

**TECHNONET
ASIA**

REPORT
of the
THIRD TECHNONET INFORMATION COMMITTEE
WORKSHOP ON NETWORK DEVELOPMENT (TIC3)
held
22 - 27 February 1979
in
Singapore

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International Development Research Centre

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THIRD TECHNONET INFORMATION COMMITTEE
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Singapore, 22-27 February 1979

R E P O R T
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Thursday, 22 February

SESSION I - Opening Session

Dr Leon V Chico welcomed the participants to the workshop. He stressed that Council, at TC5, had recommended that TIC3 be a *working* meeting to evolve an action program for networking among the Participating Organizations (POs) and with national and international organizations.

Since TECHNONET ASIA has been in operation for about six years, he felt that the time was right for the POs to commit to the obligations and responsibilities in the network. Later on during the workshop, two working groups will be formed to formulate action plans for implementation by the POs and TECHNONET Centre.

Dr Chico further commented that this workshop will assume greater importance with the impending transformation of TECHNONET into a more permanent legal organization.

He then went on to conduct the introduction of the participants (*Annex I*).

Mrs Purita Festin (EDF) was then unanimously elected Chairman. Mr Freddy Soon (SISIR) and Mrs Susan Dearman (HKPC) were elected Co-Chairmen, with the understanding that they would each chair the working group sessions.

The Provisional Agenda was adopted without further comments (*Annex II*).

Mrs Festin took over the chairmanship and expressed her appreciation at the confidence reposed on her by the workshop.

SESSION II - TECHNONET Information Activities:
A Review and Future Possibilities

Mr Santi Grachangnetara was requested to address the workshop to give an account of the technical information activities in which TECHNONET Centre is involved. He presented a summary of the data collated at TECHNONET Centre (*Annex III*). His purpose was to give all participants an idea of what had so far been done, as background information for the workshop, particularly when the workshop begins to look into the future activities related to technical information.

Mr Santi called the attention of the participants to the possibilities for technical information development as spelt out in the UP ISSI and SISIR papers, as well as proposed from other POs.

Mr Arthur Vespry enquired whether TECHNONET had had any dealings with CARIRI (Caribbean Industrial Research Institute) in the West Indies and Mr Santi replied in the positive. The data prepared by TECHNONET Centre indicated a cut-off date as of 30 June 1978. Since then, TECHNONET has established linkages with several other institutions.

Dr Chico commented that Technical Enquiries (TEs) received at TECHNONET Centre were on the decline due possibly to intensified interaction among the POs. This was desirable although TECHNONET Centre should be kept informed of the nature of TEs - by providing TECHNONET Centre with copies of covering letters so that it would know where to direct future enquiries of a similar nature.

Most of the POs claimed that they were handling TEs directly between themselves and even non-POs without keeping TECHNONET Centre informed.

Mr Vespry suggested that if a TE emanates from a non-PO to a PO in another country for reply then the originating PO should be informed if possible. A PO to PO communication would be more effective as presumably POs give a higher priority to TEs from POs.

Mr Shahabuddin Faruque (BSCIC) advised the workshop that BSCIC handled a considerable number of TEs from POs and non-POs directly but does not keep TECHNONET Centre informed. For example, BSCIC had received a TE from Nepal on the pencil industry set-up and an answer from HKPC was provided. Mrs Dearman commented that she had provided information on six other similar TEs.

Mr Soon reported that SISIR's strength was not in information processing but in handling information in the sense that SISIR has built a strong international network which it can tap whenever necessary.

Mrs Festin stated that EDF had received some direct enquiries from HKPC and BSCIC with answers provided from its own national sources of information, with copies provided TECHNONET Centre.

Mr Ng Aik Pheng (SIRIM) told the workshop that lately TEs received from non-POs were handled directly by SIRIM with information sources obtained from its own library. He further commented that SIRIM may not be subscribing to SISIR's CAS due to lack of familiarity with the service. He planned to look into this aspect in more detail on his return home.

SESSIONS - Status/Update on the Development of PO Information
III & IV Activities and its Future Plans

The POs were called upon individually to present the background paper each had prepared for this workshop.

Mr Shahabuddin Faruque presented BSCIC's paper on its technical information activities (Annex IV). He cited BSCIC's recent efforts to develop the Technical Information and Extension Service Department. In order to provide the necessary information to prospective users, the specific functions being carried out by this Department are as follows:

- (a) dissemination of selective information materials by providing printed information sheets as obtained from various sources. This helps in diffusing the latest technological activities, and introducing new processes and products to prospective users;
- (b) publication of technical bulletins started on a monthly basis in the local language. The bulletin contains information on industrial processes, investment briefs, new products development and project profiles. Articles are obtained from various professionals engaged in the respective fields, and the bulletins are distributed free of cost to the Chambers, Government offices, and also to the TECHNONET POs;
- (c) Current Awareness Service has been found to be a very useful medium of disseminating useful technical information packages. Mr Faruque hoped for additional support from TECHNONET to improve this service in the near future;
- (d) undertaking informal exchanges by arranging visits to research and development departments of different organizations, pilot project construction and demonstration in collaboration with other organizations, and arranging meetings with experts and attending conferences;
- (e) improving library facilities;
- (f) Information linkages such as networking with other TECHNONET POs has been found to be very rewarding. The main problem is the difficulties experienced through the postal service. Contacts have also been made with national organizations dealing with industrial information.

Mr Faruque went on to say BSCIC has, from the beginning, experienced difficulties in the production of printed documents because of a lack of the proper equipment such as copying machines and printing from microfiche.

Mrs Susan Dearman (HKPC) presented HKPC's status update on the information service program (*Annex V*). She began by saying that a great deal has happened since TIC2, and HKPC's Information Section now offers a flexible combination of three vital elements necessary to promote industrial development: technical information services; backup facilities and technical consultancy/extension services. HKPC still maintains a Current Awareness Checklist, one of its publications, but the cost effectiveness of this is being examined because it seems to appeal only to a small group of English-reading subscribers. It also, in fact, has a fairly small circulation. Another two of HKPC's publications are the Plastics Bulletin and the Furniture Bulletin, both of which are distributed free with a feedback form to ascertain specific interests and invites requests for photocopies. The response from the plastics industry in terms of photocopy requests, enquiries and consultancy, have been very good. However, that from the furniture industry has not been quite so satisfactory, most probably due to the language problem. HKPC's translation capacity is somewhat restricted, because of limited manpower, to be able to quickly overcome this problem. Efforts have been made by HKPC to establish mutual cooperation with these two industries and to keep abreast of each industry's needs and interests. A Federation of Hong Kong Furniture Manufacturers has been formed as an interface with the industry. However, it has been noted that the plastics industry is a very competitive one and the members of the industry are generally very reluctant to join together and cooperate.

A recent development at HKPC is the significant demand for environmental information. Because of this, a new Environmental Information Unit has been established. This unit will issue probably a newsletter type of publication, rather than a bulletin. The need for environmental information has been taken as a very strong basis for HKPC's Technical Information Service to go on-line. The computer terminal which will be used for this is expected to be housed in the Information Section in the Kowloon Branch, but will be made accessible to all the Divisions of HKPC. Mrs Dearman asked the members of the workshop to note that the principal portion of the information unit of HKPC will continue to provide services to cater to the needs of the less sophisticated industries found in Hong Kong. On this basis, there is no reason why networking with other organizations should not continue. The on-line service would cater for the more sophisticated users such as those concerned with environmental control and the electronics industry.

HKPC has launched a Technology Transfer Service for local industries, which offers technical know-how and business opportunities to those seeking them. All types of business opportunities are covered including licencing agreements, export opportunities, and joint ventures. The work is carried out mainly by HKPC's compilation of a quarterly technology transfer package circulated to 200 selected medium scale manufacturers in Hong Kong.

At TIC2, the need for organizing training courses in information for TECHNONET POs' staffs was expressed. This was experimented on in 1978, and much has been learnt from that exercise. It is expected now that HKPC will play a leading role in organizing INFOTRAC II some time in September this year. Mrs Dearman hopes to structure it in such a way as to follow the ideas that she and her colleagues in HKPC have, and also to meet the needs which will be expressed at TIC3.

In August 1978, HKPC participated in a TECHNONET PO Personnel Exchange Program and found the experience to be very satisfactory. It was hoped by Mrs Dearman that more of this could be arranged in the future. Mrs Dearman mentioned particularly, under the context of associated activities, a Furniture Industry Study Mission to Europe which HKPC had organized. This was in order to, in a practical way, show the furniture manufacturers in Hong Kong how contemporary machines are actually used abroad rather than just to read about them. The mission was believed to be very successful, and the related publication resulting from this mission has been circulated among the TECHNONET POs.

Before concluding, Mrs Dearman expressed the belief that information and extension are extremely closely related, and it is therefore very difficult to distinguish between the two. Also, in view of HKPC's future plan to establish an on-line retrieval service, she hopes this facility can be extended not only to clients in Hong Kong but also to TECHNONET POs who would wish to make use of it. However, this must be on a cost basis, unless the search is something that HKPC would itself require.

Mr Yoon Koo-Ho (KORSTIC) gave the presentation on KORSTIC's information activities (*Annex VI*). Originally in 1970, KORSTIC had planned to implement the National System for Scientific and Technological Information (NASSTI), but for various reasons, found this to be impractical. It was subsequently decided in April 1975 to establish within KORSTIC a computerized national information network. Since that time, KORSTIC has gone on to developing automation for information processing. This encountered the problem of limited computer capacity, too small to store large bibliographic data files. KORSTIC then acquired a medium scale computer in December 1978. Latest plans now call for the relocation of the computer centre to the new Daeduk Science Park, at the same time upgrading the hardware required. The new Daeduk branch of KORSTIC will be opened in July 1979 and will eventually be an integral part of the National Science Data Bank located in the Science Park which currently has 10 research and development institutions on the premises, with an expected addition of seven more within a few years.

KORSTIC has already commenced substantial expansion of its tape library to broaden its data base coverage and, similar to HKPC, seriously considers linking up with international data base services via data transmission networks such as Lockheed and SDC.

The new system will enable both Selective Dissemination of Information Service and Retrospective Search Service to be accessible to customers throughout the country from July this year.

KORSTIC has recently (from 1978) published a monthly journal entitled "New Products and New Technology", in the Korean language, as well as a number of State-of-the-Art Reviews (STARs) on selected technology. It has also started publication of a directory of some 3 000 projects in science and technology involving the work of 4 700 scientists. In addition to this, KORSTIC is implementing an On-going Research Retrieval System (ORRS) whereby a file is compiled in machine readable form which permits convenient updating.

Mr Ng Aik Pheng (SIRIM) gave a presentation on SIRIM's development of information activities (*Annex VII*). He started by saying that SIRIM had undergone reorganizing during 1978. There are now four Divisions: Administration and Finance; Standards; Industrial Research; and Techno-Economy which provides technical information as well as consultancy and extension services.

SIRIM's library holdings consists of some 5 600 books, 275 journals, 150 000 standards and 500 of SIRIM's own abstracts and other publications. It is possible that SIRIM will commence translation work of standards and technical reports in the future. The library now also has two well qualified full-time librarians, thus improving greatly on the past situation. One librarian manages the Research Section, and the other the Standards Section. Increased efforts have also been made in the area of SIRIM's publications. There is now the Berita SIRIM (in Bahasa Malaysia and English); Journal Contents, specializing in Science subjects and also engineering; Sectional Listings of Standards which are received monthly (this is in effect equivalent to a CAS bulletin); and Aliran Teknologi (in Bahasa Malaysia and English) composed of abstracts to benefit research, standards and extension work (regarding trends or movements in technology).

SIRIM is seriously considering the possibility of computerizing its information and library services. Meanwhile, it attempts to play the role of promoting extension and information services among various related government departments. This is done by, for instance, circulating the TECHNONET Newsletter to six ministries comprising some 30 different government departments. Both SIRIM and MARA also regularly send staff members to attend meetings of the Council of Small Industries which is organized under the auspices of FIDA and MIDA.

In connection with an action plan to be drawn up with TECHNONET, Mr Ng suggested that there should be developed a stock of specialized information (on paper and film) and a list of resource persons of specific expertise. He concluded his presentation by mentioning some of SIRIM's sectoral interests which include:

- (1) Food processing
- (2) Woodworking
- (3) Mineral applications
- (4) Metal fabrications.

Mr Alan Scharanguivel (MARA) presented MARA's status update (*Annex VIII*). He informed the workshop that MARA currently has 260 extension officers posted at various state and district offices. He has recently drawn up a paper which will require the addition of another 170 extension officers to this group. He strongly voiced the belief that technical information should be given importance, not of itself, but rather as a total package, which should include not only raw technical information, but rather how it could be put to use by the industrialists themselves. Besides MARA's pamphlet titled "MARANIAGA" which is published once in every two months, there have been several radio programs conducted with limited success in an attempt to form new entrepreneurs.

