had taken place due to their web presence.

Conclusion: In general, creation of a web presence has increased the range of external contacts maintained by PAN's partners. These contacts have allowed PAN partners to become involved in new projects.

Electronic Conferences

Fifteen of the 19 respondents reported that they knew that PAN had facilities for electronic conferences, but only 4 had experience with electronic conferences on the PAN site. Two others suggested they were thinking of conducting a conference. Those that had used such facilities gave them mixed ratings on a scale of 1 to 4 with 1 representing "not useful" and 4 representing "very useful", there were 2 ratings of 2 and one each of 3 and 4. It was noted that organizing an electronic conference required a great deal of work if it was to be successful (perhaps 25% more than a "real" conference) and takes extra time because virtual conferences are usually open for several weeks.

¹³ Those who were aware of other networks mentioned: the Asia-Pacific Development Information Programme (APDIP) (a UNDP-supported project); Association for Progressive Communication (APC); Philippines Sustainable Development Network (PSDN); CodeOne (Philippines); Asia Pacific Advanced Network (APAN); Asian Internet Information Initiative (AIII) (latter two called "subsets of the Internet"); OneWorld; World Trade Organization (WTO); SEA-AIDS; UNESCO; Institute of Development Studies (IDS); Centre on Integrated Rural Development for Asia and the Pacific (CIRDAP, an IDRC project hosted by PAN); Development Alternatives Information Network (DAINET); India Development Information Network (INDEV); and SD Gateway (Sustainable Development Communications Network, formerly the Spinning the Web Network).

A total of 7 people reported having participated in conferences not hosted by PAN (12 had not participated in any). Once again, ratings on usefulness were mixed, with 1 rating of 1, 3 ratings of 2, 2 ratings of 3, and 1 rating of 4. Only one person had tried to organize any sort of electronic conference among their own staff.

In terms of the future importance of PAN continuing to host such electronic conferences, participants were asked to rate importance on a scale of 1 to 4 with 1 representing “not important” and 4 representing “very important”. The responses were:

	Rating	Number of responses
not important	1	1
	2	5
	3	4
very important	4	8

In addition to suggesting that such facilities are important, it was also noted that future conferencing tools should not only be web-based. Those with slow and limited access could benefit from experiments with email-based conferencing tools. WebCT, which was highly praised, has the limitation of being web-based. Those who reported not having been involved in conferences do use listservs to gather and exchange information.

Conclusion: Although few PAN partners have used electronic conferences, the importance of such tools for collaborative communication was acknowledged. Efforts are needed to make such conferencing tools more useful and to develop (or promote) tools that are based on email.

E-commerce

Of the 19 participants interviewed, 13 reported that they currently sell products or services over the Internet. Publications are the most commonly good sold. Various types of books and journals are being sold by 11 of the PAN partners interviewed (using a variety of methods to allow people to place orders and pay). Three partners use the Internet to allow participants to register for courses, two sell video and audiovisual products, two sell CD-ROMS, and two sell statistical data. In addition, one of the PAN partners in India has set up an e-commerce site selling local handicraft products (<http://xlweb.com/indiashop/>) using a secure server in the United States. The primary target audience for this site is the 80 million Indians who are working overseas.

Eighteen of the 19 people interviewed knew that PAN had e-commerce facilities on the website. Currently, 7 are participating in PAN e-commerce activities, but 4 of these noted they were just starting. (This is to be expected because training was provided in August and interviews were conducted in late October and November.) All of those who were considering or using the system were aware of the charges that PAN would be collecting; however, most were not aware

of how these costs compared with commercial operations. Two partners mentioned that the virtual book concept was an interesting way to make their free publications available to others.

Several concerns were raised with regard to the e-commerce system. How to charge for postage to various locations in the world was raised by some partners. Others were concerned about the added costs they would have to pass on to their customers because of the commission charged by PAN. The need to use credit cards was also raised. Some of the concerns related to postage charges and credit cards are being worked on or are based on misunderstandings among the PAN partners. (On 21 January 2000, PAN informed all partners of an addition to the e-commerce facility that addresses the need to handle differences in postage rates.¹⁴) In India, concerns are related to foreign currency regulations imposed by the Reserve Bank of India on credit card transactions, which those interviewed suggested would be resolved by mid-2000.

Conclusion: PAN partners are using the Internet to sell products, often simply by using email to replace regular mail for ordering. They normally accept cheques and money orders but some have been using credit cards. Most orders are prepaid before shipment. As PAN evolves the e-commerce site it will continue to need to carefully look at partners needs and help them develop appropriate strategies and plans for their e-commerce activities. It will also be important for PAN to monitor e-commerce development in each country as this is a rapidly changing and evolving field.

Ten of the partners reported that they had bought something over the Internet but nobody had personally sold anything. The items that had been purchased included flowers, books, magazines, and computer parts. The need for “plastic money” was the most often mentioned constraint.

Participants were asked if it was possible in their country to purchase items over the Internet using credit cards linked to secure transactions. Twelve replied that it was possible to buy over the Internet (4 in Singapore, 1 in Indonesia, 3 in the Philippines, 2 in Malaysia, and 2 in India), one did not know, and 6 said no (1 in Indonesia, 2 in the Philippines, 2 in India, and 1 in Nepal). There are clearly differences of opinion between PAN partners in the same countries. Where positive responses were given, it was reported that this was possible only very recently ... for less than a year (except in Singapore). Some suggested that although credit card information may be provided, security is not guaranteed. In some countries, it has become common for purchases to be made over the Internet (for food or for tickets to local events, for example), but payment is by cash on delivery. Others expressed concern over whether such electronic communications are acceptable in court if disputes arise. The Philippines just (in September 1999) launched one e-commerce site at a meeting in San Francisco, and in India it has been possible for the last 3 months to make purchases from outside India, but there are restrictions imposed by the Central

¹⁴ This new system integrates both a shipment charge and per item charge. Each shop manager can now partition the world into a maximum of 200 zones and define up to 10 shipping methods (eg, surface, air mail, courier companies). This should help address the concerns raised by the partners.

Bank. Within India purchases can be made with local credit cards, but payment is expected in cash when items are delivered.

There was support for PAN continuing to host e-commerce facilities. Asked to provide a rating on a scale of 1 to 4, with 1 representing “not important” and 4 very important”, responses were:

	Rating	Number of responses
not important	1	0
	2	4
	3	5
very important	4	10

The partners who were interviewed believe that e-commerce will be important in the future and that it is important that they are aware of its potential. However, a recurring comment was that the partners are not working for profit and that their mandates are to disseminate information for free or for advocacy purposes. Therefore, they are concerned about any increases in costs. One partner noted that “charging is a constraint to the sharing of information.” Partners see the potential of the Internet to help them reach wider audiences more quickly, which is important for time-sensitive materials. It should also be noted that the situation is changing very rapidly and that in all countries interest in establishing e-commerce among commercial vendors is high. Therefore, local changes are likely to be rapid and need to be carefully monitored.

Conclusion: The potential exists to use the Internet as an important way for PAN partners to enhance the dissemination of information and perhaps earn some supplemental income. Partners may need help to think through how e-commerce might be used and the type of model they need to develop to incorporate these activities into their current practices, because making money is not necessarily a priority for these organizations.

Distance Education or Training

One respondent of the 19 who were interviewed indicated that their institution had conducted distance education. Similarly, one had also attempted some distance training. The organization that had conducted the distance education was a regional training centre and the one that had conducted some training was just starting to do so in an informal way. Asked how important it would be for PAN to provide support for distance education and training in the future, the respondents rated this on a scale of 1 to 4, with 1 representing “not important” and 4 “very important”, as:

	Rating	Number of responses
not important	1	3

	2	5
	3	5
very important	4	6

Those who provided a rating of 3 or 4 were from Singapore (1), the Philippines (5), Malaysia (2), and India (3).¹⁵ Concerns were raised over the amount of bandwidth that is needed and therefore the need to consider methods that were not web-based. As well, some of those who work in rural development, mentioned that their clients do not have computers. One partner also wondered where appropriate courseware would come from.

Conclusion: PAN partners are interested in this subject and believe it may be important in future, but they have little experience or knowledge at this time and distance education training.

Future

The participants were asked what new Internet-related applications or services that their institutions might need over the next 2 to 3 years. The range of future plans demonstrates the degree to which Internet activities have been integrated into the activities of these institutions.

The most common thing that PAN partners would like to do is enhance discussion and interaction with users, clients, and their own partners. They want to use discussion groups, Web CT, e-conferences, and email-based systems to stimulate more interactive exchanges, gather feedback, collect data, and disseminate information. In addition to improving interactions, partners are looking for ways to improve the content on their websites. This includes both gathering information from other sources as well as placing their own information and research results on the Internet. Related to this interest is a desire to develop multimedia applications and to find ways to incorporate diagrams to make the communication more “visual”, especially for those with slow connections.¹⁶ Three partners are looking for ways to provide web access to their existing databases. Two partners are looking forward to making use of telephony applications on the Internet. These PAN partners are also looking for ways to continue to promote the benefits of the Internet within their own organizations and to enhance the connectivity of their partners and associated organizations and help them tap into the Internet.

¹⁵ On 8 March 2000 the Government of Singapore announced that it was setting up a Virtual Institute for E-Learning that would have a focus on Asia. In Canada, DFIAT recently announced it would set up a network of strategic centres to deliver Canadian education products and services ... “to use them as springboards to develop marketing, support and content development joint ventures with appropriate local receptors.”

