

Meeting Report

The Pacific Neighborhood Consortium

Second Meeting: Hong Kong, January 17 – 18, 1994

The second meeting of the Pacific Neighborhood Consortium was held at the Omni Hong Kong hotel. The welcome and introductory remarks were made by the consortium executive director, Curtis Hardyck. Special thanks were offered to the host universities: The University of Hong Kong, the Chinese University of Hong Kong, City Polytechnic of Hong Kong and Hong Kong University of Science and Technology for their help and support in arranging the meeting and providing the electronic mail facilities for attendees. New attendees from Academia Sinica (Taiwan) and the University of Macau were welcomed.

The keynote address was given by Vice Chancellor Wang Gungwu, head of the University of Hong Kong and is provided in full as an attachment to this report. Vice Chancellor Wang spoke of the goals of the PNC and the effects such efforts have on higher education, not only in the Pacific Rim but also on worldwide education efforts.

Following the keynote address, a brief discussion was held about the goals of the breakout sessions on databases and database priorities. Curtis Hardyck briefly reviewed the discussions of the previous meetings relevant to the breakout sessions on database priorities and suggested that a new orientation needs to be developed. In the first meeting, the discussion sessions concentrated on identifying those kinds of databases that the member institutions could consider developing that would have use by the members and also have a large potential use by other institutions. However, recent developments in the commercial sector make developing commercially viable databases highly unlikely. At the last on-line learning meeting in London (December, 1993), there were over 500 firms present, all offering various kinds of information services. Given the massive amount of effort and capital being expended in the commercial area, it seems unlikely that universities can effectively compete or produce a product that would have commercial benefits. A more appropriate direction seems to be to orient efforts in developing databases much as a would be done with a university press – produce those items which are of scholarly benefit and value, but which would not be developed commercially.

Four discussion groups were formed: Biological and Medical; Physical Sciences; Humanities and Museum Collections; and Business and Commerce. The reports of these groups are provided as an attachment to this report.

A panel session on the future of the Internet was chaired by Alan Y. S. Ho (Chinese University of Hong Kong), with Hoe Tong Thio (National University of Singapore), Chan King Bor (Hong Kong Telecom), Art StGeorge (National Science Foundation, USA) and Anthony Rutkowski, Executive Director of the Internet Society.

Hoe Tong Thio reported on the current state of Internet development in Singapore, of the kinds of uses made of Internet connections by the National University and of the limitations on use currently required by the nature of the agreements with Singapore Telecom. Internet use is growing in Singapore and the government plans to expand communication facilities will probably produce a great deal of growth in use. Singapore plans to develop its communication facilities to allow more access by all of its citizens to worldwide information sources.

Chan King Bor provided a brief history of the development of Hong Kong Telecom and of their goals to provide improved worldwide service, and of the interest in Hong Kong of improving communications facilities to the educational system. Hong Kong Telecom has not taken a formal position on Internet use nor on expansion of current Internet developments.

Art StGeorge reviewed the current interest and programs of the National Science Foundation in furthering network development and applications. He stated that the NSF does not currently fund hardware developments, but does devote considerable funding to projects that will expand network use. Although the NSF cannot directly fund projects in countries other than the US, it can fund collaborative projects where the principal investigator is in the United States, working with co-investigators in other countries. He urged the PNC members to consider the development of collaborative projects that could be NSF funded.

Anthony Rutkowski provided a history of Internet, its beginnings as the ARPANet, and its metamorphosis over time into the NSFnet and finally the Internet. He provided statistics on the rate of growth, rate of expansion, the number of countries currently served by the Internet and the projected rate at which the Internet would continue to expand, both as a service to education, and also as an increasingly important service to commerce.

Following the banquet dinner at the hotel, the banquet speaker was Simon Winchester, author of *Pacific Rising, Korea*, and numerous other publications. In his talk, he focused on some unhappy predictions about the possible future of Hong Kong following the return of Hong Kong to China. His view is that conflict will inevitably develop, given the freedoms residents of Hong Kong currently enjoy as compared to mainland China. One of the sources of conflict will be generated by the potentials for access to information far beyond what was available in

the past. While Southeast Asia will benefit from this information explosion and profit from it, the potential for conflict in Northeast Asia will remain high for quite some time. As the people who are in part responsible for the information explosion, the members of PNC may view themselves as in part responsible for these developments and should follow them to see what effects the ease of access to information produces in this part of the world.