There are plans in MARA to expand the information section, particularly to revamp it. A significant problem that has been experienced in this section is the translation of technical information into a form which is readily useable by small scale entrepreneurs. In addition to this problem, MARA has been recruiting quite a number of people who have not received the proper training as industrial extension officers, and are particularly untrained in the processing of technical information for industrialists. He hopes that MARA will soon be able to establish a central library, combining two existing libraries which will fulfil the functions of information service for industrial entrepreneurs. Mr Scharanguivel also mentioned particularly an experiment which is being conducted in one of the states of Malaysia where a number of guides and booklets are being prepared to benefit the prospective new entrepreneurs, who will be sufficiently interested in these publications to use them for starting up new businesses.

Mrs Leticia Aquino (UP ISSI) presented UP ISSI's update of its information program (*Annex IX*). During 1978, UP ISSI's major information activities were:

- (a) Information processing and documentation which includes acquisition, cataloguing, indexing, abstracting, storage and retrieval of print and non-print materials;

- (b) operating a technical enquiry service, an important result of which has been the publication of an abstract of technical enquiries, both of local and international origins, which had been handled by UP ISSI;
- (c) publication of the quarterly Small Industry Journal, monthly Current Awareness Lists, Current Contents and Newsletter and weekly News Briefs;
- (d) Reprography - not much has been done on this item except for the provision of assistance to an EDF Project;
- (e) Special Projects - UP ISSI organized, for the first time in 1978, the Small Industry Information Management Training Course (SINFOMAN) for Processors and Users. UP ISSI is also taking up a project called "Countryside Selective Dissemination of Information". In this respect, it is trying to establish a network in the simple region with the coordinating centre located at the National Economic Development Authority (NEDA). Just completed also is the compilation of a Directory of National Sources of Information for Small Scale Industries in the Philippines. The latter part of this publication lists journals which are subscribed to by the various institutions whose work relate to the development of small scale industries. The list also shows journals which none of these agencies are subscribing to and will serve as the basis from which additional journals could be taken up for subscription by UP ISSI in the future.

In reviewing UP ISSI's targets for 1979, Mrs Aquino particularly cited the effort to put on microfiche the result of researches pertaining to various small scale industries. At the same time, she sought to know whether any of the other TECHNONET POs were contemplating or were in fact carrying out a similar effort already. UP ISSI's efforts in providing its CAS to the various industrial sectors will particularly concentrate on the food, woodworking, garment and metalworking industries. These sectors were selected from the results of a survey of the three pilot regions of the Philippines and also based on the result of a survey conducted by the Commission for Small and Medium Scale Industries (CSMI). Another special effort, which will be made by UP ISSI, is the micro-documentation of UP ISSI's reports and industry reports. This work will hopefully be carried out in cooperation with the Technology Resource Center.

On the subject of UP ISSI's future plans, Mrs Aquino stressed that the Technical Information Service (TIS), now provided by UP ISSI, will continue and will be broadened particularly in the three pilot regions, and hopefully will later spread to other regions. At the end of this year, she expects that the Countryside Selective Dissemination of Information Project will be evaluated. Before Mrs Aquino concluded her latest update, she drew attention particularly to two problems concerning the strengthening of UP ISSI's information service. Firstly, where there are two POs of TECHNONET in any country - as is currently the situation in Malaysia and the Philippines - there is a need to define the roles of these POs so that efforts do not duplicate each others. Secondly, Mrs Aquino sought clarification with regard to the role to be expected of TECHNONET Centre particularly in the next two years in connection with the development of technical information services of the TECHNONET POs in all the countries.

Mrs Purita Festin (EDF) presented the country paper of EDF (*Annex X*). She stated that the EDF Technical Information and Extension Service (TIES) program has three major thrusts: information dissemination, extension and training. Originally conceived to serve the small and medium industries, the service has since been expanded to meet the information needs of large industries, government institutions and the rural sectors. Although the original goal as set out in the three-year program has been substantially accomplished, the active information service will continue to be provided to the small and medium industries.

Also during the period, efforts were made to link up with other information centres and data banks, both local and foreign. The link up with the National Science and Development Board (NSDB), the key referral and coordinating centre for the Philippine network of scientific and technological information service was firmed up in the second year. EDF is cooperating with the NSDB particularly on the program to establish a National Information Center.

During the next 3-4 years, EDF plans to re-orient its information service to better serve the small and medium scale industries, through the ongoing and proposed projects which include:

- (1) The documentation of a Technology Transfer Model in print or appropriate audiovisual form from the source of information up to the time when the technology is disseminated, adopted and utilized by the manufacturing sector.
- (2) Participation in NSDB pilot projects. One concerns upgrading of human resources in the Philippines. The other involves the organization of information resources within the country.
- (3) Re-orienting its publication - Trends in Technology - towards appropriate technology information. Along this line, EDF will publish a series on Appropriate Technology which will repackage traditional and modern technology to suit the requirements of rural small and medium industry.
- (4) The SDI Service and Technical Enquiry Service.

TECHNONET will be looked upon to provide support for some of these projects.

Mrs Mercedes Cheong presented SISIR's information service update (*Annex XI*). SISIR's Technical Information Program comprises three main areas of activity: Current Awareness Service; Question and Answer Service; and Industrial Liaison Service. Under its CAS, to-date some 21 688 articles have been requested by subscribing members from commerce and industry. 1 300 articles were also requested by TECHNONET POs who had taken advantage of this program. There is also the packaged information program which SISIR developed for architects and professionals in the building and construction industry. 328 architects and professionals currently subscribe to this service. Another packaged program has been developed for production and quality control engineers. There are currently 384 subscribers. SISIR's

CAS programs result from scanning by some 45 SISIR staff and 39 Polytechnic and National Library personnel. More than 1 000 journals are being scanned under this service. The Question and Answer Service processes an average of ten written enquiries and 100 telephone enquiries per month. The Industrial Liaison Service has resulted in a number of STARS concerning the food, electrical/electronics, furniture and also plastics industries. These reports are confidential, and will only be available to TECHNONET POs upon their request, and subject to permission of the specific industrialists concerned.

SISIR's international linkages have seen many staff members of various POs visit its premises to familiarize them with SISIR's Information Service operations. Mrs Mercedes Cheong also recently visited KORSTIC late last year to familiarize herself with KORSTIC's patent information service. There is a serious plan in SISIR to establish a similar service for Singapore, which will also serve to back up the Technical Information Service with patent information, as well as make Singapore industrialists aware of various technologies which are available for licencing.

Mr J Kulatilleke presented the IDB paper (*Annex XII*). IDB's industrial information service currently has 256 members. The service includes the Current Awareness Documentation Bulletin containing abstracted information, and also information packages pertinent to specifically chosen industries. Particular attention will be given to prospective industrialists in rural areas - by way of giving special considerations and reduced cost of this service to this type of people.

Mr Kulatilleke's paper spelt out specific actions that are suggested as should be taken by TECHNONET POs as well as TECHNONET Centre. These could be taken up during the workshop group discussions. Also clearly shown in the paper is IDB's suggestions for modifications to the syllabus of the planned INFOTRAC II.

The final paper was presented by Mr Krsichai Songsathaphorn (DIP) on DIP's status update on the information service program (*Annex XIII*). He stated that after Mr Soon's (SISIR) recent visit to DIP, the Industrial Service Institute (ISI), to which Mr Krischai belongs, has already embarked on an intensive program to strengthen the technical information service of ISI, beginning with the publication of a CAS in Thai. Because this has only been a recent effort, there is still insufficient response to properly evaluate the project's success. He also mentioned that in the last few months, HKPC and SISIR have strongly provided resources support, particularly in terms of technical articles, which are normally found in suitable periodicals. He hoped that TECHNONET Centre will be able to provide additional support, so that ISI can subscribe to an adequate number of technical journals next year.

ISI's Technical Information Service Unit, now in the process of being formed, has already started to compile a list of local and foreign equipment and machinery, as well as the distributing agent, manufacturer, the cost of procurement, and the related industrial processes involved. This is because many of ISI's clients come to the Institute with specific requests for this type of information.

(Mrs Prabha Thacker (ISC), who had been delayed on her journey, was only able to join the workshop later on during the day - see Annex XIV for her country paper.)

The presentation of the country papers was followed by a brief period of questions and answers.

Mr Vespry suggested that HKPC thoroughly look into the possibility of taking full advantage of Network/Time sharing of computerized data transmission costs which he believed could be as low as US\$12 per hour - whereas HKPC currently pays in the order of US\$200 an hour. He also suggested that, in view of HKPC's new Environment Information Unit, it should contact the Asian Institute of Technology (AIT) in Thailand which could be of considerable benefit because of AIT's specialized unit. It was further suggested by Mr Vespry that TECHNONET should encourage its POs to attempt compilation of a directory of Industrial Research Institutes (both government and private) similar to that already done by the nationals involved, as it would be an extremely useful tool. To Mrs Aquino (UP ISSI), Mr Vespry recommended that she contact the Coconut Research Institute of Sri Lanka's Coconut Information Centre (to be supported by IDRC). This could result in the enrichment of both the CIC's and UP ISSI's holdings in related literature.

In rounding up the discussion for this session Mrs Festin, the Chairman observed that there clearly exists various levels of information service capability among the POs. The participants were asked to take this into consideration when choosing the composition of the Workshop Groups which will be formed later on. The consensus was that one group should be made up of KORSTIC, SISIR and HKPC (more developed), possibly with the addition of SIRIM, with the other POs making up the other group.

As Dr Chico will not be able to stay with the workshop after the weekend, he took the opportunity of available time to speak on the expected output of TIC3. Primarily, the workshop should result in specific action programs for TECHNONET's Information activities. In the process, both national and regional networking will come into the picture. The Council, at TC5 in December 1978, had expressed its consensus that it was time to make definite commitments with regard to TECHNONET's Information Program by each TECHNONET PO. Thus, the output of TIC3 should take the form of a Back-Home-Action-Plan (BHAP) styled document.

It is considered essential that particularly those POs which do not yet have a properly developed TIS unit should commit themselves to this task so that there will be established throughout the TECHNONET network a firm basis for "direct networking". As a secondary output of the workshop, special working relationships may well develop.

SESSION IX - INFOTRAC II

In view of the time available, discussion of INFOTRAC II was taken up. Dr Chico stated that at INFOTRAC I, the participant from KORSTIC did not really benefit from the course because he was already very familiar with the topics concerned. As it turned out however, as pointed out by Mr Yoon, the experience did prove to be extremely useful because the trainee has now been put in a position heavily involved in the planning and organization of an information training program. On the other hand, Dr Chico went on to say, several participants needed, and benefited from, the course. This divergence resulted in the idea of arranging for courses for two levels of expertise. Also, there is the possibility of organizing study tours for those who would not really benefit from a similar "basic" training course on information.

Mr Santi expressed the opinion that, bearing in mind the theme of TIC3 - "Making Technology Accessible to Small Industries Through Networking" - he would strongly support a course designed to provide relatively new and inexperienced information officers of TECHNONET POs with a firmer grasp of the work involved in a TIS unit which serves small industry. This would enable the less endowed POs to have a sufficient number of properly trained personnel. Such a course would also even benefit recent recruits of developed TIS units of TECHNONET such as those in SISIR and KORSTIC. For the more experienced candidates, study visits or exchange assignments would probably be of greater benefit to all concerned.

Mrs Dearman explained that INFOTRAC I, as an experiment, would be considered successful. This view was amply supported by Mr Krischai and Mr Faruque, both INFOTRAC I participants. The constraint in the real usefulness of the course was found mostly to be in the environment back in the participant's own organization. In any event, it was generally agreed that INFOTRAC II should be 3-4 weeks in duration and should be heavily oriented towards practical information work - and less so on library functions which should not be left out.

Mrs Festin broached the subject of Information Trainers' Training. This, however, was regarded as a remote possibility, mainly because of the limited budget of TECHNONET, at least for the next year or so. It will therefore only be accorded a relatively low priority in TECHNONET.

Dr Chico raised the question whether it would really benefit a "raw recruit" to go on study visits to HKPC and SISIR. Mrs Dearman gave the opinion that there is a great deal to see, even for a "high calibre" person to properly absorb and thereby benefit from such a tour. The best strategy would be long term working assignments during which a broad spectrum of information activities can be properly experienced and assimilated by such "raw recruits". Before adjourning for the day, Mrs Dearman made a special plea to all POs that the candidates for INFOTRAC II should be truly competent in spoken and written English. This had been a significant problem during INFOTRAC I.

At a subsequent session, the participants discussed in detail the course design of INFOTRAC II as proposed by Mrs Dearman. It was agreed by all that HKPC will act at the lead institution for the overall planning and conduct of INFOTRAC II. In principle, it will be a 3-4 weeks course which caters to the needs of relatively inexperienced information officers of the POs. Some essential library science subjects will be covered to a depth of "appreciation" only. The major module of the course will involve project (practical) work.