¹⁶ This desire to make communication more “visual” may be particularly important for rural development activities and for distance education. Research is needed to explore ways to enrich the visual content without further increasing the need for bandwidth.

Asked if these services and applications could be developed and delivered locally, 13 of 19 participants replied yes. Nonetheless, 15 respondents felt they would need further support from PAN, 3 were unsure, and one said not for what they were doing now, but help with e-commerce would be useful. Asked what form this support should take, 5 suggested the need for grants from PAN, 15 said continuing support through the PAN website, and 4 were unsure (all five that suggested the need for grants also wanted continuing support from the website as well). Support from PAN for hosting was mentioned by 5 partners. Five partners also suggested the need for help with e-commerce. The need for training and advice related to specific applications was mentioned by three of the partners.

Conclusion: These PAN partners are anxious to continue experimenting with new ways to integrate the Internet into the day to day operations of their institutions and, in particular, are looking for ways to make their discussions more interactive. Nearly 80% feel that they will continue to depend on assistance through a more “interactive” PAN website.

In terms of being willing to pay for PAN services in future, 13 said they would be willing to pay something, 4 were not sure, and one said no. Participants are willing to pay some amount, but want to be sure it is less than or equal to commercial rates. Several of the partners interviewed have considered other sites for their hosting already as these become more common and in some cases are free. These sites include “commercial” ones available in the United States as well as other “development” type sites such as OneWorld. There are advantages, of course, to having your web presence mirrored in several locations to increase your exposure, and a presence on these other servers does not mean these organizations plan to leave PAN. However, it is clear that PAN partners now have other options and are exploring them.

Participants were also asked what impact there would be on their institution if they had to obtain the services currently provided from PAN from another source. The responses that were given can perhaps be summed up in the words of one partner who said “it would be workable but not at all desirable.” Some of the concerns related to loss of the expertise in e-commerce and loss of the benefits that are derived from the experimentation and training that are provided by PAN. Related to e-commerce, one of the partners noted that he could probably not get a merchant account without IDRC participation and collaboration. Others were concerned about the loss of the “credibility” that comes from being associated with IDRC and PAN, the loss of exposure via PAN, and the loss of the “togetherness” that has been developed among PAN’s partners. Now that organizations have established their web presence and its associated URL they are also reluctant to change their addresses because it would mean a lot of work to publicize the change to all of their users and clients. Finally one partner said they would “have the feeling of being alone, of being an orphan.”

Conclusion: PAN partners could manage if they no longer received services from PAN, but they would prefer to continue the association with PAN to maintain their exposure and credibility and to benefit from a central site for hosting, training, and experimentation.

Suggestions for PAN

Those interviewed were also asked for their opinion on what PAN should look like in 3 to 5 years. By far the most common suggestion was that PAN must become better known and be a much more dynamic site. Reference was made to such sites as the BBC and to OneWorld. Those who are being hosted are now much more demanding in terms of what is provided by the host site. In general, PAN partners would like to see the PAN website be more than a place to be hosted, they want to be on a site that is dynamic, that changes daily, that points to areas of the site that have changed, that offers email facilities, and that is organized differently (perhaps by discipline or country, but not by institution).¹⁷

Eight of the partners suggested that PAN needs to increase its public affairs to make the website better known in the region and to encourage even more development partners to join the PAN family. They also suggested the need to establish links with other regional organizations and databases. Suggestions were made that PAN place banner advertisements on development sites, that it encourage its partners to launch public affairs efforts locally, that PAN take out advertisements in regional magazines and newspapers, and consider radio and television advertisements. Six pointed out that there was great value for institutions in the region to have a place to turn to that was leading the way with respect to Internet technologies and applications and they encouraged PAN to continue to be a regional resource for “training and experimentation”.

PAN was also encouraged to be sensitive to the constraints faced by some of its partners and their clients with regard to bandwidth. It was suggested that PAN seek ways to use both the web and email-based solutions as it seeks to make interactions among partners more dynamic and interactive.

With regard to the “look and feel” of the website several suggestions were made with regard to changing the overall look. Comparisons were made to other “portal” sites and it was suggested that the PAN site needs to become more like a café that would encourage meetings and exchanges of information, that would include email facilities, and that would have bulletin boards so visitors could leave messages and comments, that it include a search engine specifically tailored to development information ... in short it should aim to become more “newsy” and more interactive. It was suggested that the newsletter should be monthly (or even better, weekly). To make the site this dynamic it was suggested that a person would be needed full-time to provide editorial direction, to develop a strategic model for the site, and give overall direction and visioning to the ways in which the site should evolve in terms of content and presentation.

¹⁷ Partners are looking for such features from their “host” because these features are available on other hosting sites they have visited. Such features would, of course, increase bandwidth requirements for those visiting the site. Clearly some balance is needed if those with limited bandwidth are an important client group that is expected to access the PAN server (as suggestions for both web-based and email tools for discussions suggest).

Three people suggested that perhaps the site should be organized by country, with a map of the region for easy navigation to issues that were specific to individual countries as well as to links to development issues affecting the entire region. The idea was to transform PAN from “being a content site that looks more like a corporate site.” In this regard, several partners commented on the fact that PAN itself had to develop a new “strategic or business plan” to chart its future development.

Conclusion: PAN partners feel that the PAN website needs to be better publicized and needs to attract a greater number of partners. Partners would like to see the PAN website revamped to make it more dynamic and newsy. If this were to be done, it would likely require a full-time person to manage this development and handle editorial content. Partners would also like PAN to consider adding such features as email and development-specific search engines to encourage enhanced use of the site.

Finally, asked if they had anything else to add, the participants took the chance to praise IDRC and PAN for being on the forefront of encouraging and supporting exploration of the use of the Internet for development purposes. They also urged PAN to continue its “much needed and appreciated” experimentation and training because “there are many more development organizations in the region that require assistance to develop websites and learn how to take advantage of these new technologies for development purposes.”

ASRO Staff

Seven PAN staff in the Singapore Regional Office were interviewed. The sample included three program staff and four staff involved with the technical aspects of running the PAN server and e-commerce activities. Their input has been combined to present an “ASRO” view of the PAN server and associated technical services. Some questions were asked only of the program staff, some only of the technical staff, and some were asked of all staff.

Evolution of idea for PAN website

In 1994 IDRC was being restructured and all programs were challenged to prove that their programs were still viable. ASRO had started to address how to help NGOs to think about and use the Internet for development purposes. At that time, the Internet was still quite new in Singapore. IDRC provided \$80,000 CAD for a team of four regional consultants to conduct an Asian survey. Out of this survey, the initial program of support was designed and eventually led to the creation of PAN and to the establishment of a server at NetCentre. The rationale was that IDRC’s clients had to have reliable access to a server if they were to experiment with Internet technologies. When NetCentre closed, the server and 2 of the technical staff were transferred to IDRC. At the time, it was concluded that there were no other organizations in the region that were able to host and support the server. When IDRC’s structure was changed, the PAN Asia program was expanded to become a Program Initiative, which has now evolved to include Latin America and other parts of the developing world.

Having the server in-house has, in the opinion of the ASRO staff, been invaluable in terms of learning about Internet technologies. Because it was a closed system, program staff could just say “show me” and technical staff could experiment with applications. As a result it “was and is a critical tool for programming and for our own learning.” This sentiment was also expressed in the following ways: “If you want to do applied research you must have the tools ... you absolutely must have the tools, especially to do applied research in information and communications technologies. The need for a website is a given.” “The server gives us a tool to share with development projects ... for ourselves (it allows us) to give advice.” “Having our own server is also critical to having somewhere to provide training”. If PAN had not had its own server, “we could not have handled all of the legal aspects related to e-commerce.” The server has also been a major selling point for IDRC attracting other donor funding. For example, in the case of ENRAP, “the website was the critical selling point, IDRC was seen to have the equipment, the expertise, and the network.”

Conclusion: The server is seen by PAN staff as an essential element of PAN’s programming tools in the region. The server also provides PAN’s own staff with an environment in which they can learn and experiment. In addition, the server provides IDRC and PAN with credibility among other donors and development agencies.

Contributions made by PAN Asia

PAN was credited for making an important contribution to research and development organizations in the region by being the first donor to push for Internet applications ... this value was thought to be both in terms of financial support and in terms of the “philosophy” of involving developing countries in the Internet revolution. In this regard, it was pointed out that without the PAN server some development projects would not have access to the Internet. For this reason, one of the program staff felt that the PAN server should be considered as a shared resource for all projects in the region.

From a more technical point of view, PAN’s work with servers was cited as demonstrating that a UNIX-based server is the most robust for ISPs in the region. This has been demonstrated in practice by ISPs in both Mongolia and Cambodia. It was also noted that PAN was able to use the server to help build content among PAN’s partners (it was noted that this was more difficult early on and is now becoming easier). PAN has also experimented with conferencing software, because initially there were no appropriate products. Now they have switched to WebCT. The PAN server has also allowed PAN to develop e-commerce software and facilities and to negotiate arrangements for secure credit card transactions over the Internet.

Conclusion: PAN Asia has led other donors in promoting the use of the Internet for development purposes. The PAN server has facilitated PAN’s ability to develop, experiment with, and demonstrate a range of software products appropriate to developing country needs.

Disappointments

One of the disappointments for PAN staff has been the time spent in defending their activities to others in IDRC and the fact that PAN networking is not seen as being closely integrated to the rest of IDRC’s work in the region. The only other “disappointments” at a more general level were related to the effort and time that was expended on trying to develop joint ventures in China and Sri Lanka.

Conclusion: PAN Asia staff felt stress from having to constantly “defend” their program within IDRC.