The January 18 session began with a demonstration by Nam Ng of the University of Hong Kong of HARNET, the Hong Kong academic network, illustrating the capacities for library access, specialized databases and Chinese Language databases.

Following the HARNET demonstration, K. H. Poon of the City Polytechnic of Hong Kong provided a demonstration of CITYLINK, the CPHK education network, serving the Polytechnic and now expanding to serve the public school systems of Hong Kong.

A presentation of a workshop on SGML was carried out by Lewis Lancaster (University of California, Berkeley), Min-min Chang (Hong Kong University of Science and Technology) and Chin-Chun Hsieh (Academia Sinica, Taiwan) who reviewed the progress of SGML applied to Chinese, Japanese and Korean. The problems of computer reading of different versions of documents were reviewed and the difficulties of dealing with different word choices, phrases, annotations, comments and references addressed.

To accomplish this, it will be necessary to have a reference version with additional background information provided to deal with differing versions.

A preliminary report on a survey of acceptable use policies (AUP) in the Pacific Rim was done by Bernard Sheehan (University of British Columbia, Canada), Prachak Poomvises (Chulalongkorn University, Thailand) and Fredric Biedenweg (Stanford University, USA). Currently, acceptable use policies differ drastically from country to country and region to region, creating a potential for conflict where material acceptable to one country is unacceptable to another. The panel members reviewed the use policies currently in force in their respective institutions and announced plans to carry out a survey of use policies in PNC institutions.

Two lunchtime presentations were done. On January 17, Wayne Merrick of International Telecommunications Services demonstrated how broad spectrum radio can be used as a high speed data transmission system usable over a 30 mile radius, requiring only a small dish antenna and eliminating the need for wiring. On January 18, Steve Silberstein of Innovative Interfaces demonstrated how the Innovative Interface system allows an automatic and

relatively paper free accounting and checkout system for libraries.

A plenary session was held on the afternoon of January 18, in which general policy matters were reviewed and the breakout session reports given. The current status of the PNC was reviewed and the following agreed on as the sense of the membership.

- As the PNC serves both as a valuable forum for the discussion of multi-national issues and programs and as an organization devoted to the uses of communications, it provides a unique opportunity to discuss and formulate multinational projects. The benefits of this organization warrant intensification of efforts to expand the role of the PNC in the development of multinational projects.
- There are numerous opportunities to obtain funding for multinational projects through cooperative arrangements. To facilitate this, the PNC secretariat will develop a list of those institutions wishing to participate in such projects, the resources available and the persons willing to participate as co-principal investigators. PNC members will shortly receive a request for information about resources, and the names of appropriate contact persons.
- A PNC Gopher should be initiated as soon as possible, with the PNC database as the first entry, followed by descriptions of member institutions and the projects currently underway. PNC members will receive requests for Gopher information and related projects in the near future.
- There is strong interest in the development of an electronic museum of the Pacific. Since many of the member institutions have material already in suitable form for inclusion in an electronic museum, development of a project to create such a museum should proceed as rapidly as possible.
- Efforts are currently underway to develop a program for a future meeting on database linking and usage, combining both a tutorial review and a discussion of the problems encountered in the linking of disparate databases.

Discussion of a site for the 1995 meeting has centered on three potential sites: Taipei, Bangkok and Beijing, with no decision reached yet.

The meeting was adjourned temporarily at 5 pm on January 18, and resumed at 7 pm, for a dinner harbor cruise of Hong Kong, after which the meeting was ended.

Medical and biological databases

The group began by reviewing the kinds of medical and biological databases currently unique to their institutions. Chulalongkorn University produces the Thai medical journal index, a guide to Thai medicine. Chinese University of Hong Kong produces a Chinese herbal medicine database (currently proprietary). The University of Hong Kong maintains and updates a health sciences database including publications and conference papers. Seoul National University produces a CD-ROM series of traditional medicine. Springer-Verlag has a pilot project underway with the University of California, San Francisco, in which Radiology and Oncology journals are available electronically in high-resolution and color. At present these databases are limited to the country of origin, principally because of the cost of electronic communication between adjoining countries. At present it is still cheaper for countries in Asia to talk to each other via the United States than directly. Since most connections via the US are at maximum, 128kb, large file transfers or on-line access to databases is extremely slow, when possible.