Friday, 23 February

SESSION V - National Sources of Information for Industry

The Chairman opened this Session by inviting comments from various participants.

Mrs Aquino began by saying that UP ISSI had, two years ago, presented the concept of national networking for small scale industries by inviting 11 members of the Commission for Small and Medium Scale Industries (CSMI) to brainstorm at a Seminar at UP ISSI's premises. Those present, at the time, had been very much against the concept primarily because it was seen that UP ISSI would not be able to afford the necessary equipment such as a moderate size computer. Two of the institutions that attended this Seminar reacted positively, and from this, UP ISSI continued to conduct a series of workshops. After three workshops, very little progress had been made. UP ISSI then started independently to implement its original concepts and subsequently came up with a Directory of National Sources of Information, a project supported by TECHNONET. Mrs Aquino noted that unfortunately, no provisions had been made in the questionnaire to identify specific experts. The second step taken by UP ISSI was the development of documentation and information centres and libraries. It was felt strongly that personnel involved should be properly reorientated through suitable training programs. This work of UP ISSI has been evaluated and it appears that the majority of the objectives have been met, and UP ISSI is now in the process of trying to come up with a system of information service in each of the organizations involved. So far, out of six institutions, two have already implemented this system. Particularly, UP ISSI has launched the selective dissemination of information through countryside industries and trade associations.

This work has begun in one pilot region. Information workshops and courses for users of information, similar to that organized for entrepreneurs, have been conducted, and as a result of this, several institutions interested in this work have contacted UP ISSI for the purpose of collaboration. Already, the Technology Resource Center has pledged support for this project, and it is hoped that within the next few years, national networking for small scale industries will evolve. UP ISSI has continually attempted to bring about informal national networking arrangements with various organizations, primarily through its CAS, and hopefully these arrangements will eventually be formalized.

Mr Krischai commented that there are presently only informal contacts with various government, private and international agencies. Attempts have been made to change this into a formal arrangement by organizing workshops, seminars and similar activities, but this work is still going on. In the meantime, there is close personal relationship between ISI Bangkok and the Thai National Documentation Centre (TNDC), the Applied Scientific Research Corporation of Thailand (ASRCT) and the the Department of Science Library of the Ministry of Industry, particularly with these organizations' technical information service units. DIP distributes the TECHNONET Newsletter to these people and others, and continue to make those concerned increasingly aware of the need for national cooperation in the area of technical information for industry.

Mrs Dearman stated that in Hong Kong, there are several organizations potentially able to participate in national networking, but at present this takes the form of inter-library loans and redirecting of enquiries. Of the sources of information which are available in Hong Kong, on the one hand, there are the commercial and statistical type, and on the other, there are the more academic organizations. There is a definite need for a focal point in Hong Kong, particularly to compile a list of experts so that various technical enquiries can be channeled to the appropriate quarters. Currently, a paper rests with the Government concerning the formation of a technical Information Service for Industry which is to be led by HKPC, but may very well be housed at the Hong Kong Polytechnic, mainly because of space considerations. It has always been difficult to get the Hong Kong Government to commit the necessary funds for this type of work. Moreover, the general atmosphere of competition and strong profit motives that exist in the industrial community in Hong Kong inhibits proper cooperation between the people concerned with provision of information to those who need it. To illustrate this problem, Mrs Dearman recounted an example whereby the Federation of Hong Kong Industries was unable or unwilling to give a small piece of information from a standard specification, with the result that HKPC had to purchase the whole specification in photocopy form - 40 pages at HK\$1 per page. This expense would not have been necessary had there been the proper cooperative attitude between the two institutions. For the time being, HKPC is making good progress in liaising with the governmental Environmental Protection Unit, and hopes that it will become a model for future national networking, and institutional cooperation concerning technical information.

Mr Scharanguivel commented that in Malaysia, MARA has a formal link with the Small Industry Consultative Committee, the National Productivity Centre (NPC), SIRIM, MARA, and others such as MIDF. Furthermore, MARA deals closely with FIDA which has set up a central unit which helps provide technical information to larger scale industries. MARA relies mainly on the NPC to meet its training needs. Contact is also kept with the Ministry of Primary Industries which deals with rubber and palm oil. A recent development in Malaysia is MIDAS of the Science Library which is attached to the Universiti Sains Malaysia in Penang. They have taken steps to collect papers, resulting from research work completed in the Universities. In the future, MARA is still considering letting out the task of scanning and abstracting to a private firm but so far, there has been no definite decision. In addition to this, a data bank of technical information for industry has also been deliberated upon for several years.

Mrs Thacker told the participants that most of ISC's clients come to it seeking information mainly related to investment opportunities. Although there are several government organizations whose work involves provision of technical information to industry, there is a definite lack of coordination work between the various parties. Mrs Thacker, therefore, perceives a very strong need to organize a national central information unit to service the needs of the industrial sector. For the time being, ISC publishes the ISDOC Bulletin as well as a bi-monthly accessions list. ISC's own information service unit is very small and lacks the necessary skilled and trained manpower. In fact, this is seen as a common problem experienced in many sectoral activities in Nepal. ISC has not been able to do much to resolve this problem and will look to TECHNONET for assistance.

Mr Faruque stated that national networking has always been a subject often raised in Bangladesh. BANSDOC has charted out tentative programs as well as organized a series of workshops which deal with a range of information activity. Mr Faruque felt that for this issue to be resolved, it will take a great deal of time. He distinctly feels the need to establish a sectoral information centre which will cater to the specific needs of small scale industries in Bangladesh. He hopes soon to organize a seminar for industrial information service personnel, as well as users, in April 1979. Since becoming a member of TECHNUNET, BSCIC has started to establish informal relationships with leading institutions in the field of technical information.

Mr Soon commented that, like all the countries of TECHNUNET, SISIR has informal arrangements with various government departments and similar bodies. He emphasized, however, that "national networking" indicates a more formal working arrangement. SISIR has, for a long time, considered the UNESCO program involving some 20 institutions in Singapore, but the Government's decision to embark on this is still pending. In practical terms, national networking in Singapore, a small place, is not seen as at all difficult. However, many of the organizations that claim to be information centres are in fact not really able to perform this function. The most important issue involved, as far as SISIR is concerned, is whether the Government will spell out a definite need through a policy decision on the establishment of an information centre - the basic question being whether Singapore wishes to establish an equivalent to KORSTIC in Korea. For the time being, SISIR continues to build up its strength in this field so that if eventually the decision is made to create national networking, then SISIR will have a major say and part to play.

Mrs Festin stated that her institute has already identified many information sources useful to EDF, and have established linkages with them. EDF is currently assisting the NSDB's program, now in the second of its four year plan, as earlier reported. She presented a flow chart illustrating EDF's various sources of information from which the needed materials for small and medium scale industries are obtained. Being a small institution with limited resources, this is seen as the most appropriate action that EDF can take. Mrs Festin went on to say that both formal and informal linkages have been established with various institutions, particularly during the past two or three years. EDF has served not only the needs of small and medium industries, but also the larger ones, and this has resulted in significantly building up EDF's information resources.

Mr Ng reported that SIRIM maintains linkages with various universities, colleges, government departments, statutory bodies and private firms. These institutions mostly have libraries, but not all have appropriate information services, and of those that do, only some can actually cater to the needs of small scale businesses in specific industry sectors. Mr Ng reported on close collaborations with the Rubber and Forest Research Institutes, Departments of Geology and Mines, project departments of various development banks, projects of state development corporations, as well as the NPC and MARA. SIRIM takes into consideration joint research proposals whenever a new project is identified as requiring expertise from these institutions. This results in SIRIM's extension officers working closely together with the research officers, and it is hoped that in this way, formal networking arrangements will evolve in the years to come.

Mr Kulatilleke stated that IDB enjoys a number of effective information linkages with organizations such as the Ceylon Institute of Scientific and Industrial Research, Coconut Research Institute, National Science Council, Ministry of Industries and others listed in his paper earlier presented at this workshop. Besides these, IDB also communicates with 36 other public sector institutions, as well as other sources such as Sravodhya and the Agricultural Engineering Society of Sri Lanka.

Mr Yoon report that KORSTIC has become de facto the central focal point for technical information meeting the needs of organizations such as the National Industrial Research Institute, and the Korean Small and Medium Industry Promotion Corporation. There is no definite plan to bring about formal national networking. KORSTIC cooperates very closely with various libraries of the research and development institutes located in the Science Park, and also with more than 150 libraries comprising 8 000 journals from which the Union Catalogue List is made by KORSTIC and revised every two years. KORSTIC has already made recommendations to the Government that the establishment of information units should be encouraged in several departments. While the establishment of a total national networking system is seen as difficult, KORSTIC is in the process of setting up a national science data bank which hopefully will contribute greatly to the networking efforts in Korea.

After the round of comments from the various participants, the workshop went into general discussion on the subject.

Mrs Festin observed that, from the comments heard so far, there appear to be a definite need to strengthen infra-structures to enable effective national networking to evolve. For some TECHNONET POs, it is still not within their capabilities to network effectively, primarily because the building up of infra-structure requires strong government support and commitment. This is clearly seen in the Philippines. Mr Soon commented that the actions which need to be taken by the TECHNONET POs, as well as TECHNONET Centre, is an extremely important matter. The TECHNONET ASIA Project has two main lines of interest: Information and Extension. Extension activities normally remain entirely within the PO country and exchanges with other POs in this regard only take place during regional training courses and meetings. This is not the case in information activities because information service necessitates dependence on others. Direct networking between POs is considered by Mr Soon as absolutely vital to the success of the TECHNONET Project. However, for a PO's technical information service to become the national centre of information for industry, it is subject to national acceptance. Only when this national acceptance exists, can that PO take the lead in networking within the country, and only then can it effectively link with the others of the Network. The question of how this can be brought about remains entirely up to the individual PO concerned because it must seek the necessary commitment from within the organization and from within the country.

Mr Soon commented that the possibility of having two POs in a country - one strong in extension and the other specializing in technical information service - should not be disregarded. Mrs Dearman strongly supported Mr Soon's view, particularly in that there needs to be a government edict in support of establishing a leading national information unit for industry. In addition, she noted that it is possible to build up this service very quickly as HKPC has been able to accomplish it in a matter of 18 months, with the help of TECHNONET Centre. Of course, for this to be possible, the blessing and encouragement of the PO Head, as well as hard work and a positive attitude, are essential.

Mr Alex Kennedy of the Institute for Scientific Information (ISI), of Philadelphia, USA, was introduced to the workshop by Mr Vespry. Mr Kennedy is presently in Singapore to set up an office which will provide several information retrieval services offered by the ISI. Mr Kennedy explained about the ISI's services which include: Current Contents, covering 70 scientific disciplines; Science Citation Index, offering 2 500 journals in science and technology; and "tear sheet" service as well as the Index to Scientific Review, a mini service of the Science Citation Index.

SESSION VI - Networking within TECHNONET and with Outside Sources of Information

After a break for morning coffee, the participants took up general discussions in preparation for the planned workshop group meetings in the afternoon. At the end of the general discussions, Mr Santi summarized the various topics to be considered by saying that basically two types of issues were involved: one related to policy and the other to non-policy matters. The policy issues particularly concerned:

- (1) the institutionalization of technical information service in the PO countries;
- (2) national networking - where it is desirable and what arrangements would be necessary; and
- (3) leading on from this, international networking would be likely.

The above issues need to be tackled jointly by both TECHNONET Centre and the POs concerned in accordance with the action plan which could be devised by the workshop groups.

The non-policy issues could be divided into two major portions. The first involves work which need to be performed by TECHNONET Centre, the specific item which had earlier been mentioned was development of a "Starter's Kit" for establishing a technical information service unit at a PO. The other portion consists of specific actions which need to be taken by the POs themselves were as follows:

- (1) networking agreements whereby specific actions necessary for effective networking need to be precisely defined and committed to by the participants. This would include the design of a common format for technical enquiries to be handled within the Network which the workshop group could work on;
- (2) a directory of expertise needs to be developed and properly designed so that the result will end up more interpretable than that which resulted from a similar earlier attempt. The example of this would be the directories which have already been put up by KORSTIC and UP ISSI;

- (3) finite moves to develop national networking in each PO country. At least two items have already been suggested by the participants: national seminars to be organized for the various potential providers of technical information service such as proposed by Mr Faruque; and looking into and resolving the problems encountered by Mr Yoon in compiling the TECHNONET Union Catalogue List. There may be similar works which could be suggested by the workshop groups;
- (4) there is a necessity for the POs' training need to be examined and clearly identified, and while the TIC3 participants will have the opportunity of designing jointly the syllabus of INFOTRAC II, the workshop groups may be able to make additional suggestions to meet TECHNONET POs' training needs in the field of information work through other means and activities.