Roles of PAN server in IDRC and PAN PI

PAN is one of the prominent activities for IDRC in Asia; it is considered “one of the big four.” It was considered to give IDRC as a whole “a trademark in the region” that results in the Centre having a high degree of visibility. This visibility is reflected in the 800,000 or so “hits” that the PAN website now receives each month.¹⁸ The site also allows IDRC and PAN to share information with organizations in the region and around the world. PAN and IDRC have also received publicity in newspapers and magazines in the region from articles written about PAN’s Internet activities.

¹⁸ Statistics since October 1999 are as follows: October 643,458; November 928,935; December 883,971; January 807,947; and February 879,091. The number of user sessions during the same period varied between 55,058 and 72,542. These statistics exclude PAN’s internal access to the site.

For the PI itself, the website is used for all internal housekeeping tools, which includes lists and archives as well as reports and other project information.

All three program staff who were interviewed rated the PAN website as making a very important contribution to IDRC's public affairs in the region (rated a 4 on a scale of 1 to 4). In fact, it was stated to be "the most important thing we do in the region with respect to public affairs." Program staff agreed that this public affairs activity could be done elsewhere or in a different way, but noted that in many ways PAN is the "hook for much of the public affairs effort" and that maintaining an Asian image for the site and the public affairs effort is very important. It was also suggested that IDRC needs some in-house capacity to keep pace with technological advances and to experiment and test ideas and applications.

Conclusion: PAN Asia and its website are very important to IDRC's public image in the region, and the website allows IDRC and PAN to share information with other development organizations. The PAN PI makes extensive use of the website for its own housekeeping. The website also provides PAN and IDRC with in-house capacity to assess technological advances that might be important in the region.

Other web-based networks in region

APDIP in Kuala Lumpur was mentioned by two of the program staff as the only donor-supported "competitor." It has just recently been launched and is looking for ways to raise awareness of the Internet among policymakers through conferences and meetings and the provision of some training. The UNDP is also now working in Butan to set up "PAN-type" activities and establish an ISP. (During the week I was in ASRO, representatives from two organizations came to visit with PAN staff to explore ways they could collaborate with PAN and benefit from PAN expertise and experience). It was also suggested that there are organizations springing up in India to help people become connected (e.g., People Link). However, it was noted that it is important that we not assume that everyone has a computer, and understand that it is not yet a habit for researchers to check their email each day. In many organizations in the region, one computer is shared among many people, or one person "controls" the computer for many users. Therefore, it is important that groups like PAN seek ways that allow people to work with the Internet with limited computer access.

Conclusion: Other donors are just starting to become interested in Internet applications in the region and are, in some cases, looking to PAN for guidance and assistance. Future PAN activities might be directed at how to assist those with limited computer access.

How well is PAN known?

PAN staff were asked to assess how well known PAN was among research and development organizations, NGOs, development agencies, governments, and policymakers in the region. Here are the responses (1 represents “not well known”, 4 represents “very well known.”):

Respondents	R&D organizations	NGOs	Development agencies	Governments	Policymakers
No 1	4	2	4	2	3
No 2	3	2	3	1	3
No 3	2	3	3	2	3
Average	3	2.3	3.3	1.7	3

PAN was rated as being well known among development agencies, research and development organizations, and policymakers in the region. It is less well known among NGOs and least well known among government officials.

Conclusion: PAN staff feel PAN Asia is quite well known in the region among some audiences (partners are not as optimistic).

PAN's efforts at marketing itself have "really been to market the program initiative as a whole." Brochures and information updates have been distributed to international meetings, such as the International Federation of Library Associations. As well, PAN is marketed through presentations made by PAN staff at conferences and by various activities undertaken by the Regional Director. PAN has also used direct mail and has developed an agreement with IDRC Books to do a mailing on the PAN yearbook to 6000 addresses. Partners have also helped promote PAN by placing advertisements in their newsletters and journals. In addition, the Canadian High Commission in Singapore "is very interested in PAN" and does some promotion. All trainees at RELC are given a briefing on PAN as part of their training activities.

Future marketing activities are really dictated by "how we want to appear to others." For the time-being we "are being rather cautious because we have to wait until it clear what is happening in IDRC," but "we could do better if there was a clear indication of future plans." It was suggested that PAN could take out "banner" advertisements, create more links to and from other sites, and perhaps take out paid advertisements. One possible link could be with a new startup company in Singapore that has been set up to promote e-commerce in Asia.

Conclusion: PAN has undertaken some marketing to date, but more could be done to make PAN and the website better known in the region. Such efforts require a clear indication (and resources) from IDRC of its future priorities for PAN in the region.

Projects or activities resulting from website

PAN's research and development grants are managed and administered over the Internet and are open to everyone in Asia, not just PAN partners. Projects with Foods India and Food Sri Lanka were initiated as a result of initial contacts made via the website. The PAN website has also attracted interest from other donors. For example, UNDP TCDC approached PAN to get help

with linking their projects and this resulted in a contract to get 11 of their partners on-line (includes ministries of trade and economic cooperation departments). UNDP has also approached PAN to talk about its e-commerce activities and to explore ways to collaborate.

Conclusion: PAN's research and development program is an example of how the Internet can be applied to manage and develop projects in the region. The website has attracted the attention of other donors in the region who now see PAN Asia as a source of expertise on Internet applications.

Sense of family

All of the PAN staff felt that PAN had been successful in developing a sense of family among PAN partners. The methods that have been used to foster this feeling include; conferences such as the one held in Mongolia, training workshops, the newsletter "PANorama," and the WebCT conferencing software. In addition, links are created "to everything via the website so that it is all available to everyone." PAN also shares "information on the performance of the PAN site as well as provide statistics for each of the partners' sites."

The advantages that PAN staff feel accrue to members of the PAN family are: the development of skill in the use of Internet technologies, the ability to exchange information and experiences and to learn about what each other is doing, and the opportunity to experiment for free with e-commerce and its application for development purposes.

The only disadvantage noted was that IDRC sees its involvement as short-term and that PAN's partners could be let down.

PAN staff also felt that PAN partners would be more likely to share information among each other. This requires the building of relationships based on trust and credibility and PAN staff feel that this has only been more recently achieved. Staff have noticed that WebCT has initiated exchanges of information more directly among partners rather than having all partners depend on PAN staff for advice and assistance.

Conclusion: PAN staff feel they have been successful in developing a sense of family among PAN partners, but recognize that to date interactions among partners has been limited. WebCT offers the potential to enhance information exchange on a broader range of topics.

Services provided via the PAN server

Hosting is provided on a selective basis to organizations in the region. Priority is given to those who have the fewest options for local access and hosting. If they are not a PAN project recipient they are charged \$500 per year. IDRC grant recipients are also hosted, but must include funds in the project to cover the costs involved. Conference facilities and mailing list hosting are provided at no charge. E-commerce is provided with no setup fees, but a 20% commission is charged to help defray costs and cover the cost of secure credit card transactions (the cost for this service is 6.5%). The fee charged by PAN is a little below commercial percentages, but is provided under

different conditions because there are no setup fees (which can vary between \$5000 and 20,000) and no monthly charges in addition to the percentage on sales.

Finally, it was noted by PAN staff that PAN had “really taught ASRO how to do the Internet.” In addition, at least five locally engaged staff have developed new skills (UNIX, FTP, Internet business, marketing, e-commerce, and training) and taken on new responsibilities related to managing the PAN server, developing content, and marketing PAN activities.

Conclusion: Hosting and e-commerce are the most important services provided by the PAN server to its partners. IDRC staff in ASRO have also derived training and career opportunities because of the server.

Revenue from PAN server

PAN recovers about \$2700 US from hosting charges each year and has realized about \$3500 US from its commissions on sales of publications and CR-ROMS off the PAN website. An additional \$3700 US has been generated from the sale of the PAN yearbook, and \$3500 SGD has been generated from provision of leased line access to Cable Media Asia Pte Ltd. ENRAP also pays \$20,000 US per year for its hosting and access. Other revenue includes significant funding provided through Singapore One for development of the multimedia aspects of the PAN website, which amounted to \$383,386 CAD, which includes \$279,776 for ASRO and PAN staff costs. This project is coming to an end.

Conclusion: PAN currently generates modest revenue directly from the PAN server. The server has attracted significant external funding to both PAN and ASRO.

Software development/application

PAN chose to develop its own e-commerce software because nothing else was available at the time to match the e-commerce model that PAN partners wanted to adopt, which was a system that could accommodate multiple merchants with a single checkout. In addition, it was felt that PAN staff needed to do some learning if they were to be able to help other ... “we must try and see what works and what does not work to really be able to help others. Without this facility we cannot teach others or anticipate problems.”

PAN also experimented with the use of Cold Fusion, the use of Flash Generator with Cold Fusion to create the experimental program EVE (Enhanced Vocalisation Engine), video streaming (allows video to play as it is being downloaded), secure socket layer (SSL) for encryption of credit cards, and VPN (virtual private network), which uses two firewalls to encrypt traffic to two server sites and is now being used by IDRC Ottawa after testing by PAN Asia.

PAN staff were also asked how long they thought IDRC can or should subsidize the development of such products. “It really depends on how long we want to keep the PAN Asia image ... for as long as there is a PAN Asia.” It was also pointed out that there is a strong “public good” element

to this support. PAN has been able to use the website to demonstrate what is possible and been able to attract other donors to become interested in the application of the Internet for development purposes.

Conclusion: PAN's decision to develop e-commerce software met a need to experiment with a model that was appropriate to the needs and wishes of its partners. It also provided a training opportunity for PAN staff to learn and be in a position to help others. Such software development helped demonstrate PAN's competence to other donors and attract their attention.