The issue of distance education in medicine was reviewed. The possibility of a mutual benefit or shared exchange program seems unlikely, given that Asian interest in American and European medicine is substantial, but there is no corresponding interest by American and European physicians in Asian medicine. A distance education program in advanced medicine also seems doubtful, since the majority of physicians interested in cutting edge knowledge would prefer to travel to the source rather than receive the information via videoconferencing.

For online information of general interest, two proposals were made for PNC action. First, PNC should work to improve inter-country communication in Asia. Until a higher bandwidth is available, efforts should be made to get databases such as Medline on CD-ROMs, and work on finding a way to update this material over the existing bandwidth.

Participants were from Korea, Thailand, Taiwan, Hong Kong, Singapore and the United States.

Report prepared by Curtis Hardyck

Physical Sciences Database Session

The issue of access to Physical Sciences Databases was clearly not a top priority among the delegates attending this meeting of the Pacific Neighborhood Consortium. However, the Chair of this breakout session presented the following ideas that may be of interest to the PNC in the longer term.

It seems that there is a wide variety of data as well as teaching materials that would be of interest to PNC members. Some will be specific to regional interests or areas of study while others will be of general interest. A survey of PNC membership might be undertaken to determine answers to the following:

- What databases are known to exist? Of those, which are maintained by PNC members? Please identify all databases as fully as possible.
- What databases are needed? What organization is a likely source for such data?
- What access standards are needed, either for existing databases or for databases to be created? For example, astronomical data records might be stored currently in a number of different data formats. A more uniform format would ease sharing of such data.
- What might PNC do to enable or promote access to these databases?
- What institutions or individuals might be contacted to investigate these issues further?

The Chair of this breakout session presented the following examples of hypothetical Physical Sciences databases that might be of interest to the PNC membership.

Hazardous materials data including proper handling, storage, and procedures to be used in case of exposure to humans or the environment.

Earthquake engineering reports and design standards including recent research work, post-event analysis, and abstracts of structural dynamics analysis programs.

Seismic activity data recordings from stations around the Pacific Rim.

Astronomical observation data from the optical and radio telescope observatories, both land-based and orbiting.

Global change data including geophysical field data from around the Pacific rim as well as throughout the Pacific basin. A database of computer-ready models of planetary geophysical characteristics would ensure consistent input to modeling and analysis programs.

NASA satellite images of Earth as well as other solar system objects.

A database of “virtual laboratory experiments” and other teaching or curriculum materials to aid in physical sciences education.

An electronic reference library of physical data of all types from a wide variety of fields. See for example the classic Chemical Rubber Handbook.

In conclusion, the Chair presented an idea for integrating a wide variety of databases into a new facility in the Pacific Neighborhood: the Virtual Museum of the Pacific. The technology to be used initially would be World Wide Web (WWW).

Each PNC member would be encouraged to create a WWW server containing complex object databases relating to their country, region, or areas of interest. Information could be of any type or format that is desired by the organization creating it. The PNC itself would maintain a “virtual museum entrance and visitor map” that would help “visitors” find exhibits of interest.

Some of the “galleries” that might be created could include:

Visual arts collections with both images and text descriptions.

Ethnographic collections including text, images, audio, and perhaps film clips of regional peoples, both current and historical. The University of Alaska, for example, has an on-line database of this type describing some of the Eskimo peoples.

Architectural displays showing historical and current human population centers.

Maps and other geophysical data.

Image and text descriptions of the member institutions, the programs it offers, research it is supporting, etc.

Regional or indigenous music collections with accompanying images of instruments and text

describing the significance of the work.

Writings and other important cultural documents from the region. For example, some of the great poetry collections of China or Japan might be put in machine readable form (CJK or other standard format) by a PNC member institution and made available in the Virtual Museum of the Pacific for interested scholars everywhere.

Since server locations and the logical topology of the servers would not be visible to “visitors”, it should be possible to start with a few servers containing databases transferred to them by PNC member institutions. If there is sufficient interest among PNC members, a trial of this idea could be undertaken with a few members already familiar with WWW technology.