Subsequent to this, it was decided that, for the non-policy issues, the participants would break up into two groups and later join together to take up the detailed discussion of the policy issues at hand.

SESSION VII - Preliminary Discussion of Groups A & B (Combined)

The participants took up for discussion as a single group the background of problems and possibilities - particularly in the TECHNONET countries where Technical Information Service (TIS) has not reached a relatively advanced level of development - for pursuing this task at the TECHNONET PO concerned.

It was the consensus of those present that, on the matter of establishing or developing a TIS unit at the PO concerned, the objectives for this undertaking should first be clearly defined. The objectives should take into account the various policy constraints that may currently exist. Based upon this, three fundamental components will be identified: Manpower requirements; Resource Materials requirements; and Statutory/Budgetary requirements.

The Manpower requirements have two basic aspects which need to be considered. One is the staffing, which depends largely on the statutory/budgetary constraints. This notwithstanding, it is possible in most cases that a potentially useful person could be identified to receive training and/or the necessary exposure be it through a formal training program or on-the-job training. TECHNONET can be looked upon to provide the necessary assistance on this.

Resource materials necessary for the TIS unit in question already exist in many forms. The PO concerned should definitely take advantage of HKPC's and SISIR's as well as other TECHNONET POs' outputs, all of which are available for free. TECHNONET Centre is also in a position to assist the PO concerned with the acquisition of other free, and possibly paid subscriptions. In addition to this, on a case to case basis, assistance may be provided in the acquisition of standard reference works and specialized books and non-bibliographic resources.

The budget constraint is something that must be taken up internally at each PO. This would be more easily overcome once the objectives have clearly been determined, and the necessary resources fully identified. It was agreed that where appropriate the participants from the PO concerned should play a leading role in putting together a concept paper for presentation to the PO Head. This effort could be given documented support from TECHNUNET Centre, if appropriate. On this score, Mr Soon recommended that the summary of proceedings of TIC3 should be highlighted and directed to the PO Heads by the Administrator of TECHNUNET to ensure that the matter will receive the adequate attention of the PO Heads.

On the subject of attempting to formalize national networking, there were divergent views. KORSTIC and HKPC felt no necessity to do this, mainly because their information units are virtually self-sufficient. Most of the other POs already enjoy an "informal" national networking arrangement based on personal contacts. In fact, as a group, the effort to formalize national networking was seen as very ambitious and even unnecessary at this stage. It was agreed that the POs should merely keep in mind the possibility of becoming eventually involved in formal national networking. To this end, wherever possible, the PO should attempt to manoeuvre itself onto the UNESCO's NATIS Committee to keep track of developments. Meanwhile, efforts should be made to strengthen the POs' capabilities in providing technical information to industry so that it will be in a strong position to take up this role at the appropriate time. It was pointed out by Mr Santi that, if anything was being pushed, it was the concept of networking (meaning interaction, cooperation and collaboration) among the TECHNUNET POs.

It was suggested by Mr Soon, and agreed to by all participants, that the POs represented should commit to putting on paper the contributions each is willing to make to the network members. This would provide a firm basis for "Direct Networking", and hence the foundation upon which the viable existence of TECHNUNET will depend.

In the meantime, it was agreed that TECHNUNET Centre should continue the task of establishing additional contacts with international sources of technical information pertinent to TECHNUNET so that these sources will be familiar with the TECHNUNET identity. Thus, if and when TECHNUNET Centre becomes non-existent, at least members of the Network will still be able to make use of these international linkages established under this identity.

Following this, the workshop split into two groups to discuss the "non-policy" issues of the action plan to be drawn up by the working groups. It was agreed that the workshop would take up discussions again the following Monday.

Saturday, 24 February

The participants were taken to visit the Jurong Town Corporation (JTC), whose primary function is the development and management of industrial estates in Singapore. A briefing on JTC's activities was conducted by its Senior Public Relations Officer, and the participants were then taken on a tour of the Jurong Industrial Estate, which is the largest of 18 such industrial estates throughout the island, and managed by JTC.

Monday, 26 February

Session VIII - Reports of Groups A & B

The two groups were integrated again to deliberate on the outcome of their individual discussions and their reports are presented hereunder.

Group A

This group comprised: Mrs Susan Dearman (HKPC Hong Kong)
Mr Yoon Koo-Ho (KORSTIC Korea)
Mr Alan Scharanguivel (MARA Malaysia)
Mr Ng Aik Pheng (SIRIM Malaysia)
Mr Shahabuddin Faruque (BSCIC)

The group began by discussing what each PO had to offer to others.

HKPC offered to supply to POs all its publications - the Information Checklist, the Plastics Bulletin, the Furniture Bulletin and the proposed Environmental Newsletter. A back-up library photocopying service would also be provided at no cost. HKPC would undertake manual literature searches and provide bibliographies on subjects within its special fields. On-line search facilities would be available at cost price. An offer has also been made to DIP for bulk copies of the Furniture Bulletin at reduced subscriptions. HKPC also offered to take 1-2 trainees for on-the-job training to provide resource persons for information courses.

KORSTIC offered a literature and patent searching service free of charge and to supply bibliographies followed by hard copies on request. Translations from Japanese to English would also be supplied free, within reason. Computer-based information retrieval would be available at cost. KORSTIC offered to take 1-2 trainees for 2-3 weeks' on-the-job training.

MARA undertook to obtain, on other POs' behalf, any local publications on request and to inform other POs of their availability. MARA's own publications, which are in Bahasa Malaysia, would be supplied to DP Indonesia and a list of contents in English to other POs. MARA would be prepared to offer training in extension work.

SIRIM has to offer, on request or exchange basis with POs, its own publications - SIRIM News, Journal Contents (Science and Engineering), Sessional List of Standards, Aliran Teknologi - some of the articles in these publications are in Bahasa Malaysia. SIRIM can be approached to supply resource persons for courses in information and extension services.

BSCIC would arrange to obtain local journals, deal with technical enquiries in its special fields and searches of Bangladesh patents.

In summary, the POs in the group guaranteed to supply their publications gratis to other POs, to answer technical enquiries according to their capabilities, and to give priority to TECHNUNET interests.

Technical Enquiries (TEs)

A standard format should be devised by KORSTIC in cooperation with TECHNUNET Centre. The form should be in triplicate, Copy A to go to the Resource Centre(s), Copy B to TECHNUNET Centre, and Copy C to be kept as file copy. A reply slip should be included on the form to ensure rapid reply - to indicate either that the enquiry is being dealt with or that no information is available on the subject.

"Starter's Kit"

It was agreed that a "Starter's Kit" be drawn up by TECHNUNET Centre on the basis of POs' stated needs.

Training

All POs expressed the need for INFOTRACs, INDEXTRACs and STEWs, as well as on-the-job training, which HKPC and KORSTIC offered to supply. Several POs offered resource persons for courses and HKPC agreed to organize INFOTRAC II in conjunction with TECHNUNET Centre.

Union List of Periodicals

KORSTIC reported that this was partially complete but that two POs (IDB and DP) had not replied, and several had submitted incomplete information. KORSTIC agreed to contact the POs concerned and have it completed as soon as possible.

Directory of Resources

All agreed that a directory of the capabilities/subject specialisms of all POs would be feasible and most valuable.

Prepared by Mrs S Dearman
Chairman

Group B

This group comprised:

- Mr Krischai Songsathaphorn (DIP Thailand)
- Mrs Prabha Thacker (ISC Nepal)
- Mr J Kulatilleke (IDB Sri Lanka)
- Mrs Leticia Aquino (UP ISSI Philippines)
- Mrs Purita Festin (EDF Philippines)
- Mr Freddy Soon (SISIR Singapore)

Discussions centred on non-policy issues concerning networking as listed out earlier on by Mr Santi. The following topics were discussed:

- (a) What POs can do to contribute towards networking;
- (b) What POs want from other POs;
- (c) What POs want from TECHNUNET Centre;
- (d) Mechanics of networking among POs.

(a) What POs can do to Contribute Towards Networking

The group recommended that each PO should list out the services or activities it is prepared to share with other POs. For services where fees are incurred, it is hoped that the PO concerned should provide these at subsidized rates for other POs. A listing of the services and activities each PO is prepared to contribute is as follows:

- IDB
1. CAS will be offered free-of-charge to all POs;
 2. All publications, bulletins, etc., published by IDB will be given to all POs free-of-charge;
 3. IDB is prepared to serve as a focal point for all enquiries on Sri Lanka, ie IDB will entertain enquiries from POs about Sri Lanka and give priority to finding the answers to these enquiries.
- UP ISSI
1. Will provide all published materials, bulletins, unclassified research to all POs;
 2. Will entertain technical enquiries from all POs;
 3. Will offer its training courses to POs on a charge basis;
 4. Will serve as a focal point for enquiries on the Philippines.
- EDF
1. Will provide all publications to POs free-of-charge;
 2. Will entertain technical enquiries from POs;
 3. Will answer information on the Philippines when required to do so;
 4. Prepared to offer back issues of spare copies of journals.
- DIP
1. Will provide all published bulletins to POs;
 2. Will serve as a focal point for enquiries on Thailand.
- ISC
1. Will furnish published materials to all POs;
 2. Will provide information on Nepal when requested.
- SISIR
1. Will offer CAS to all POs under the present arrangements;
 2. Will offer back issues of spare copies of journals to interested POs;
 3. Will entertain technical enquiries;
 4. Will entertain technical enquiries about Singapore;
 5. Will provide staff, subject to exigencies of service, to serve as resource persons;
 6. Will provide on-the-job attachments for staff of POs in the area of information.

(b) What POs Want from Other POs

Here, discussions were focussed on specific requests from POs wanting to tap the resources from other POs. Basically, requests centred mainly on POs supplying resource persons for specific training programs or for conducting specialized courses or seminars. POs also requested for other staff to be accepted at other POs for short-term on-the-job training.

In cases where POs charge for their services, such as in translation, etc., it was recommended that such charges should be nominal or should be at subsidized rates.

(c) What POs Want from TECHNONET Centre

It was agreed that the proposed "Starter's Kit", comprising basic hardware as well as software materials required for basic information service to be started, should be compiled by TECHNONET Centre and distributed to those who need them. The Centre should also come up with a standard format for technical enquiries.

(d) Mechanics of Networking Among POs in the Area of Information

Discussions covered mainly networking in the information field and exclude extension, transfer of technology, etc. In the information field, it was generally agreed that networking between POs can only be realized when POs have developed compatible information programs. The group recommended that the proposed listing of information capability of each PO be undertaken so that in the area of information, a more realistic assessment of POs' capabilities can be ascertained. In the final analysis, networking can only happen when there is cooperation and when there is a two-way flow.

Prepared by Mr F Soon
Chairman

SESSION IX - Formulation of an Integrated Action Program
for TECHNONET and POs on Network Development

A committee was formed to summarize the workshop's plan of action as detailed below. Members of the committee were:

Mr Freddy Soon (SISIR Singapore)
Mrs Purita Festin (EDF Philippines)
Mrs Prabha Thacker (ISC Nepal)
Mr Alan Scharanguivel (MARA Malaysia)
Mrs Leticia Aquino (UP ISSI Philippines)
Mr Yoon Koo-Ilo (KORSTIC Korea)

Introduction

TECHNONET ASIA is on the way to becoming a separate and formal entity by July 1980. In view of the impending change, there is a definite need to re-examine its activities both in the information and extension sectors. This workshop was convened to examine how information activities of POs can contribute towards "networking" and how future activities should be oriented vis-a-vis the new entity.

Rationale

The future existence of TECHNONET is regarded to be strongly dependent upon the interaction, cooperation and collaboration between and among the POs particularly because information activities require active linkages between the POs, whereas extension activities tend to be more "internal" in nature.

Objective

The objective in formulating this action plan is to ensure the future meaningful existence of TECHNONET as a network. The key to this is seen to lie in the effective interaction (direct networking) between the POs. To this end, TIC3 participants perceive that each PO needs to develop its TIS unit up to a certain minimum level of capability so that it can "network" not only in concept, but also in deed, to ensure TECHNONET's continued and useful survival.

General Recommendations

It is understood that this workshop is attended by PO staff members who have been vested with the authority from their respective PO Heads to actively take part in the deliberations and to commit themselves and their organizations to the plan of action jointly drawn up and detailed below. It is the consensus of the participants that all POs should particularly attempt to implement such actions as spelt out in this plan at the earliest opportunity, and certainly complete the tasks well before June 1980, the concluding date of TECHNONET Project's Phase Two.