What PAN should look like in 3 to 5 years

PAN staff in ASRO believe that PAN should continue as a networking program that moves on to distance education. Within the region the concept of life-long education is seen as essential and rural areas are starting to seek the same resources and teachers that are available in metropolitan cities. PAN staff also believe that if the sole purpose of the PAN website is to be a pilot activity it has done very well, but if it is to generate enough revenue to be self-supporting then it was noted that corporate decisions are needed and a new business plan needs to be developed. This would have to include much more marketing and the inclusion of many more partners on the website. For this reason, it was suggested that PAN would have to attract additional revenue for the services it provides as well as attract money from other donors (distance education was considered a potential "carrot" to attract donor interest). External funding was considered especially important "as funding from Ottawa is not even expected to hold at the same level." A few PAN staff mentioned that a new modality might be needed for PAN to give it more freedom to raise and generate revenue.

It was also suggested that the PAN website needed to become more dynamic by further developing discussion and conferencing facilities as well as new information services and sources. PAN, it was suggested, could also take on such things as: further research into the virtual bookshelf concept; experiments with computer-based training; exploration of video on demand and other broadband applications; and the use of video conferencing tools that might be appropriate for NGOs. Eventually, the technologies that are developed would be transferred to the partners, for example the establishment of e-commerce malls in their own countries.

Conclusion: PAN staff in ASRO believe that distance education will grow in importance in the region and should be a priority. Further expansion of the PAN website would require it to be better marketed on the basis of a new "business model" and would likely mean expanding its range of partners and perhaps donors. If future development of the website is undertaken, it would need to focus on making the site more dynamic and interactive, which may require the development of a "new look and feel."

Regional Experts

Five “regional experts” were interviewed in Asia. Three were asked most of the same questions, but the other two were not asked all of the same questions. One because of time constraints and the other who preferred to have a “general discussion” rather than a “formal” interview.

These five people have quite different involvement with PAN. Two have been involved with PAN since the early stages and participated in the early technical and content development of the PAN website. One is a current member of the PAN research and development board, one is an Internet specialist, and the other is works in a regional organization dedicated to promoting the use of the Internet in developing countries.

PAN ASIA’s contributions

PAN Asia was praised for being the first to bring the Internet to many countries in the region, to recognize the potential of the Internet, and to provide support and training to help development organizations participate in experimentation with these new technologies. It was also noted that an important contribution of PAN was that it was “hands-on” and that it was very important that PAN tries things and goes through the problems itself to get real experience. For this reason, it was felt that “compared with other donors, PAN actually knows what it is talking about”. The fact that PAN is undertaking this work in a non-commercial environment was also noted because as one of the experts who works for a commercial company in Singapore noted “commercial companies focus on dollars and returns, but research and development organizations need training and access to bring people together and share experiences. PAN has the benefits of the countries foremost in its mind.”

Conclusion: PAN Asia is recognized as a leader in the use of information and communication technologies for development and the website sets PAN apart from other donors because it allows PAN staff to be “hands on” and “knows what they are talking about.”

These people were also asked what was the most disappointing aspect of PAN’s work in Asia. Generally, there was a feel that not too much had been disappointing, although one person remarked that there seems to be a lack of clear commitment to future activities. Another mentioned that some of the projects (such as the yearbook) did not move ahead as planned. Two of those interviewed were disappointed to note that there was still a need to encourage more interactions and collaboration among PAN partners. They encouraged PAN to continue to experiment with ways to encourage such interactions, and one person specifically mentioned that WebCT was a very good move in this direction.

Conclusion: There is some concern over PAN’s long-term commitment, and there may be a need for PAN to encourage greater interaction among its partners.

PAN’s visibility

These experts were asked how well they thought PAN was known among research and development agencies and NGOs in Asia. They were asked to provide a rating on a scale of 1 to 4, with number 1 representing "not well known" and number 4 "very well known". One gave a rating of 1, and three gave a rating of 2.

Conclusion: PAN is not thought to be well known among research and development agencies and NGOs in Asia.

PAN server

Three of the experts were asked if they thought it was still necessary for PAN to have a server in Singapore. All three said yes. One person remarked that today all organizations should have their own server in a location with good access. Another remarked that there was a need within PAN to have a central site where "people could come together." This same person said that the PAN site had potential as an important portal site but that to realize its potential it would require further marketing. The third person noted that the "little guys need support" and that most operations in the region focus on commercial applications for large companies, which leads to a situation in which grassroots organizations are left further behind. All three agreed that Singapore was an ideal location for such a central server given the technical expertise and the bandwidth and access that were available.

Conclusion: These "experts" believe it is important for PAN Asia to have a server to provide support to those who require assistance (especially small organizations) to benefit from the Internet. Singapore is an ideal location for the server, but PAN may need to do more marketing to become better known.

E-commerce

In general, these experts felt that PAN had been successful in developing a sense of family among at least some of the PAN partners. They also felt that it had been a wise decision for PAN to develop its own e-commerce software 2 years ago. Because the PAN e-commerce model is based on a multi-merchant, multi-product system with a single "checkout," these experts felt that the software needed to be developed and customized. Dealing with a payment gateway that worked in different currencies and with different postage rates was noted to be a problem. PAN's decision to work with bank drafts was cited as a good idea. It was also noted that "none of the commercial packages are plug and play, they all require programming" (estimated to be 50% less now than 2 years ago).

All three said they thought that PAN should further develop its e-commerce software. These "regional experts" did not know of other e-commerce software with the same capabilities. For this reason, it was suggested that the package could perhaps be sold to such organizations as UNDP and that the rights might also be sold to Informix (the software on which the e-commerce application has been developed as an "add-on"). Finally, it was noted that although there may be a need for some improvements and enhancements there was a need to maintain a balance between "a commercial undertaking and site designed to give experience to users".

All three experts who were asked, agreed that secure credit card transactions were a necessary step for development of e-commerce facilities. The reasons that were suggested as to why this was important was that individually NGOs and development agencies could not get such facilities and accreditation through Versign for secure transactions. Credit cards were said by one to be “essential” for e-commerce, but he agreed that bank drafts were a useful alternative in the region. He suggested that perhaps payments could be collected through local ISPs on the phone bill, but another of the experts felt that this would not likely be possible and may in fact be more complex to arrange.

Conclusion: Given the model of e-commerce that PAN and its partners adopted, these “regional experts” agreed that it was necessary for PAN to develop its own software. The e-commerce software may have some commercial potential. Continued development may be justified, but a balance between developing a commercial undertaking and a site to gain experience must be maintained.

Other applications

The experts were also asked if there were any other applications that PAN might consider developing. The following suggestions were made: development of telephony applications; micro-financing (lending of small amounts of money as well as collection over the Internet); development of a “wallet” for the Third World based on money orders through post offices perhaps (because credit card access will still be restricted); development of a cache network for PAN (servers in member countries) to make local access quicker; and moving toward being “services” oriented rather than “institution” oriented and creating a “yellow pages” of the services provided by each of PAN’s partners that could be linked to other yellow-pages sites.

Conclusion: The regional experts see much scope for PAN using its server facilities for further innovation and experimentation in using Internet applications for development purposes.

PAN services

In terms of the services provided by PAN, the two experts that were technically oriented agreed that hosting and mirroring are now more readily available in the region, but it was noted that although hosting is easier now, it is still not easy. Therefore, mirroring is still considered very useful and necessary. The two disagreed on whether there were now local sources for e-conferences, e-commerce, and technical support in the countries of the region.

Conclusion: The hosting and mirroring services being provided by PAN are becoming more common in the region. Work on “interactive” applications that can be used to encourage information exchanges among development partners in the region may still be needed.

Future priorities

The following suggestions were made with respect to where PAN should place its priorities in the future: adapt information and communication technologies to meet the needs of developing countries including the development of innovative business and technical strategies; become

much more interactive; promote the website and improve interactions among partners; and continue to work on e-commerce from the point of view of NGOs because otherwise they will get left behind and forgotten.

In terms of how this support should be provided, these regional experts felt that centralized support through the website as well as individual projects would both be needed. They suggested that a good server gives the level of connectivity needed for PAN and its partners to have an effective web presence. Individual grants could be used to help develop web skills, enhance editorial skills and content, develop visual methods of communication to minimize the dependency on English, and experiment with using “new technologies to make a difference to people’s lives”.

Conclusion: PAN should continue to use its website for innovation and adaptation. Efforts should focus on adapting Internet techniques for NGO use, developing new models and strategies for using the Internet for development purposes and increasing interactions via the PAN Asia website.

Paying for PAN services

The two technical experts were divided in their opinion about financial viability. One took the approach that it must really be break-even because: “if you can’t sustain yourself how can you help or expect others to become so?” He felt that the PAN server could become financially viable, but that it would have to expand in order to do so. The other expert felt that you would have to have a sliding scale of rates given IDRC’s and PAN’s mandate. He suggested that you could charge perhaps \$100 to \$250 US for small non-profit organizations to provide access and three user IDs. Non-related organizations could be charged \$1000 US per year. Hosting and mirroring charges would be about \$250 US for 5 to 10 meg of space. Technical support would be charged at extra cost. Under these conditions he felt that PAN could recover about 40% of its costs (60% if very lucky). Another expert suggested that all development organizations should allocate a certain percentage of their funds to be redirected to the application of Internet technologies.

Conclusion: PAN may have the potential for modest increases in the revenue generated from its website. However, this would require a fundamental change in philosophy and increased investments in marketing and promotion as well as an expansion in both the number and type of “partners.”