Report prepared by David Wasley

Humanities / Museum database Discussion

The group decided that we need four work groups to deal with major issues before us. These four are:

■ Tagging / Markup

There is an enormous amount of input of data around the Pacific. While input problems are still urgent and involved matters such as coding standards, the next step in the process will be the mark up of the data. In particular, we need to deal with SGML and TEI as the standards that should be incorporated into the PNC program. Toward this end, a workgroup was formed which will work toward a conference on Standard Markup Language in Taiwan in January, 1995, with a possibility of an additional workshop in Seoul in October, 1994.

■ Distance Learning

One of the major future concerns will be with connectivity of classroom and seminar instruction between PNC institutions. A workshop needs to be formed to help with pilot projects and policies. Prof. Ortiz of the University of Mexico indicated a willingness to be involved in such a workgroup along with Prof. Keller of Stanford. The suggestion was made that a conference could be organized for 1996 to further explore the matter.

■ Museum Database for the Pacific

While no one in the meeting could represent the museum community, it was felt that PNC should be involved in the development of a museum database that would have digital images from collections throughout the region. This would be on the one hand for preservation and on the other for on-line access. A workgroup should be established by member institutions using personnel from the museums.

■ Use Policy

The matter of use policy is important for humanities as well as science and technology. Some member of the PNC representing the humanities should be on any workgroup which deals with this issue.

Our recommendation is that future PNC meetings would in part be given over to presentations from the workgroup and that time be allowed for the workgroups to meet for planning and reports during the time that has been in the past given over to "breakout." By focusing the attention of PNC on a few important issues and by have a group dedicated to workshops, conferences, funding proposals, pilot projects, etc. we can advance the work of

the consortium. We recommend that PNC appoint and solicit membership for the workgroups, appoint a chair for each workgroup and assist in fund raising for the projects undertaken by each.

Report prepared by Lewis Lancaster

Business and Commerce Database Discussion

The Business and Commerce breakout session focused primarily on how the member institutions could provide better and easier access to databases containing business, economic, and trade information for their users. The specific areas of discussion included:

- How to obtain information about useful databases
- Costs and terms of access to databases
- Possible conflicts between public and private databases

Throughout all of these discussions there was evaluation of possible roles for PNC and of the need for cooperation in providing access to a wide range of information resources.

The discussion started with each attendee identifying him or herself and the institution with which he/she was affiliated. We then briefly covered recent changes in both connectivity and business/commerce resources at many of the institutions represented. Many of the session participants commented on the fact that this introductory discussion highlighted the benefits of sharing information about information sources. In many cases there was follow-up discussion of how the lessons learned at one institution might be shared with others seeking access to the same or similar databases and information suppliers.

A related theme that arose in several forms was concern over the cost of access to certain data. It was pointed out that the barrier was not always (only) the direct cost of subscribing to certain information services, but that there were indirect costs related to monitoring compliance with licensing terms, etc. The tension between the uncertain value of information to the users and tight institutional budgets was also discussed in this context.

At one point speakers discussed the relationship between improved access tools (Mosaic, for example) and the parallel need to simplify the terms of access. While there is an ever-increasing variety of bibliographic and numerical data available to Internet users and much work has been done on providing better access tools, there are still fundamental problems relating to the lack of accounting and payment mechanisms for certain users, types of use, and groups of vendors.

The discussion concerning financial arrangements relating to information provided for a fee covered a number of alternatives to the traditional payment at point of use.

Several of the session attendees indicated that their institutions would be interested in obtaining both “physical” access and legal / financial access to databases through cooperative agreements with other institutions. By this process there could be a sharing of administrative and negotiation burdens as well as a reduction in the need to mount files locally or provide direct connections to vendors.

Another point that arose in our discussions related to how one could discover the wide range of data and information available from vendors who traditionally have marketed their services to the private sector. In certain cases current and historical business/commerce data have been provided along with transactions processing and a wide range of value-added services. But researchers, in many instances, would benefit from access to these data sources. The discussions on this topic included illustrations of the types of databases available and preliminary ideas on how access to these sources might become available.

Report prepared by Yale Braunstein