1. Direct Networking is essential to the survival of TECHNONET, therefore the Network information program should be accorded at least the same priority as, if not greater than, at this time, the extension program which has been receiving particular attention in the past. TIC3 participants agreed that a good supporting information system is considered indispensable to effective extension work.
2. Where necessary and appropriate, a PO will provide assistance to other less developed POs particularly to improve the capability of the latter's information services, at least up to the extent that would be considered a minimum required for active networking.
3. The less developed POs will prepare an action paper for in-country approval, identifying specific areas that need attention so that effective "networking" capability may be attained in good time. TECHNONET Centre will assist by providing the necessary guidelines and following up with the appropriate authorities.
4. At the end of TIC3, TECHNONET Centre will send to all PO Heads a letter emphasizing/highlighting the items of work identified at this workshop, to properly acquaint each PO Head with the outcome of TIC3 and with what each PO has agreed to undertake.
5. A basic mechanism for handling Technical Enquiries within the Network will be drawn up in detail. For example, a TE Form, in triplicate, with a tear slip at the bottom for replies has been proposed. TECHNONET Centre will continue to act as the principal coordinator. All POs will provide TECHNONET Centre with a copy of every TE's covering letter so that an accurate profile of areas of interest, strengths, and limitations may be gradually built up.

6. All POs will review the possibility of making fuller use of the various resources already available within the Network. These include SISIR's SDI service and HKPC's CAS, both of which are considered very useful to TECHNONET's POs, as well as publications of all the POs. Each PO should at the same time ensure that such resources are made known to, and received by, the others of the Network.
7. A list has been drawn up identifying what contributions each PO is offering to the Network. This list should be used by all POs as a basis for "direct networking" with one another.
8. Each PO will compile a national directory of technical information pertinent to the various industrial sectors served by the POs.
9. When HKPC and any other PO goes "on-line" with services such as SDC or Lockheed, access to this service will be arranged for other POs on an actual cost basis.
10. It was unanimously agreed to recommend that formal as well as informal training for information officers of TECHNONET should continue to be organized, not only for members of the less developed POs but also for others should they require it.
11. As contained in SISIR's country paper (Pg 116 - III no 7a) it was strongly endorsed by the participants that a certain amount of money be set aside to allow POs' staff to travel between POs on an exchange basis on specifically identified programs of information and/or extension.
12. It was agreed that all TECHNONET POs, with only one or two exceptions, should actively engage themselves in national networking, and at the same time prepare themselves to fulfil the role of leading institution in a national network for industrial information at the appropriate time when formalized national networking becomes a reality.
13. TECHNONET Centre should continue to develop additional linkages with non-TECHNONET/international sources of information. Each PO's name should be made known - with reference to TECHNONET ASIA - to all such sources to facilitate subsequent direct communication.
14. TIC3 participants pledged to render every effort at each PO to increase an awareness of TECHNONET's identity and the PO's membership of the Network. All correspondence related to TECHNONET will be given significantly high priority for prompt attention and response.
15. TECHNONET Council is strongly recommended to consider the possibility of networking along special lines of interest and/or priorities - specifically in information, or extension, or both. Other common areas of interest should be worked out between groups of two or more POs for such direct networking.

16. Specific requests from any PO for TECHNONET Centre's or other POs' support or assistance with information program development (e.g. SISIR's tentative request for assistance to its Patents Information Handling) will be worked out on a case to case basis with a minimum of delay.

Specific Recommendations

As a matter of Network priority, the following actions are recommended by the committee as essential work items which need to be undertaken by POs and TECHNONET Centre particularly within the remaining 16 months of the TECHNONET Project's Phase Two.

1. The ongoing Union Catalogue of POs' Serials Holdings still lack responses from IDB and DP. A last reminder will be issued and work will proceed even if responses are not complete. The resulting catalogue should have provisions for evaluation before being circulated, and if determined to be valuable and put to practical use by most POs, should be updated yearly.
2. A matrix of information capabilities of each PO (*Annex XV*) has been drawn up, and this should be used particularly by TECHNONET Centre as a basis for guiding each PO's development in information.
3. TECHNONET Centre should actively encourage those POs with inadequately developed TIS Units, for direct networking purposes, to upgrade them at the earliest opportunity. This could be done through the compilation of a "Starter's Kit" (which was felt very essential by the participants) for establishing a Technical Information Service unit at a PO. On the part of the POs concerned, there must be clearly demonstrated an institutional priority accorded to this work. Only then will TECHNONET Centre provide the necessary and appropriate assistance. (See also General Recommendation No. 2).
4. To ensure that the above action plan is acted upon, a status report should be presented by each PO at the next Council meeting. In the meantime, TECHNONET Centre staff who visit POs will follow up with each participant on the progress made. News of the latest developments and progress made in information program at each PO will be directed to TECHNONET Centre marked "for circulation among POs".
5. The Committee strongly recommended that TECHNONET Centre should assume an active role in providing stimulus, guiding and persuading PO Heads to take immediate action to implement the above recommendations and any other plans which are considered vital to the meaningful existence of TECHNONET. In general, committee members expressed the need for TECHNONET Centre to be more assertive than in the past.

Tuesday, 27 February

SESSION X - Closing Session

The Integrated Action Plan as formulated by the appointed committee (Session IX) was accepted by the rest of the TIC3 participants after detailed deliberations.

On behalf of Dr Chico the TECHNONET Administrator, Mr Santi formally closed the workshop with expressed appreciation at the participative spirit of the workshop and its output after four days' deliberations.

In reply, the Chairman, thanked TECHNONET Centre for its invaluable inputs and guidance in steering the workshop in its proper path and commended its staff for the efficient handling of the workshop details.

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THIRD TECHNET INFORMATION COMMITTEE
WORKSHOP ON NETWORK DEVELOPMENT (TIC3)
Singapore, 22-27 February 1979

LIST OF PARTICIPANTS
=====

Participating Organizations (POs)

Mr Shahabuddin Faruque
Deputy Chief Engineer (Mech.)
Extension Department
BSCIC Bangladesh

Mrs Susan Dearman
Head, Information Section
HKPC Hong Kong

Mr Yoon Koo-Ho
Director, Information Resources Dept
KORSTIC Korea

Mr Ng Aik Pheng
SIRIM Malaysia

Mr Allan Scharenguivel
MARA Malaysia

Mrs Leticia E Aquino
Chairman, Industrial Information Dept
UP ISSI Philippines

Mrs Purita M Festin
Vice-President
Engineering & Industrial Research
Services
EDF Philippines

Mr Freddy H C Soon
Director
Standards & Corporate Services
SISIR Singapore

Mrs Mercedes Cheong
Senior Officer
Industrial Technical Information
Service
SISIR Singapore

Mr J Kulatilleke
General Manager
IDB Sri Lanka

Mr Krischai Songsathaphorn
Industrial Information Officer
ISI/DIP Thailand

Others

Mrs Prabha Thacker
Acting Branch Chief
Documentation & Publications Branch
Industrial Services Centre (ISC)
Nepal

IDRC/TECHNONET Singapore

Dr Leon V Chico
Administrator
TECHNONET ASIA

Mr Santi Grachangnetara
Deputy Administrator
TECHNONET ASIA

Mr Robert Aw
Engineer
TECHNONET ASIA

Mrs Sum Wai Ping
Executive Assistant
TECHNONET ASIA

Mr Eduardo Q Canela
Senior Research Fellow
TECHNONET ASIA

Mr SSB Elwela
Senior Research Fellow
TECHNONET ASIA

Ms Mary Lim
Secretary
TECHNONET ASIA

Mrs Catherine Heng
Secretary
TECHNONET ASIA

Mr H Arthur Vespry
Asian Regional Liaison Officer
IDRC/Information Sciences Division

Ms Maria Ng
Librarian
IDRC

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15.2.79

THIRD TECHNONET INFORMATION COMMITTEE
WORKSHOP ON NETWORK DEVELOPMENT (TIC3)
Singapore, 22 - 27 February 1979

Theme: "Making Technology Accessible to Small Industries Through Networking"

A G E N D A

Thursday, 22 February

Session I 0900 - 1030 Opening Session
- Remarks by TECHNONET Administrator
- Introduction of Participants
- Election of Chairman and Co-Chairman
 and two Rapporteurs
- Approval of Provisional Agenda

COFFEE/TEA BREAK

Session II 1100 - 1230 TECHNONET Information Activities:
- A Review and Future Possibilities by
 Santi Grachangnetara
- Discussion
(possibly showing TECHNONET slide
 presentation if most participants have
 not seen it)

LUNCH (hosted by TECHNONET Administrator)

Session III 1400 - 1530 Status/Update on the Development of PO
Information Activities and its Future
Plans (10 minutes per PO)

COFFEE/TEA will be served

Session IV 1600 - 1730 Continuation of Session III

Friday, 23 February

Session V 0900 - 1030 National Sources of Information for Industry
- Networking Arrangements (if any)
 . What actions should be taken by POs
 and TECHNONET Centre

COFFEE/TEA will be served

Session VI 1100 - 1230 Networking within TECHNONET and with
Outside Sources of Information
- Preliminary Discussion

LUNCH BREAK

Friday, 23 February (contd)

1400 - 1730

Workshop

- Participants will be divided into 2 groups - Group A
- Group B

COFFEE/TEA will be served

Saturday, 24 February

0900 - 1300

Field Trip (to be arranged by SISIR)

Monday, 26 February

Session VII 0900 - 1030

Preliminary Reports of Groups A and B
- Discussion

COFFEE/TEA will be served

Session VIII 1100 - 1230

Continuation of Session VII

LUNCH BREAK

Session IX 1400 - 1530

INFOTRAC II (Staff Development)
- Type of Participants
- Review of Course Syllabus

COFFEE/TEA will be served

1600 - 1730

Workshop (Combined Groups A and B)
- Formulation of an Integrated Action Program for TECHNINET and POs on Network Development

Tuesday, 27 February

0900 - 1030

- Reserved for individual discussions between Participants and TECHNINET Centre staff
- Reproduction of Report

Session X 1100 - 1300

Closing Session
- Integration and Final Report, including Back-Home-Action Plans
- Closing Remarks

(An afternoon session(s) may be added)

Note: The main output of the Workshop would be finalizing an Action Program for TECHNINET ASIA (involving TECHNINET Centre and individual POs) on Network Development.

It is essential that Workshop participants are senior staff members with sufficient authority to make commitments on behalf of their organizations. Some "homework" will be required prior to and after the Workshop.

THIRD TECHNONET INFORMATION COMMITTEE
WORKSHOP ON NETWORK DEVELOPMENT (TIC3)
Singapore, 22 - 27 February 1979

SESSION 11
(TECHNONET Information Activities)

<u>CONTENTS</u>	<u>Pages</u>
TIS Development in POs and TECHNONET Support of Institutional Facilities (Information)	1 - 3
Information Service Study Tours/Personnel Exchanges	4 - 5
Microfiche Reader/Printers at POs	6
Microfiche and KWIC Index Distribution List	7
Photocopying/Duplicating Equipment at POs	8
POs' Publications	9
Free Periodicals received at TECHNONET Centre	10 - 13
Moderately Priced Useful Periodicals received at TECHNONET Centre	14 - 15
Specialized Technical Information Services and Data Bases	16
Special Interest Publications per POs' Sectoral Priorities	17 - 28
<u>Basic Reference Books</u>	29 - 31
Sources of Technical Information in TECHNONET Countries	32 - 35
Sources of Technical Information in non-TECHNONET Countries	36 - 38
Books on Sources of Information	39

* Specialized Reference Books per POs' Sectoral Priorities

TECHNET SUPPORT OF POST
INSTITUTIONAL FACILITIES/TIS DEVELOPMENT

	Type of Support	Period
ESCI	Purchase of technical books and one year's subscription to technical journals	October 1978
HKPC	Establishment of a Plastic Technology Information Unit	Nov 76 - Mar 79
DP	Joint Translation Project with MARA for Technical Articles	Nov 77 - Sept 1978
MARA	Joint translation project with DP for technical articles	Nov 77 - Sept 78
UP ISSI	Purchase of technical books	Sept 76 - 1978
	Compilation & Publication of a Directory of National Sources of Information on Small-Scale Industries	Aug 77 - March 79
	Countryside Selective Dissemination of Information through Industry Assns.	Nov 78 - Nov 79
EDF	Purchase of Technical Books	Sept 76 - April 77
	Establishment of Technical Information Service (TIS) for Entrepreneurs	Dec 77 - Jan 79
SISIR	Computerization of Current Awareness Service	Aug 74 - Aug 77
	Expansion of CAS and Compilation of Union List of Technical Serials	Feb 76 - Feb 78
DIP	Purchase of technical reference books and one-year subscription to technical journals	May 76 - 1978
	Start-up of ISI's TIS - translation of TECH BRIEFS from English to Thai - supplies and materials	Sept 76 - Aug 77
	Assistance to set up TIS	April 1978