Future for PAN

For the future it was suggested that PAN needs to better market itself both to PAN partners and the “outside world”. It was also pointed out that it is important that PAN continue to help countries live with the changes that the Internet is bringing. One person noted that there are many Asians now working overseas and that in some cases they are working in large American companies that are often involved in Internet applications. It was suggested that this was a potential source of both expertise and resources for PAN to consider tapping into.

Conclusion: PAN should continue its efforts to help developing countries adapt to the changes being introduced by the Internet. PAN may wish to enhance its marketing to become better known both regionally and internationally.

Other comments

It was pointed out that while in the United States user penetration is about 30% for the Internet, it must be remembered that usage is about 1% in Asia. Therefore, very few people are really enjoying the benefits of the Internet in the region and there is much work to be done. In this regard, it was suggested that NGOs and development agencies will eventually benefit from the improvements demanded by industry. Three of the experts interviewed believe that wireless communication will play an important role in Asia in the coming years. They also took the opportunity to encourage PAN to find ways to increase dialogue and make the website a “form for discussion.” It was suggested that greater use could be made of WebCT. As well, it was suggested that e-commerce should be looked at from the point of view of increasing dissemination rather than from the point of view of generating money and that there are natural links between distance education and e-commerce to sell or disseminate course materials.

Conclusion: Priorities for future PAN activities related to the website should perhaps focus on making the site more interactive and dynamic (as has been started with WebCT). E-commerce should be looked at in terms of dissemination rather than commercial potential. Wireless technologies should be monitored as to their potential for Internet-related applications in development projects.

NepalNet Partners

Interviews were conducted with three partner organizations that belong NepalNet as well as with the Nepal Internet Users Group (NIUG), which is now responsible for NepalNet. In addition, discussions were help with ICIMOD staff who had been directly involved with the establishment and operation of NepalNet.

History

NepalNet was started with PAN funding in 1997 to get Nepalese development organizations (mostly NGOs) on the Internet. The first year was spent identifying partners and negotiating contracts. The objective of the project was to provide an incentive for Nepali organizations to become involved in the Internet. Therefore, deals were negotiated with ISPs, modems and access were provided free of charge, and training was provided to one person from each institution. (The cost of access has dropped in Nepal by 75% since the beginning of the project.)

The project was designed to develop content (homepages) for each partner institution. Websites were designed by the partners and submitted to ICIMOD, which then linked and edited the sites and posted them to PAN. In addition, ICIMOD staff have contributed content found elsewhere. The sites were organized under nine key development sectors: agricultural, economy, education, forestry, sociology and demography, policy and law, environment, ecology and biodiversity, and technology and infrastructure. Of the 35 members, ICIMOD and NIUG rated 10 to 12 as being very active, 10 to 12 as moderately active, and about 10 as “very hard to deal with.” NepalNet was formally launched in the middle of 1998 and receives about 200 to 300 hits per week. NepalNet is hosted on the PAN Asia server and has become a OneWorld partner. It is also listed on such regional sites as bestofasiapacific.com and southasia.net.

As the PAN project was coming to an end, a search was made for a local institution to take over from ICIMOD (PAN funding continues until June 2000). A few organizations, such as the National Computer Centre and one of the universities, were considered but for a variety of reasons did not work out. The Nepal Users Group was started by the first ISP in Nepal (Mercantile Communications Pvt. Ltd) and was registered as an NGO in April 1998 to promote the use of information and communication technologies in the development sector (final papers from the Social Welfare Council were still being processed in November 1999). After the NIUG is officially registered as an NGO it will be able to receive money form outside organizations. NepalNet has now established a small ISP called Indrini (rainbow) with the objective of providing affordable access by local institutions to information about Nepal. NepalNet’s approach to the provision of access in Nepal was to establish an Intranet that is Nepal wide (for the time-being this is restricted to the Kathmandu Valley, but a feasibility study is being conducted with regard to further expansion). The Intranet is designed to provide local institutions with free access to information about each other. This reflects one of the priorities for NepalNet, which is to encourage organizations in Nepal to share information because they feel that international and local NGOs “often get involved in reinventing the wheel.”

Conclusion: ICIMOD and NIUG have been successful in creating NepalNet by combining funding from PAN with the facilities and support available through the PAN Asia server. NepalNet has about 20 active members and as made a good start at making itself well known by linking with OneWorld and getting itself listed with regional Internet sites.

Self-sustainability

A major question is whether NepalNet can become self-financing. Efforts are being made now to get institutional members and also to attract and involve international NGOs in Nepal (there are about 25 operating) because they can afford to pay for services. NepalNet has also been able to attract about new 200 individual members. NepalNet plans to charge 5000 rupees for NGOs and 10,500 rupees for international NGOs. The Nepal Users Group can be expected to have difficulty making this a self-financing operation in only 6 months. When asked, they were unable to provide a figure that would be their approximate break-even point in terms of generating enough revenue to cover their fixed costs.

Conclusion: Some work will need to be done very soon to establish a business plan that will set targets for NepalNet trying to achieve self-sufficiency. It may be necessary to provide NepalNet with some Nepalese or regional assistance to provide leadership in this regard.

Nepal Internet Users Group

The User Group now has a permanent office and a staff of four (an office manager, an information specialist, a technical officer, and a web designer). A policy decision has been made that all services must be on a payment basis (free access was to be terminated on 1 January 2000); however, to encourage institutions to become more actively involved NIUG is offering free training to members on the first Thursday and Friday of each month. Funds will also be raised by providing training to non-members (perhaps in e-commerce) and by providing hosting services. NIUG also plans to do more marketing and promotion, which they were reluctant to do before because they only had a single telephone line for access (8 new lines were scheduled to be installed by the end of December 1999). As an example, a display was prepared for the annual information technology conference held by the Computer Association of Nepal.

Conclusion: The addition of new staff gives NIUG improved technical expertise and better capability to undertake additional training and provide improved support to their clients. Efforts to promote NIUG and raise funds from various sources must be a priority.

PAN Asia Server

For NepalNet, the most important reason to be hosted on the PAN Asia server is the visibility it provides (the free space was a secondary consideration). They are also interested in exploring the options presented by e-commerce and have held a seminar for local organizations to introduce the concept and explain how e-commerce might be used. They are also considering trying to set themselves up to provide training in e-commerce. They noted that credit card transactions are useful for international sales, but that most commerce within Nepal will continue to be conducted in-person.

NIUG's approach to e-commerce is that it is a tool that may be very useful to promote and publicize various organizations, not so much to sell things to make money. NIUG looks at these Internet e-commerce activities as "how to conduct your business over the Internet," which would include advocacy, electronic distribution, and electronic marketing. During one discussion, it was proposed that a more general name such as e-marketing might be more appropriate for the type of thing PAN is trying to promote.

Conclusion: International visibility is critical for NepalNet and the main reason NIUG wants to be on the PAN Asia server. E-commerce offers potential not just to generate some revenue, but to better market organizations. This point was raised by other PAN partners who see the tools developed for e-commerce as being of more general application than to make money, which is often not an organizational priority.

Local NepalNet Partners

Three local NGOs were visited. Two have already committed to joining NepalNet and the other was currently making a decision on whether or not to join (but has had on-going contact with NIUG). All three have integrated email into their day-to-day operations and have established a web-presence (one had been using email since 1994 and the Internet since 1995). These electronic links are used to "get the information we need," "develop contacts with similar people elsewhere," "find out who is marketing similar products," "provide small and medium enterprises (in Nepal) with the information they need to set up industries and determine where they should invest," and "promote contact with both international and national partners." The two NGOs that had already agreed to join NepalNet said that it would be the "focal point" and will be a "place to exchange information and look at other partners who do similar types of work."

All three of these NGOs spoke of the need to put manuals and other information on the Internet so that the information could be accessible by others. Such information would be provided free of charge, but they thought that some other materials, such as solar cookers or goods provided by other own partners, could in future be sold over the Internet.

One of the NGOs, which has committed to joining NepalNet currently has their web presence in the United States. This is a commercial site that provides 20 meg of space for free in exchange for placing advertising banners on the site (for \$5 per month the advertising can be removed). The only condition is that the site must attract at least 50 hits per month.

Conclusion: These NGOs have integrated electronic communications into their day to day operations and are both looking to expand the application of the tools they now have and exploring new possibilities. They are not limiting their options and are considering other hosting and mirroring services ... something that several PAN partners mentioned (not necessarily as an alternative to PAN but as a supplement).

Appendix 2: Contacts

Izumi Aizu, Principal, Asia Network Research Sdn. Bhd., No 20B, Taman Desa Business Centre, Jalan Desa Jaya, Taman Desa, 58100 Kuala Lumpur, Malaysia

Shahid Akhtar, Head, Information, Communication, and Outreach Division, International Centre for Integrated Mountain Development (ICIMOD), GPO Box 3226, Kathmandu, Nepal

Maricel S Almojuela, Project Officer, Asian NGO Coalition for Agrarian Reform and Rural Development PO Box 3107, QCCPO 1103, Quezon City, Metro Manila, Philippines. Office Address: ANGOC Regional Secretariat, 5-B Marilag Street, University of the Philippines Village, Diliman, Quezon City, Philippines

Amelia C Ancog, Vice President, National Research Council of the Philippines, General Santos Avenue, Bicutan, Taguig, 1631 Metro Manila, Philippines and Under Secretary of State for Science and Technology (retired)

Nona M Avelina, Science Research Specialist II, Philippine Council for Health Research and Development, Department of Science and Technology, DOST Building, Gen. Santos Avenue, Bicutan, Tagig, Metro Manila, Philippines

Monisha R Basnet, Information Specialist, Nepal Internet User Group

Mukunda Ram Bhandary, Chief, Information, Documentation and Publication Division, National Productivity and Economic Development Centre (NPEDC), Post Box 1318, Balaju, Kathmandu, Nepal

Payas Chhetri, Web Designer, Nepal Internet User Group

Vivien Chiam Liew-Yin, Regular Business and Partnerships Development Manager, Southeast and East Asia Regional Office, International Development Research Centre, 7th Floor, RELC Building, 30 Orange Grove Road, Singapore 258352

Betty Chin, Deputy Director, Singapore Institute of International Affairs, 6 Nassim Road, Singapore 258373

Chin Saik Yoon, Publisher and Managing Director, Southbound, Suite 20F, Northam House, 55 Jalan Sultan Ahmad Shah, 10050 Penang, Malaysia

Chew Lip Ping, Network Security Engineer, Reuters Asia Pte. Ltd., 18 Science Park Drive, Singapore 118229

John Chow, Property Manager, Southeast Asian Ministers of Education Organisation (SEAMEO), Regional Language Centre (RELC), Third Floor, 30 Orange Grove Road, Singapore 258352

Sonny Boy F Espique, Senior Science Research Specialist, Philippine Council for Health Research and Development, Department of Science and Technology, DOST Building, Gen. Santos Avenue, Bicutan, Tagig, Metro Manila, Philippines

Patrick Gallow, IT Manager, Southeast Asian Ministers of Education Organisation (SEAMEO), Regional Language Centre (RELC), Third Floor, 30 Orange Grove Road, Singapore 258352

Paterlito P Garcia, Senior Science Research Specialist, Philippine Council for Health Research and Development, Department of Science and Technology, DOST Building, Gen. Santos Avenue, Bicutan, Tagig, Metro Manila, Philippines

N K Gopalakrishnan, Librarian and Senior Faculty, Administrative Staff College of India, Bella Vista, Hyderabad 500 082, India

Jon Gregson, Internet and Connectivity Consultant, International Centre for Integrated Mountain Development (ICIMOD), GPO Box 3226, Kathmandu, Nepal

Nira Gurung, Distribution Officer, Information, Communication, and Outreach, International Centre for Integrated Mountain Development (ICIMOD), GPO Box 3226, Kathmandu, Nepal

Kenneth C Ilarde, Research Assistant, Policy and Development Foundation Inc., Unit 7B, Vermida I Condominium, 120 Amorsolo Street, Legaspi Village, Makati City, 1229, Metro Manila, Philippines

Loyola Joseph, Secretary, FOOD (Foundation of Occupational Development), 63 C-Block, First Floor, Bharathiyar Complex, Jawaharal Nehru Rd., (100 Feet Road), Vadapalani, Chennai 600 026, India

Atsede Worede Kal, Information Services Officer, United Nations Development Programme, Special Unit for Technical Co-operation Among Developing Countries, 304 East 45th Street, Room FF-1208, New York, NY 10017

Mathias Körber, Network Services Manager, Singnet Engineering and Operations, Singapore Telecommunications Limited, 2 Stirling Road, 03-00 Queenstown Telephone Exchange, Singapore 148943

Renald Lafond, Senior Program Specialist and Team Leader PAN Networking Program Initiative, International Development Research Centre (IDRC), PO Box 8500, Ottawa, Ontario, Canada K1G 3H9

Lim Siew Choo, Finance and Projects Coordinator, Technonet Asia, 291 Serangoon Road, 05-00 Serangoon Building, Singapore 218107

Nathaniel Don E. Marquez, Deputy Executive Director, Asian NGO Coalition for Agrarian Reform and Rural Development PO Box 3107, QCCPO 1103, Quezon City, Metro Manila, Philippines. Office Address: ANGOC Regional Secretariat, 5-B Marilag Street, University of the Philippines Village, Diliman, Quezon City, Philippines

Vijay Menon, Secretary General, Asian Media Information and Communication Centre (AMIC), CS-02-28, SCS Building, Nanyang Technological University, Jurong Point PO Box 360 Singapore 916412

Zbigniew Mikolajuk, Senior Program Specialist/ENRAP Coordinator, International Development Research Centre, Southeast and East Asia Regional Office, 7th Floor, RELC Building, 30 Orange Grove Road, Singapore 258352

M A Muhartoyo, Asian and Pacific Coconut Community, 3rd Floor, Lina Building, Jalan H R Rasuna Said Kav. B-7, Kuningan, Jakarta 12920, Indonesia

Santosh Narayanan, Chief Co-ordinator, FOOD (Foundation of Occupational Development), 63 C-Block, First Floor, Bharathiyar Complex, Jawaharal Nehru Rd., (100 Feet Road), Vadapalani, Chennai 600 026, India

Bijay Nepal, Assistant Technical Officer, Nepal Internet User Group

Maria Ng Lee Hoon, Coordinator, PAN Asia Networking, Southeast and East Asia Regional Office, International Development Research Centre, 7th Floor, RELC Building, 30 Orange Grove Road, Singapore 258352

Merlita M Opeña, Chief, Research Information, Communication, and Utilization Program, Philippine Council for Health Research and Development, Department of Science and Technology, DOST Building, Gen. Santos Avenue, Bicutan, Tagig, Metro Manila, Philippines

Sangeeta Pandey, Documentation Officer, International Centre for Integrated Mountain Development (ICIMOD), GPO Box 3226, Kathmandu, Nepal

Danny B. Pedragosa, Information Network Manager, Approtech Asia, Ground Floor, PSDC Building, Real Cor Magallanes Sts, Intramuros, Manila 1002, Philippines

Egbert Pelinck, Director General, International Centre for Integrated Mountain Development, GPO Box 3226, Kathmandu, Nepal

Saurava Pradhan, Information Officer, Centre for Rural Technology (CRT), Tripureswor, P O Box 3628, Kathmandu, Nepal

Fetty Prihastini, Reference and Distribution Officer, ESCAP CGPRT Centre (The Regional Co-ordination Centre for Research and Development of Cereals, Grains, Pulses, Roots and Tuber Crops in the Humid Tropics of the Asia and the Pacific, Economic and Social Commission for Asia and the Pacific), Jalan Merdeka 145, Bogor 16111, Indonesia

P G Punchihewa, Executive Director, Asian and Pacific Coconut Community, 3rd Floor, Lina Building, Jalan H R Rasuna Said Kav. B-7, Kuningan, Jakarta 12920, Indonesia

Kanaga Raja, Publications and Communications Assistant, Third World Network, 228 Macalister Road, 10400 Penang, Malaysia

K G Rajamohan, Social Scientist, M S Swaminathan Research Foundation, Information Village Research Project, Tamizh Kudil, 4a Navasanthi Street, Villianur, Pondicherry, India

K A Raju, Director, Centre on Rural Documentation (CORD), National Institute of Rural Development (NIRD), Rajendranagar, Hyderabad 500 030, India

Lilia O Ramos, Executive Director, Approtech Asia, Ground Floor, PSDC Building, Real Cor Magallanes Sts, Intramuros, Manila 1002, Philippines

Ric Rodriguez, Philippine Business for Social Progress, 3rd Floor, PSDC Building, Real Cor Magallanes Sts, Intramuros, Manila 1001, Philippines

N G Satish, Deputy Librarian, Administrative Staff College of India, Bella Vista, Hyderabad 500 082, India

Kiron Sharma, Co-ordinator, Technical Services, United Mission to Nepal, PO Box 126, Kathmandu, Nepal and Ad-hoc Committee Member, Nepal Internet User Group

Amina Shrestha, Office Manager, Nepal Internet User Group

Ganesh Ram Shrestha, Executive Director, Centre for Rural Technology, Tripureswor, P O Box 3628, Kathmandu, Nepal

Sama Shrestha, Assistant Program Officer, Asia Network for Small Scale Bioresources, Min Bhawan, PO Box 11035, Kathmandu, Nepal

Sudarshan Shrestha, Information Specialist, International Centre for Integrated Mountain Development (ICIMOD), GPO Box 3226, Kathmandu, Nepal

Dominic Soh, Network Engineer, International Development Research Centre, Southeast and East Asia Regional Office, 7th Floor, RELC Building, 30 Orange Grove Road, Singapore 258352

Randy Spence, Regional Director, Southeast and East Asia Regional Office, International Development Research Centre, 7th Floor, RELC Building, 30 Orange Grove Road, Singapore 258352

Anup Sthapit, Resource Person and Computer Operator, Information, Documentation and Publication Division, National Productivity and Economic Development Centre (NPEDC), Post Box 1318, Balaju, Kathmandu, Nepal

Anil Takalkar, Deputy Director, Centre on Rural Documentation (CORD), National Institute of Rural Development (NIRD), Rajendranagar, Hyderabad 500 030, India

Anuar Talib, Media Officer and Webmaster, Southeast Asian Ministers of Education Organisation (SEAMEO), Regional Language Centre (RELC), Third Floor, 30 Orange Grove Road, Singapore 258352

George Tan, Database Manager, Asian Media Information and Communication Centre (AMIC), CS-02-28, SCS Building, Nanyang Technological University, Jurong Point PO Box 360 Singapore 916412

Mahinda Thenabadu, Manager, Corporate Affairs, Technonet Asia, 291 Serangoon Road, 05-00 Serangoon Building, Singapore 218107