SUMMARY OF TES HANDLED THROUGH
TECHNONET CENTRE

POs	1972- 1973	1974	1975	1976	1977	DEC 1978	TOTAL
BSCIC	-	-	-	-	3	1	4
HKPC	7	8	8	2	2	-	27
DP	-	2	-	2	1	1	6
KORSTIC	-	-	-	-	-	-	-
SIRIM	3	9	9	7	13	1	42
MARA	-	1	1	4	4	1	11
UP ISSI	2	3	6	5	1	-	17
EDF	12	1	5	1	5	-	24
SISIR	15	14	20	17	10	7	83
IDB	-	-	8	4	15	2	29
DIP	-	2	1	8	4	-	15
MISC.	13	5	14	4	10	7	53
TOTAL	52	45	72	54	68	20	311

SISIR'S CAS

SERVICE ANNOUNCED TO ALL POS IN FEB 1975

POs	NO. OF ARTICLES REQUESTED & PROVIDED			
	1975	1976	1977	JUNE 1978
BSCIC	-	-	71	116
HKPC	273	518	683	284
DP	NOT SUBSCRIBING		NOT SUBSCRIBING	
KORSTIC	NOT SUBSCRIBING		NOT SUBSCRIBING	
SIRIM	NOT SUBSCRIBING		NOT SUBSCRIBING	
MARA	NOT SUBSCRIBING		NOT SUBSCRIBING	
UP ISSI	80	440	-	-
EDF	Subscription entered on 1 April 1975 but no articles requested so far			
IDB	Subscription entered on 8 Oct '75	68	247	254
DIP	20	36	253	110

INFORMATION SERVICE STUDY TOURS/PERSONNEL EXCHANGES

name & Designation	To	Dates of Visit	Purpose
C mmad Siddiq (Librarian)	SISIR HKPC	31 Jul - 5 Aug 78 7-12 Aug 78	Observe information activities plus on-the-job training in library usage
William Chan (Asst Indust'l Economist)	SISIR	15-20 Sept 75	Observe TIS & general familiarization
s Susan Dearman (Head, Information Section)	SISIR	27-28 Feb 78	Observe ITIS operation
sdi Rasyad	SIET Hyderabad	9 Oct - 1 Dec	attend SIET's course on Information Storage and Retrieval Systems
TIC ng Han-Chul (Int'l Relations Officer)	MARA & SIRIM UPISSI & EDF	26 Feb - 1 Mar 78 1-4 Mar 78	Observe their information activities and discuss re TECHNET POs Union Catalogue
M ncent Choong (Librarian)	NRC/TIS Ott	2 weeks in Nov 75	On-the-job training in TIS
g Khong Seng (Coordinator, App Chem Div)	NRC/TIS Ott	1974	On-the-job training in TIS
SSI s Sonia Tiong Aquino (Head, Mgmt Consult Div) uardo Q Canela (Training Associate)	SISIR	15-20 Sept 75	Observe ITIS en route NRC/TIS course
O Cipriano (Research Associate)	SISIR	28 Jan - 1 Feb 78	Observe ITIS (plus Quality Control Div)
Z O Tiesay (Officer-in-Charge, Resource Materials & Documentation Center)	SISIR HKPC	31 Jul - 5 Aug 78 7-12 Aug 78	Observe their information activities and on-the-job training in library
s Lotita F Belandres (Research Assistant, Industrial Info Dept.)	SIRIM MARA SISIR T Centre	4-7 Dec 78	observations visit after SIET course on information storage and retrieval

Ms A Peralta (Associate Consultant)	SISIR	15-20 Sept 75	Observe ITIS & general familiarization
IR			
Freddy H C Soon (Head, ITIS)	NRC/TIS	1972	On-the-job training in TIS operation
Ng Eng Hua (Info Officer, Elect Eng. Section)	NRC/TIS	1972	On-the-job training in TIS operation
Mrs K S Tan (Sr Officer, ITIS)	KORSTIC	5-9 Nov 75	General familiarization
Mrs Mercedes Cheong (Sr. Info. Officer)	KORSTIC	13-22 Dec 78	to study KORSTIC's patents information service program
PB			
S S B Elwela (Manager, Reg Office for Colombo and Kegalle)	SISIR	15-20 Sept 75	Observe TIS & general familiarization
Mrs I Unamboowe (Director, Doc. & Pub. Division)	ISI Bkk SISIR	31 Oct 77 1 Nov 77	Observe handicraft inds. Observe ITIS operation
Mrs S M Tennekoon Ms N L Gunasekera (Library Assistants)	SISIR HKPC	31 Jul - 5 Aug 78 7-12 Aug 78	Observe their information activities and on-the-job training in library use
DIP			
detpai Meekun-iam (Chief, Extension Services, ISI)	SISIR	31 Jul - 5 Aug 78	Observe information activities and on-the-job training in library usage
ammu Vasinonta (Chief, ISI Chiang Mai)	SISIR	31 Jul - 5 Aug 78	Observe information activities and on-the-job training in library usage
	SIRIM	7-9 Aug 78	Observe information activities
s Prabha Thacker (Acting Branch Chief, Doc & Pub Div)	SISIR IDB	21-22 Jul 77 23-28 Jul 77	Observe information & documentation activities

SUMMARY OF TECHNONET POS' MICROFICHE EQUIPMENT

PO	Equipment Model	Reader	Printer	Provided by	Date	Remarks
11C	Fuji RF3A-M	X		TECHNONET	April 1978	No printing arrangement available
IPC	Bell & Howell RP550 Spacemaster	X	X	Self	April 1975	Machine in Kowloon (Information) Branch
2	Recordak PE.1A	X	X	Self		Machine in CRDMIH Office, Cempaka Putih PDIN has same model (provided by TC)
ORSTIC	Bell & Howell RP550 Fuji Q4F	X X	X X	TECHNONET Self	June 1977	
IRIM	3M 400F	X	X	Self		Printing available at University of Malaya & National Archives.
BA	Kodak Easamatic 40	X		TECHNONET	January 1977	Printing available at SIRIM? and USIS
ISSI	Ektalite 117	X		Self		UP Library received an RP550 from TECHNONET (April 1976) to serve UP ISSI and EDF
3	Ektalite 121	X		TECHNONET	December 1975	
ISIR	Bell & Howell RP550	X	X	Self		
OB	Kodak Easamatic 40 Bell & Howell RP550	X X	X	TECHNONET TECHNONET	January 1976 August 1976	
IP	Kodak Easamatic 40 Bell & Howell RP550	X X	X	TECHNONET TECHNONET	April 1976 June 1976	at ISI Chiang Mai at ISI Bangkok

DISTRIBUTION* LIST FOR MRC/TIS TECH BRIEFS
MICROFICHES AND PRINTED KWIC INDEXES (BOTH)

- | | | | |
|------|--|-----|--|
| 1-11 | TECHNONET Information Liaison
Officers | 16. | Librarian
Rubber Research Institute of
Malaysia
P O Box 150
Kuala Lumpur 61-02
MALAYSIA |
| 12. | Director-General
Central Research Organisation
P O Box 278
Rangoon
BURMA | 17 | Director
Documentation & Industrial
Information Department
The Industrial Development
Centre for Arab States
P O Box 1297
Cairo
EGYPT |
| 13. | Miss Luwarsih Pringgoadisurjo
Director
Pusat Dokumentasi Ilmiah Nasional
P O Box 3065/Jkt
Jakarta
INDONESIA | 18. | Mr Thamnu Vasinonta
Chief
Industrial Service Institute
P O Box 82
Chiangmai
THAILAND |
| 14. | Miss Marina Dayrit
University Librarian
Gonzalex Hall
University of the Philippines
Diliman
Quezon City 3004
PHILIPPINES | | |
| 15. | Mrs Josefina Dimatulac
Chief, BOI-DI Library and
Documentation Center
Department of Industry
Industry and Investments Building
385 Buendia Avenue Extension
Makati, Metro-Manila 3117
PHILIPPINES | | |

PRINTED INDEXES ONLY

- | | | | |
|-----|---|-----|--|
| 19. | Secretary Cesar Majuca
Chairman
Commission on Small and Medium
Industries
Department of Industry
Industry and Investments Building
385 Buendia Avenue Extension
Makati, Metro-Manila 3117
PHILIPPINES | 20. | Senior Librarian
Department of Science Library
Rama VI Road
Bangkok 4
THAILAND |
|-----|---|-----|--|

NB: TECHNONET Centre receives 25 sets of both microfiches & printed indexes from Ottawa.

SUMMARY OF TECHNONET POS' PHOTOCOPYING/DUPLICATING EQUIPMENT

PO	Photocopier	Provided by & date		Duplicator	Provided by & date		Remarks
BSCIC	Canon NP 50	TECHNONET	Feb 1979	1 cyclostyling machine	Self		
HKPC	Rank Xerox 4000 Rank Xerox 4000	self self	May 1975 Nov 1977	Gestetner 460S Gestetner 460S	self self	Mar 1978 Mar 1978	at head office at Kowloon (Information) branch
DP	Toshiba BD702A Toshiba BD702A	self self	1976 1978	Gestetner 380A Gestetner 480S Rex Rotary 2300S	self self self	1963 1977 1978	all equipment at CRDMMH
KORSTIC	Sindo Ricoh DT1200 Fuji Xerox 1000	self self	Feb 1978 Mar 1975	Gestetner 360	self	Oct 1975	
DIRIM	3M 254 Ricoh BS-2 Selex 900 Rank Xerox 3600	self self self on rental	Feb 1972 1972 Jul 1977	Gestetner 410 Gestetner 410 & 380 Gestetner 380 Gestetner 380	self self self self	Apr 1976 Oct 1971 Jun 1966 (old)	
ARA	Rank Xerox 3600 3M 107	on rental since 1976 self	Jun 1974	- Gestetner 480-440	- self	Apr 1978	MARA head office ASEDD Division
P ISSI	Canon NP-70 Gestetner Scanner E2-590	TECHNONET self	Dec 1976 1969	Gestetner 320 Gestetner 466	self self	1966 1969	at UP Campus, Diliman at Tacloban
TF	Nikon F (colour transparency prod.)	self	Dec 1973	Gestetner 460 Gestetner 466	self self	Feb 1970 Oct 1971	all printing jobs contracted out to commercial printers
ISIR	Ubix 750 Ubix 750	self self	1973 1976	Gestetner Addressograph Multi-graph offset printer	self self		
DB	3M VQC III 215 Nashua 1210	TECHNONET self	Jun 1976 Jun 1978	Gestetners 380A, 360 320 Scanner 455	self self	Dec 1968 Feb 1970	
IP	3M 181 Toshiba 702A 3M 271; Royenna 3E4	self TECHNONET self	1975 Aug 1978 May 75; Sep 1970	Gestetner 455 1 Gestetner; 1 3M 1 Gestetner; 1 3M	self self self	Jul 1976 Mar 78; Aug 1969 Oct; Sept 1972	at DIP head office at ISI Bangkok at ISI Chiangmai

POs' PUBLICATIONS

<u>PO</u>	<u>TITLE</u>	<u>FREQUENCY</u>	<u>LANGUAGE</u>
BSCIC Bangladesh	- BSCIC Bulletin - Current Awareness Bulletin	Monthly Monthly	Bangla- English
HKPC Hong Kong	- Hong Kong Productivity News - HKPC Plastics Bulletin - TIS Information Checklist - Furniture Bulletin	Monthly Quarterly Monthly	English & Chinese English & Chinese English
DP Indonesia	- Current Awareness Service - Berita Selulosa + Industry Profiles (various)	Bi-monthly Quarterly	Indonesian Indonesian Indonesian
KORSTIC Korea	- Korea Scientific Abstracts	Bi-monthly	English
SIRIM Malaysia	- Berita SIRIM (newsletter) - Journal Contents	Quarterly Monthly	English & Bahasa Malaysia English
MARA Malaysia	- Maraniaga (newsletter)	Quarterly	Bahasa Malaysia
UP ISSI Philippines	- Current Contents Service - Current Awareness List - UP ISSI Newsletter - Small Industry Journal	Monthly Monthly Monthly Quarterly	English English English English
SISIR Singapore	- Technocom	Quarterly (suspended June 1978)	English
IDB Sri Lanka	- Karmantha - Current Awareness Service	Monthly Monthly	English English
EDI Philippines	- Trends in Technology - EDF Notebook	Quarterly Bi-monthly	English English
DIP/ISI	- "Industrial News"	monthly	Thai

FREE PERIODICALS RECEIVED AT TECHINONET CENTRE

<u>Title</u>	<u>Source</u>
"ADB Quarterly Review"	Asian Development Bank, Manila
"AGE News"	Asian Information Center for Geotechnical Engineering (AGE) Asian Institute of Technology Bangkok, Thailand
"AIT Review"	Asian Institute of Technology Bangkok, Thailand
"APIC Journal"	Asian Packaging Information Centre Hong Kong
"APO News"	Asian Productivity Organization Tokyo, Japan
"Australian Trading News"	Australian Trade Commission Singapore
"Baca"	Indonesian Institute of Sciences Jakarta, Indonesia
"Bulletin of Indian Raw Materials & Their Utilization"	Publications & Information Directorate Council of Scientific & Industrial Research New Delhi, India
"Canopy"	Forest Research Institute Laguna, Philippines
"Current Trade and Industrial Information"	Board of Investments Department of Industry Manila, Philippines
"Documentation Notes"	Tata Energy Research Institute Bombay, India
"Energy Update"	Tata Energy Research Institute Bombay, India
"FORPRIDE Digest"	Forest Products Research & Industries Development Commission National Science Development Board Laguna, Philippines
"FORPRIDECOM Technical Note"	Forest Products Research Industries Development Commission National Science Development Board Laguna, Philippines

"Guide to Training Opportunities for Industrial Development"	UNIDO, Vienna
"Hong Kong Industrial News"	Federation of Hong Kong Industries Hong Kong
"The International Informer"	International Development Data Center Office of International Programs Engineering Experiment Station Georgia Institute of Technology Atlanta, USA
"IRRI Reporter"	International Rice Research Institute Los Banos, Philippines
"Industrial Services Documentation Bulletin"	Industrial Services Centre Kathmandu, Nepal
"Journal of Engineering Education in Southeast Asia"	Association for Engineering Education in Southeast Asia College of Engineering University of the Philippines Quezon City
"Korea Institute of Science and Technology Newsletter"	Korea Institute of Science and Technology Seoul, Korea
"Manufacturer"	Singapore Manufacturer's Association Singapore
"Masalah Bangunan"	Directorate of Building Research Bandung, Indonesia
"Natural Rubber News"	The Malaysian Rubber Bureau Washington, USA
"News from OECD"	Organisation for Economic Cooperation and Development Paris, France
"Non-Destructive Testing - Australia"	Non-Destructive Testing - Australia Sydney, Australia
"NR Technology"	The Natural Rubber Producers' Research Association Hertfordshire, England
"NSDB Technology Journal"	National Science Development Board Laguna, Philippines
"NSDB-UP Research Illustrated"	Office of Research Coordination University of the Philippines Quezon City, Philippines
"Philippine Abstracts"	National Institute of Science and Technology Manila, Philippines

"Rebuild"	Division of Building Research Commonwealth Scientific and Industrial Research Organisation Highett, Australia
"RRL Jammu Newsletter"	Regional Research Laboratory Jammu Tawi, India
"Rubber Developments"	The Malaysian Rubber Producers' Research Association Hertfordshire, England
"Science and Technology for Development"	Office of Science and Technology Technical Assistance Bureau US Agency for International Development Washington, USA
"Science and Technology for Technology Newsletter"	ESCAP/UNIDO Division of Industry, Housing and Technology Bangkok, Thailand
"Science Centre Bulletin"	Singapore Science Centre Singapore
"Science Dimension"	National Research Council Ottawa, Canada
"Singapore Manufacturer"	Singapore Manufacturer's Association Singapore
"Small Industry Development Network Newsletter"	Industrial Development Division Engineering Experiment Station Georgia Institute of Technology Atlanta, Georgia
"Survey Research Newsletter"	Survey Research Singapore Pte Ltd Singapore
"IAICH News"	Technical Assistance Information Clearing House New York, USA
"Tin and its Uses"	Tin Research Institute Middlesex, England
"UNCTAD Monthly Bulletin"	UNCTAD Information Service Geneva, Switzerland
"UNIDO Newsletter"	UNIDO Vienna
"UNISIST Newsletter"	UNESCO Paris
"VITA News"	Volunteers in Technical Assistance Mt Rainier, USA

"World Bank Report"

World Bank
Washington, D.C.

"World Packaging"

World Packaging Organisation
Hong Kong

"Yumi Kirapim"

Office of Village Development
Department of the Prime Minister
Boroko, Papua New Guinea

"AMFID Newsletter"

Agency for International Development
Office of Science and Technology
Washington, USA

RCTT Newsletter

Regional Centre for Technology Transfer/
ESCAP, Bangalore, India

MODERATELY PRICED USEFUL PERIODICALS

(Received at TECHNET Centre)

<u>Title</u>	<u>Source</u>	<u>Frequency</u>	<u>Annual Subscr.</u>
"Adhesives Age"	Palmerton Publishing Co Inc, Atlanta	monthly	US\$17
"American Dyestuff Reporter"	SAF International Inc, New York	monthly	US\$13
"Appropriate Technology"	Intermediate Technology Group, London	quarterly	£4
"Appropriate Technology Documentation Bulletin"	SIET Institute, Hyderabad	bi-monthly	US\$10
"Ceramic Industry"	Cahners Publishing Co, Chicago	monthly	US\$12
"FID News Bulletin"	International Federation for Documentation The Hague, Netherlands	monthly	£15.60
"Focus: Technical Cooperation"	Society for International Development, Washington	quarterly	by membership
"Foundry Management & Technology"	Penton/IPC, Cleveland	monthly	US\$15
"Furniture Design & Manufacturing"	Technical Publishing Co, Chicago	monthly	US\$10
"Industrial Design"	Design Publications Inc, New York	bi-monthly	US\$19
"Industrial Finishing"	Wheatland Journals Ltd, Watford, U K	monthly	US\$21.15
"Industry Digest"	Private Development Corp of the Philippines	bi-monthly	US\$9
"Journal of Ferrocement"	International Ferrocement Information Center, AIT Bangkok	quarterly	US\$30
"Journal of Food Science & Technology"	Association of Food Scientists & Technologists, CFTRI, Mysore	bi-monthly	US\$22.50
"Journal of the National Science Council of Sri Lanka"	National Science Council of Sri Lanka, Colombo	quarterly	US\$40

<u>Title</u>	<u>Source</u>	<u>Frequency</u>	<u>Annual Subscr.</u>
"MAZINGRA" (environment and development)	United Nations Environment Programme & Pergamon Press	quarterly	US\$6
"Mechanical Engineering Bulletin"	Central Mechanical Engineering Research Institute, West Bengal	quarterly	£1.50
"Modern Paint and Coatings"	Palmerton Publishing Co Inc, Atlanta	monthly	US\$17
"Modern Packaging"	Morgan-Grampian Publishing Co, New York	monthly	US\$20
"Modern Plastics"	Mc-Graw Hill Publications Co, New York	monthly	US\$25
"Plastics Technology"	Hartman Communications Inc, New York	monthly	US\$15
"Product Engineering"	Morgan-Grampian Publishing Co, New York	monthly	US\$25
"Science Today"	Bennett, Coleman & Co Ltd, Bombay	monthly	Rs.20
"SENDOC Bulletin"	SIET Institute, Hyderabad	monthly	Rs.50
"SENDOC Chronicle"	SIET Institute, Hyderabad	fortnightly	Rs.60
"Textile Chemist and Colorist"	American Assn of Textile Chemists & Colorists, N.C.	monthly	US\$7.50
"TRANET Newsletter"	Transnational Network for Appropriate/Alternative Technologies, U S A	irregular	US\$15
"Trends in Leather World & Manufacturers Corner"	Central Leather Research Institute, Madras	monthly	US\$10
"Woodworking Industry"	Benn Publications Ltd, London	monthly	£10
"World Wood"	Miller Freeman Publications Inc, Middlesex, England	monthly	US\$30

ABSTRACTING SERVICES (IN PO SECTORAL FIELDS)

016 333.91 614.7 UK
✓ **APPLIED ECOLOGY ABSTRACTS**, studies in renewable natural resources. 1975. m. £73.50 (\$200). Information Retrieval Ltd., 1 Falconberg Court, London W1V 5FG, England (U.S. address: 1911 Jefferson Davis Hwy., Arlington VA 22202) Ed. E. S. Krudy. bk. rev. circ. 1,000.

600 016 US ISSN 0003-6986
APPLIED SCIENCE AND TECHNOLOGY INDEX; a cumulative subject index to English language periodicals in the fields of aeronautics and space science, automation, chemistry, construction, earth sciences, electricity and electronics, etc. 1958. m. (except July) service basis. J. H. W. Wilson Co., 950 University Ave., Bronx, NY 10452. Ed. Elsa Toom.

950 015 UN ISSN 0044-9210
✓ **ASIAN PERIODICALS: A SELECTED LIST OF TITLES RECEIVED AND THEIR CONTENTS**. (Text in English and French) no. 32, 1971. bi-m. free. Unesco, Regional Office for Education in Asia, Darakarn Bldg., Box 1425, Bangkok 11, Thailand. bbl.

500 016 AT ISSN 0005-0229
AUSTRALIAN SCIENCE INDEX; an index of articles published in Australian scientific and technical periodicals. 1957. m. Aus \$12. C. S. I. R. O., Box 89, East Melbourne, Victoria 3002, Australia. Ed. R. D. Croll. index. circ. 1,600.

669 016 UK ISSN 0005-2868
✓ **B C I R A ABSTRACTS OF FOUNDRY LITERATURE**. 1969. bi-m. £12. British Cast Iron Research Association (BCIRA), Alvechurch, Birmingham, Eng. Ed. W. E. Clarke. abstr. index. circ. 200.

669 016 UK ISSN 0005-3244
B N F ABSTRACTS. 1921. m. £12 (\$29) British Non-Ferrous Metals Research Association, Easton St., London N.W.4 2EU, Eng. bk. rev. abstr. pat. circ. 1,500. (tabloid format)
Formerly: B N F Bulletin.

666 UK ISSN 0300-4570
BRITISH CERAMIC ABSTRACTS. 1958. m. £20. British Ceramic Research Association, Queens Rd., Penkhull, Stoke-on-Trent ST4 7LQ, Eng. index. circ. 1,100.

600 016 UK ISSN 0007-1889
✓ **BRITISH TECHNOLOGY INDEX**; a current subject-guide to articles in British technical journals. 1962. m. (annual cumulation) £168. Library Association, 7 Ridgmount St., Store St., London WC1E 7AE, Eng. Ed. T. J. Edwards. cum.index.

690 016 IN ISSN 0017-7968
✓ **C B R I ABSTRACTS**. (Text in English) 1964. q. free. Central Building Research Institute, Roorkee, Uttar Pradesh, India. (Affiliate: Council of Scientific and Industrial Research) bk. rev. abstr. circ. 200 (approx.) Indexed: Appl. Mech. Rev.

540 016 US ISSN 0009-2258
✓ **CHEMICAL ABSTRACTS**. 1902. w. \$4200 (colleges & universities \$3800) (American Chemical Society) Chemical Abstracts Service, Box 342, Columbus, OH 43210. Ed. Russell J. Rowlett, Jr. s-a. index. cum.index every 10 yrs. 1907-1956, 1957- every 5 yrs. Indexed: Biol. Abstr.

690 3 016 US
✓ **CONCRETE ABSTRACTS**. 1971. bi-m. \$70. American Concrete Institute, P.O. Box 19150, Detroit, MI 48219. Ed. Robert E. Wilde. circ. 250. (back issues avail.)
Concrete

620 162 016 US ISSN 0010-9349
✓ **CORROSION ABSTRACTS**, abstracts of the world's literature on corrosion and corrosion mitigation. 1962. bi-m. \$95. National Association of Corrosion Engineers, Box 1499, Houston, TX 77001. Ed. N. E. Hammer. adv. abstr. index. circ. 600. Indexed: Chem. Abstr.
Corrosion

500 016 AT ISSN 0311-5836
✓ **C S I R O INDEX**. 1952/53. m. Aus \$12. C. S. I. R. O., Box 89, East Melbourne, Victoria 3002, Australia. Ed. C. I. Muntz. index. circ. 1,500. (microfiche)
Formerly: C S I R O Abstracts (ISSN 0007-912X)

675 016 IN ISSN 0011-3638
✓ **CURRENT LEATHER LITERATURE**. (Text in English) 1968. m. Rs. 60 (\$35) Central Leather Research Institute, Adyar, Madras 600020, India. (Affiliate: Council of Scientific and Industrial Research) Ed. M.V.R. Rau. index. circ. 250.

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✓ **CURRENT MANAGEMENT LITERATURE**. (Text in English) m. Administrative Staff College of India, Bella Vista, Hyderabad 4, India.

658 758 016 US
✓ **CURRENT PACKAGING ABSTRACTS**. 1969. s-m. \$75. University of California, Davis, Packaging Program, Packaging Library, Room 450, Main Library Bldg., Davis, CA 95616. Ed. Carol Cooper. circ. 200. (looseleaf format, back issues avail.)
Formerly: Packaging bulletin (ISSN 0030-9095)

613 016 UK ISSN 0036-8402
ELECTRICAL & ELECTRONIC ABSTRACTS. Alternative title: Science Abstracts, Section B. Title varies. Electrical Engineering Abstracts. 1898. m. £96 (\$216) Institution of Electrical Engineers, Savoy Place, London WC2R 0BL, Eng. (Dist. in U.S. by Institute of Electrical & Electronics Engineers Inc., 345 E. 47th St., New York, NY 10017) adv. abstr. bibl. index. cum.index every 3-4 years. 1965-1968. circ. 4,600. (microform) Indexed: Chem. Abstr.