Gary Timoshenko, Database Manager, ESCAP CGPRT Centre (The Regional Co-ordination Centre for Research and Development of Course Grains, Pulses, Roots and Tuber Crops in the Humid Tropics of the Asia and the Pacific, Economic and Social Commission for Asia and the Pacific), Jalan Merdeka 145, Bogor 16111, Indonesia

Lyra T. Untalan, Project Officer, Corporate Network for Disaster Management, Unit 719/7, Strata 100 Building, Emerald Avenue, Ortigas Center, 1600 Pasig City, Philippines

Wei How Jen, Applications Engineer, International Development Research Centre, Southeast and East Asia Regional Office, 7th Floor, RELC Building, 30 Orange Grove Road, Singapore 258352

Fransisca Anggraeni Wijaya, Secretary, ESCAP CGPRT Centre (The Regional Co-ordination Centre for Research and Development of Course Grains, Pulses, Roots and Tuber Crops in the Humid Tropics of the Asia and the Pacific, Economic and Social Commission for Asia and the Pacific), Jalan Merdeka 145, Bogor 16111, Indonesia

Teresa Wong, Webmaster, PAN Asia Networking, Southeast and East Asia Regional Office, International Development Research Centre, 7th Floor, RELC Building, 30 Orange Grove Road, Singapore 258352

Pacita L. Zara, Executive Director, Philippine Council for Health Research and Development, Department of Science and Technology, DOST Building, Gen. Santos Avenue, Bicutan, Tagig, Metro Manila, Philippines

Harry Zulfikar, Database Section, ESCAP CGPRT Centre (The Regional Co-ordination Centre for Research and Development of Course Grains, Pulses, Roots and Tuber Crops in the Humid Tropics of the Asia and the Pacific, Economic and Social Commission for Asia and the Pacific), Jalan Merdeka 145, Bogor 16111, Indonesia

Appendix 3: Interview Guides

PAN Partners

Name:

Date:

Organization:

PAN has established an Internet server in the Singapore office of IDRC. I have been hired by IDRC to conduct a review of the ways in which PAN partners are using the PAN server facilities and related services. I will be collecting data for this review by sending an email survey to all PAN partners as well as by conducting on-site interviews with a select number of users.

The objective of the evaluation is to assess the significance and contributions of the technical support provided through the website to PAN programming and functions. The results of the evaluation will be used by PAN to plan its future activities in an effort to continue to make them appropriate to your needs.

GENERAL

1. What is the main purpose of your organization?
2. How many staff are there in total?
3. Do you currently use email and Internet services? ☐ yes ☐ no
4. Do you have your own server or do you use a dial-up service for access?
☐ own server ☐ dial-up access If dial-up, who is service provider?
5. How would you rate your overall satisfaction with the service you now have. Rate on a scale of 1 to 4, with number 1 representing “not satisfied” and number 4 “very satisfied”.
6. Are local Internet service providers (ISPs) available? ☐ yes ☐ no
7. What is the price for local access?
8. What is the speed of local access?
9. How reliable are connections to local ISPs?
Rate on a scale of 1 to 4, with number 1 representing “not reliable” and number 4 “very reliable”.
10. Do you use a local ISP to host your web presence? ☐ yes ☐ no

If yes, what is the cost? Are there any space restrictions on your web presence?

If no, why not?

11. How many staff are involved in maintaining your web presence?

12. Did you staff receive any local training on Internet technologies?

13. How do you use your web space now?

- ☐ public affairs
- ☐ external communications (email)
- ☐ internal communications (intranet)
- ☐ share research results
- ☐ sell products and services
- ☐ collect information
- ☐ other (please explain)

14. Over the last 2 to 3 years, do you find that there now more local sources of trained staff (either to hire on staff or to engage as consultants)? ☐ yes ☐ no

PAN SERVICES

15. Are you familiar with the PAN Asia server? ☐ yes ☐ no

16. Have you ever connected to the PAN Asia server? ☐ yes ☐ no

If yes, what have you use the server for?

Did you find what you wanted?

If no, why do you not use?

17. Which of the services available from the PAN website does your institution use?

- ☐ web hosting
- ☐ web mirroring
- ☐ electronic conferences
- ☐ e-commerce services
- ☐ search for information
- ☐ other (please explain)

18. Why do you use the services provided through the PAN website? Please rank these services in order their order of importance to your institution. Select all that are appropriate.

Use the number 1 to indicate the most important, number 2 the second most important, and so on.

- ☐ low cost
- ☐ unlimited web space available
- ☐ reliable connection

- ☐ high speed of access
- ☐ technical support from PAN
- ☐ increased visibility for our organization through PAN
- ☐ e-commerce facilities
- ☐ electronic conference facilities
- ☐ no local ISP available to provide services
- ☐ we lack the technical skill ourselves
- ☐ other (please explain)

19. What has the support provided through the PAN website allowed you to do that you could not do before? What has been the result of this new activity?

WEB DESIGN AND HOSTING

20. Did your organization receive support from PAN in the form of a project?

- ☐ yes ☐ no

If yes, please provide details.

If no, what services did PAN provide?

21. How did PAN help you to establish your web presence?

- ☐ project (if so, please indicate amount and duration)
- ☐ training (if so, please indicate the type of training, the number of people trained, and the duration of the training)
- ☐ web hosting
- ☐ web mirroring
- ☐ technical expertise
- ☐ provided examples or samples of what could be done (given ideas)
- ☐ other (please explain)

Who trained? Talk to the person who was trained to get their input. Did they train others? What have they done since getting training? How would they rate training? Right time? At "correct" level? Other types of training needed now? Separate follow-up with person who received the training.

22. If you use PAN to host or mirror your Internet presence, why do you do so?

23. Has your institution used its Internet presence to disseminate research results?

- ☐ yes ☐ no

If yes, what are you doing and what sort of results have you obtained?

If no, do you plan to do so in future?

24. Do you have evidence that your Internet presence has helped you reach new audiences or reach your traditional audiences more effectively?

New audience: ☐ yes ☐ no Who are they?

Traditional audience: ☐ yes ☐ no Who are they?

25. Did you receive assistance or learn from any PAN partners when you were developing your web presence? ☐ yes ☐ no

If yes, which partner and what help did they provided?

26. How important were exchanges of ideas or plans with other PAN partners in the planning or design of your web presence? Please rate on a scale of 1 to 4, with number 1 representing “not important” and number 4 “very important”.

Rating:

27. What did your institution find out, learn, or copy (for example, design, features, or content) from other PAN partners, from the PAN site, or from non-PAN sources?

Examples of things learned from PAN:

Examples of things learned from other PAN partners:

Examples of things learned from others not involved with PAN at all (found while surfing Internet for example):

28. Has your institution helped other PAN partners to create their web presence?

☐ yes ☐ no

If yes, which institution and what help was provided?

SENSE OF FAMILY

29. Do you feel PAN has been successful in creating a feeling of “family” among its partners? ☐ yes ☐ no

If yes, how has PAN developed and strengthened this feeling of family?

If no, why has PAN been unsuccessful?

30. What are the advantages or disadvantages of “membership” in the PAN family?

Advantages:

Disadvantages:

31. Do you think that PAN partners are more likely to share information or experiences with other PAN members than with non-members?

☐ yes ☐ no

Why? Why not?

32. Is the information that is shared among PAN partners most often related to your principle area of work of your organization, or is it more often related to Internet technologies and applications?

- ☐ principle area of work
- ☐ Internet technologies
- ☐ both

VISIBILITY OF PAN

33. How well do you think that PAN is known or recognized in Asia among development organizations and organizations interested in ICTs?
Scale of 1 to 4, with number 1 representing “not well known” and number 4 “very well known”.
34. Are you aware of any other web-based networks among development organizations in the region?
☐ yes ☐ no
If yes, which ones does your organization participate in?
35. Are you aware of any projects or activities that resulted from new contacts created because of your web presence on PAN?
☐ yes ☐ no

ELECTRONIC CONFERENCES

36. Are you aware that PAN has facilities for electronic conferences on its website?
☐ yes ☐ no
37. Have you ever organized or participated in an electronic conference hosted on the PAN website?
☐ yes ☐ no
If yes, which one(s), and how useful were they? Please rate their usefulness on a scale of 1 to 4, with number 1 representing “not useful” and number 4 “very useful”.
If no, why not?
38. Have you participated in an other electronic conferences NOT hosted by PAN?
☐ yes ☐ no
If yes, which one(s), and how useful were they? Please rate their usefulness on a scale of 1 to 4, with number 1 representing “not useful” and number 4 “very useful”.
If no, why not?
39. Have you ever organized or hosted an electronic conference among your own staff?
☐ yes ☐ no
40. How important do you think it is for PAN to continue to host electronic conferences?

Please rate importance on a scale of 1 to 4, with number 1 representing “not important” and number 4 “very important”.

ELECTRONIC COMMERCE

41. Do you sell any products or services over the Internet?

☐ yes ☐ no

If yes, what do you sell and what sort of sales volume have you achieved?

If no, do you have any products or services that are candidates for e-commerce? If so, what are they? Do you plan to try to sell these over the Internet in future?

42. Are you aware that PAN has an e-commerce facility on its website?

☐ yes ☐ no

43. Do you participate in the e-commerce mall hosted by PAN?

☐ yes ☐ no

If yes, what do you sell and what percentage of your overall sales does this represent?

If no, why not?

44. If you are using the e-commerce facilities of PAN, what rates does PAN charge for this service? How does this compare with rates charged by commercial sites?

45. Do you use any other e-commerce sites either to buy or sell goods or services?

Buy: ☐ yes ☐ no

Sell: ☐ yes ☐ no

If yes, what have you bought or sold?

If no, why not?

46. Is it possible in your country to buy goods and services over the Internet using credit card facilities linked to secure bank transactions?

☐ yes ☐ no

If yes, how long has this been possible?

If no, are plans in place to provide this facility locally?

47. How important do you think it is for PAN to continue to host an electronic mall?

Please rate importance on a scale of 1 to 4, with number 1 representing “not important” and number 4 “very important”.

DISTANCE EDUCATION/TRAINING

48. Does your institution conduct any distance education or training courses over the Internet?

Distance education ☐ yes ☐ no

Training ☐ yes ☐ no

If yes, who are the target groups for these activities?
How were these groups reached in the past?
How has distance education/training helped?

If no, do you think this will become important in future? Why? Why not?

49. How important do you think it might be for PAN to provide support for distance education in future?
Please rate importance on a scale of 1 to 4, with number 1 representing “not important” and number 4 “very important”.

FUTURE

50. What new Internet-related applications or services do you think will be needed by your institution over the next 2 to 3 years?
Please list your suggestions in order of their importance to your work with the first listed being the most important.

51. Can these applications or services be developed and delivered locally?
☐ yes ☐ no Why, Why not?

52. Do you anticipate that you will need further support from PAN?
☐ yes ☐ no
If yes: What type of support, why is it still needed, and how much longer will it be required?

If no: What has changed locally and in your institution to make further support unnecessary?

53. If PAN provides additional support to your organization, what do you think would be the most appropriate form for this support?
☐ individual grant to organization
☐ support through the PAN website
☐ other (please explain)

54. PAN was established to provide support to help development organizations create a web presence and use the Internet. In some cases, it charges a small fee for the services it provides. Would you be willing to pay if PAN was no longer able to provide its services for free and had to charge a fee to cover costs?
☐ yes ☐ no
What do you think would be a reasonable rate for these services?

55. If you had to obtain the services you currently receive from PAN from another source, what would be the impact on your institution?

56. What do you think PAN should look like in 3 to 5 years? What should it evolve into to best meet your future needs?

57. Do you have anything else you would like to add?

Regional Experts

Name:

Date:

Organization:

PAN has established an Internet server in the Singapore office of IDRC. I have been hired by IDRC to conduct a review of the ways in which PAN Asia partners are using the PAN website. I will be collecting data for this review by sending an email survey to all PAN partners as well as by conducting on-site interviews with a select number of users.

The objective of the evaluation is to assess the significance and contributions of the technical support provided through the website to PAN programming and functions. The results of the evaluation will be used by PAN to plan its future activities.

GENERAL

1. How have you been involved with the PAN Asia program of IDRC?
2. What do you think has been PAN Asia's most important contribution to the use of Internet technologies for development purposes in Asia?
3. What has been the most disappointing aspect of PAN's work in Asia?
4. How well known do you think PAN is among research and development agencies and NGOs in Asia? Please rate on a scale of 1 to 4, with number 1 representing "not well known" and number 4 "very well known".

Rating:

ACCOMPLISHMENTS

5. PAN has its own server in Singapore to host its own website, to provide training and technical support, and to develop new applications? Do you think it is still necessary for PAN to retain this server?
☐ yes ☐ no
Why? Why not?
6. Do you think that PAN has been successful in meeting its objective of developing a "family" identity among PAN partners? ☐ yes ☐ no
If yes, how has PAN been able to develop and maintain this feeling?
If no, why has it not been successful?

7. PAN Asia initiated the development of e-commerce software 2 years ago and built a shopping mall for use by development agencies and NGOs in Asia. Do you think this was a reasonable decision for PAN to develop its own e-commerce software?
☐ yes ☐ no
 Why? Why not?
8. Do you think PAN should further develop this e-commerce software, or are there other alternatives?
☐ yes ☐ no
 Why? Why not?
9. PAN made arrangements for secure payments with credit cards so that developing country institutions that did not have access to such in their countries could develop e-commerce activities now. Do you think this is important?
☐ yes ☐ no
 Why? Why not?
10. Are there other applications that you think PAN should develop?
☐ yes ☐ no
 If yes, what are these applications?
11. Within the region, do you think there are now local sources for some of the services and software that were originally provided by PAN? If yes, what are they?

web hosting	<input type="checkbox"/> yes	<input type="checkbox"/> no
web mirroring	<input type="checkbox"/> yes	<input type="checkbox"/> no
electronic conferences	<input type="checkbox"/> yes	<input type="checkbox"/> no
e-commerce services	<input type="checkbox"/> yes	<input type="checkbox"/> no
technical support	<input type="checkbox"/> yes	<input type="checkbox"/> no
others (please explain)	<input type="checkbox"/> yes	<input type="checkbox"/> no

FUTURE

12. As PAN Asia thinks about the future of its website, where should its priorities be placed? Use the number 1 to indicate the most important priority, number 2 the second most important, and so on.
 - ☐ web hosting
 - ☐ web mirroring
 - ☐ developing electronic conference facilities
 - ☐ developing e-commerce services
 - ☐ providing technical support
 - ☐ other types of support (please explain)

13. As PAN plans for the future, what sort of balance do you think there should be between support provided through a central website and support provided through grants to individual recipients? (As a percentage, and why?)
Centralized:
Individual grants:
14. PAN was established to provide support to help development organizations create a web presence and use the Internet. In some cases, it charges a small fee for the services it provides. Do you think PAN should charge user fees to cover its costs?
☐ yes ☐ no
What do you think would be a reasonable local rate for these services?
Do you think that the PAN website could be commercially viable?
15. If PAN's partners had to obtain the services they currently receive from PAN from another source, what do you think would be the impact on local institutions?
16. What do you think PAN should look like in 3 to 5 years? How should it evolve to best meet local needs?
17. Do you have anything else you would like to add?

IDRC/PAN Staff

Note: Not all questions were asked of all staff. Individual questionnaires were tailored to match each person's responsibilities and their involvement with PAN.

Name:

Date:

Organization:

I have been hired by IDRC and PAN to conduct a review of the ways in which PAN partners are using the PAN Website. I will be collecting data for this review by sending an email survey to all PAN partners as well as by conducting on-site interviews with a select number of users.

The objective of the evaluation is to assess the significance and contributions of the technical support provided through the website to PAN programming and functions. The results of the evaluation will be used by PAN to plan its future activities.

HISTORY

1. How did the idea for PAN to have its own website and server evolve? Who decided and what were the steps involved?
2. What do you think has been PAN Asia's most important contribution to the use of Internet technologies for development purposes in Asia?
3. What has been the most disappointing aspect of PAN's work in Asia?

TECHNICAL SERVICES

4. What services are made available to PAN partners via the website?
5. Why was it necessary for PAN to develop some software itself?
6. Why could these applications not be purchased from commercial vendors?
7. Are there now local sources for some of the services and software that are provided by PAN?
☐ yes ☐ no
If yes, what services or software are available most readily?
What is the quality and reliability of these services?
8. What new applications or technologies have been developed or applied?
9. What aspects of these applications or technologies were new or innovative?

10. How long can IDRC afford to subsidize the development of new Internet-based technologies?
Or why should it continue to do so?

PAN STAFF

11. How long have you been working for PAN?
12. What are your major responsibilities?
13. How many IDRC staff have been trained or given new responsibilities due to the PAN site?
14. How many of these staff members have stayed with PAN? Moved on to other jobs?
15. What new skills have IDRC staff developed while working on the PAN site?

ROLES OF PAN WEBSITE IN IDRC

16. What roles does the PAN website fulfill for IDRC?
17. How important do you think the PAN website been for public affairs in the ASRO region?
Please rate importance on a scale of 1 to 4, with number 1 representing “not important” and number 4 “very important”.
18. Do you think these services could be provided elsewhere or in a different way?
☐ yes ☐ no Why? Why not?
19. Have you developed any new projects or initiatives as a direct result of PAN’s web presence?
20. How many (or what percentage) of IDRC’s grant recipients in Asia are associated with PAN?
21. Are you aware of other web-based networks that are designed to help development organizations in the region use Internet technologies?

PAN FAMILY

22. Do you feel PAN has been successful in creating a feeling of “family” among its partners? ☐
yes ☐ no
If yes, how has PAN developed and strengthened this feeling of family?
If no, why has PAN been unsuccessful?
23. What are the advantages or disadvantages of “membership” in the PAN family?
Advantages:

Disadvantages:

24. Do you think that PAN partners are more likely to share information or experiences with other PAN members than with non-members?

☐ yes ☐ no

Why? Why not?

MARKETING

25. What methods have been used by PAN to market itself? Which have been the most successful?

26. What do the web statistics tell us about who is actually visiting and using the PAN site?

27. In your opinion how well is PAN known in the region. Please rate how well known PAN is on a scale of 1 to 4, with number 1 representing “not well known” and number 4 “very well known”.

☐ among research and development organizations

☐ among NGOs

☐ among other development agencies working in Internet applications

☐ among government departments

☐ among Internet policy makers

28. What new marketing initiatives are planned for the future?

FINANCES

29. Which of the services provided to PAN partners are charged for? How is the decision made on who to charge?

30. What level of income is currently generated by the PAN website? What is breakdown of income from different sources?

31. What rate of commission is currently charged by PAN for its e-commerce mall?

32. What rates do commercial sites charge for the same services?

FUTURE

33. What do you think PAN should look like in 3 to 5 years? How should it evolve to best meet regional needs?
34. What do you think will be the most important things for PAN to do in the future?
35. Do you have anything else you would like to add?