621.38 016 UK ISSN 0013-5149
ELECTRONICS AND COMMUNICATIONS ABSTRACTS. 1961. m. \$72. Multi-Science Publishing Co. Ltd., The Oia Mill, Dorset Place, London E. 15, Eng. Ed. J. Coldrick. abstr. index

621.38 016 US
ELECTRONICS AND COMMUNICATIONS ABSTRACTS JOURNAL, an abstract journal involving the theory, design and application of electronic devices and systems. 1966. 10/yr. \$245. Cambridge Scientific Abstracts, Inc., Suite 411, 6011 Kenilworth Ave., Bethesda, MD 20810. adv. bk. rev. abstr. index. cum.index. circ. 1,000. (also avail. in microfiche)
Formerly: Electronics Abstracts Journal (ISSN 0013-5097)

338.47 US ISSN 0095-7245
ELECTRONICS & EQUIPMENT MARKET ABSTRACTS. 1971. q. \$25. Predicta Inc., 100 University Circle, Research Center, 1100 Cedar Ave., Cleveland, OH 44106. Ed. David R. Burwasser.

620 016 US ISSN 0009-8408
ENERGY ABSTRACTS. 1974. m. \$265. Engineering Index, Inc., 34 East 47th Street, New York, NY 10017. (also avail. in magnetic tape, back issues avail.)
Incorporates: Energy Conversion Abstracts (ISSN 0093-8416)

614.7 016 US
ENERGY INDEX. 1973. q. \$65. Environment Information Center, Inc., 292 Madison Ave., New York, NY 10017.

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ENERGY REVIEW. 1974. bi-m. \$45. Energy Research Corporation, 6 East Valero St., Santa Barbara, CA 93101. Ed. Muriel L. Zimmerman. bk. rev. pat. stat. index. cum.index. circ. 500.

620 016 US ISSN 0013-7969
ENGINEERING INDEX; abstracts, and index, services covering sources of the world's engineering literature in plus annual cum. vol. Engineering Index, Inc., 345 E. 47th St., New York, NY 10017

531.6 US ISSN 0360-3571
✓ **ERDA ENERGY RESEARCH ABSTRACTS**. 1976. s-m. \$184 (incl. including semi-annual and annual indexes). U.S. Energy Research and Development Administration, Technical Information Center, Box 62, Oak Ridge, TN 37830. (subscriptions to: Supt. Docs, Washington DC 20402)

665.5 016 UK ISSN 0016-2388
✓ **FUEL ABSTRACTS AND CURRENT TITLES**, a summary of world literature on all technical and scientific aspects of fuel and power. 1960. m. Institute of Fuel & Chemical Technology, 100 St. John St., Guildford, Surrey GU1 2W, England. circ. 650. Indexed: Chem. Abstr.

684 749 016 US ISSN 0046-5321
FURNITURE INDEX. 1970. q. \$10. North Carolina State University, Industrial Extension Service, Box 5506, Raleigh, NC 27607. Ed. E. J. Briggs Jr. abstr. index. circ. 975. (processed)

669 016 UK ISSN 0023-9569
LEAD ABSTRACTS, a review of recent technical literature on the uses of lead and its products. 1958. 7/yr. free. (Lead Development Association (London)) Zinc-Lead Library and Abstracts Service, 14 Berkeley Square, London W1X 6AJ, Eng. (Co-Sponsor: Lead Industries Association (New York)) Ed. Martin S. White. abstr. index. circ. 10,000. (also avail. in microfiche) Indexed: World Sci. Conf. Lead

675 016 IN ISSN 0017-797X
LEATHER LITERATURE SERVICE. (Text in English) 1968. 4/yr. \$35. Central Leather Research Institute, Adyar, Madras 600020, India. (Affiliate: Council of Scientific and Industrial Research) Ed. M.V.R. Rau. index. circ. 250.

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MANAGEMENT ABSTRACTS. 1972. q. Rs. 100 (\$5). All India Management Association, Deepak, 1st Narmada Place, Flats 5-5B, New Delhi 110024, India. Ed. Bhashan L. Kashyap. circ. 700.

669 016 US ISSN 0026-0924
METALS ABSTRACTS, 1968. m. American Society
 for Metals, Metals Park, OH 44073 (And Metals
 Society, 1 Carlton House Terrace, London SW1Y)
 SDB circ. 1,500
 Formed by the merger of Review of Metal
 Literature & Metallurgical Abstracts.

669 016 UK ISSN 0026-0584
METAL FINISHING ABSTRACTS, 1959. bi-m
 £48(\$116) Finishing Publications Ltd., 179b High
 St., Hampton Hill, Middlesex, Eng. Ed. R. Finney
 adv., bk. rev. abstr. pat. index circ. 1,000. (card)

658.788 016 UK ISSN 0030-0
PACKAGING ABSTRACTS, 1944. m. £35 to
 members. Paper, Printing & Packaging Ind.
 Research Association, Randa's Rd., Leather
 Surrey, Eng. Ed. Ms. A. E. Connell. bk. rev.
 index. Indexed: Chem. Abstr.

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PLASTICS ABSTRACTS, a comprehensive abstracting
 service covering British patent specifications dealing
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 plastics 1959. w. £60(\$200) Plastic Investigations,
 31 Canonsfield Rd., Welwyn, Herts, Eng. Ed. P. C.
 J. Allman.

678 668.4 016 UK ISSN 0033-6750
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 non-members. Rubber and Plastics Research
 Association of Great Britain, Shawbury, Shrewsbury,
 SY4 4NR, Eng. Eds. P. Kirkpatrick & V. J. Beddoes
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338.9 016 UN
INDUSTRIAL DEVELOPMENT ABSTRACTS,
 UNIDO Industrial Information System (INDIS) 1971.
 \$/yr. \$5 ea. United Nations Industrial Development
 Organization, Lerchenfelderstrasse 1, Box 707, A-
 1011 Vienna, Austria (Orders from Europe, Africa
 and Middle East to: Distribution and Sales Section,
 Palais des Nations, 1211 Geneva 10 Switzerland
 Orders from Asia, the Pacific and North and South
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 LX-2300, New York, NY 10017) cum.annual index.

659.722 016 GW ISSN 0002-6697
WORLD ALUMINUM ABSTRACTS; surveys current
 literature on the production, fabrication and uses of
 aluminium and its alloys and on related scientific
 and technical subjects. 1968. m. DM.265(\$75.)
 European Primary Aluminium Assn, Koemgsallee
 30, Postfach 1207, Duesseldorf 1, W. Germany
 (B.R.D.) (And 750 Third Ave. New York, NY
 10017) (Co-Sponsor: Aluminium Assn.; Japan Light
 Metal Assn.; Aluminum Development Council)
 abstr. index. circ. 1,100. (magnetic tape) Indexed:
 Chem. Abstr.

674.8 016 US ISSN 0360-3083
WOOD INDUSTRY ABSTRACTS, 1971. 6/yr. \$10.
 Washington State University, Engineering Extension
 Service, College of Engineering, Pullman, WA
 99163. (Co-Sponsor, Forest Product Research
 Society) Ed. G. G. Munn. abstr.
 Formerly: Wood Products Industry Abstracts
 Bulletin (ISSN 0049-7908)

677 016 UK ISSN 0043-9118
WORLD TEXTILE ABSTRACTS, 1969. s.m. £57
 Shirley Institute, Manchester M20 8RX, Eng. Ed. J.
 H. Black. bk. rev. index. (back issues avail) Indexed:
 Appl. Mech. Rev.
 Supersedes: Shirley Institute Summary of Current
 Literature & Textile Abstracts.

669.5 016 UK ISSN 0044-4731
ZINC ABSTRACTS, a review of recent technical
 literature on the uses of zinc and its products. 1943.
 bi-m. free. Zinc Development Association, 14
 Berkeley Square, London W1X 6AJ, Eng. (Co-
 Sponsors: Zinc Institute Inc.; Lead Industry
 Association Inc.) Ed. Martin S. White. abstr. index.
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 East Trade Press Ltd, 1908, Princes Building, Des Voeux Road,
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AMERICAN BUILDING SUPPLIES, 1967, 12/yr.
 \$25 (contr. free circ.) W.R.C. Smith Publishing Co.,
 1760 Peachtree Rd., N.W., Atlanta, GA 30357. Ed.
 Sid Wrightsman, Jr. adv. bk. rev. illus. tr. lit. circ.
 34,500. (also avail. in microfilm from UMI)
 Supersedes: Southern Building Supplies.

691 UK
BUILDING EQUIPMENT AND MATERIALS,
 1955, m. free to qualified personnel, others L5, 1 P
 C Building and Contract Journals Ltd., Surrey
 House, 1 Throwley Way, Sutton, Surrey SM1 4QQ,
 England. Ed. P. B. Meadway. adv. bk. rev. illus.
 circ. 25,141. (also avail. in microfilm)
 Formerly: Building Equipment News (ISSN 0007-
 3458)

690 AT ISSN 0045-3412
BUILDING IDEAS, 1959, q. free. C.S.R. Building
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690 028 AT ISSN 0007-3512
BUILDING MATERIALS & EQUIPMENT, 1959, bi-
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 Ltd., 142 Clarence St., Sydney N.S.W. 2000,
 Australia. Ed. M. McNecece.

691 NZ ISSN 0097-5349
BUILDING MATERIALS NEWS, 1963, m. N.Z. \$9.
 Stone Publications (NZ) Ltd., Box 18-215, Glen
 Innes, Auckland, New Zealand. Ed. Peter D.
 Reeves. circ. 4,000 (controlled) (looseleaf format)

691 AT ISSN 0007-358X
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 Thomson Publications (Australia) Pty. Ltd., 47
 Chippendale St., Chippendale N.S.W., Australia. Ed. A.
 Whiting. adv. bk. rev. illus. circ. 12,714 (controlled)

690 CN ISSN 0007-361X
BUILDING RESEARCH NEWS, (Text in English
 and French) 1962, 3/yr. free. National Research
 Council of Canada, Division of Building Research,
 Ottawa, Ont. K1A 0R6, Canada. Ed. K. Eberhard.
 bk. rev. illus. circ. 8,000.

691 US ISSN 0002-3695
BUILDING SUPPLY NEWS, 1917, m. \$20. Cabinets
 Publishing Co., Inc., 55 Wabash Ave., Chicago, IL
 60603. Ed. Patricia Coleman. adv. charts. illus.
 mkt. tr. lit. circ. 32,435.
Building materials

690 CN ISSN 0008-3097
CANADIAN BUILDING DIGEST, (Editions in
 English and French) 1960, m. free. National
 Research Council of Canada, Division of Building
 Research, Ottawa, Ont. K1A 0R6, Canada. Ed. M.
 L. Wimberley. charts. circ. 22,000 (English ed.);
 3,200 (French ed.) Indexed: Chem. Abstr.

691 US ISSN 0010-535X
CONCRETE CONSTRUCTION, 1956, m. \$9.4
 Concrete Construction Publications, Inc., 329
 Interstate Rd., Addison, IL 60101. Ed. William C.
 Panarese. adv. bk. rev. charts. illus. tr. lit. cum.
 index. circ. 60,000. (also avail. in microfilm)
 Indexed: Eng. Ind.
Concrete

691 3 US ISSN 0010-535X
CONCRETE INDUSTRY BULLETIN, 1961, m. free
 to members; \$12 for non-members. † Concrete
 Industry Board, Inc., 110 E. 42nd St., New York,
 NY 10017. Ed. Tom Hogan. adv. circ. 1,500.
Concrete

691 3 US ISSN 0010-5368
CONCRETE PRODUCTS, 1903, m. \$12. † Maclean-
 Hunter Publishing Corporation, 309 W. Adams St.,
 Chicago, IL 60606. Ed. William J. Blaha. adv.
 charts. illus. stat. tr. lit. circ. 20,260

691 UK ISSN 0010-5376
CONCRETE QUARTERLY, 1947, q. £5. Cement &
 Concrete Association, Wexham Springs, Slough,
 Bucks SL3 6PL, Eng. Ed. George Perkins. bk. rev.
 illus. circ. 15,000. Indexed: Br. Tech. Ind.
Cement and concrete

ASIAN BUILDING AND CONSTRUCTION: Formerly **FAR EAST
 BUILDER**. Far East Trade Press Ltd, 1908, Princes Building,
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News review, articles on building projects and affairs. Materials
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FAR EAST BUILDER. Far East Trade Press Ltd, Des Voeux Road
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QUANTIBUILD. Singapore Polytechnic Building Society, Prince
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 AMERICAN CERAMIC SOCIETY BULLETIN.
 1927 bi-m. \$70. American Ceramic
 65 Ceramic Dr., Columbus, OH 43201.
 C. Snyder, adv. bk. rev. bib. circ. 1,500.
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 BRICK AND CLAY RECORD. 1992 m. \$5. Cahners
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 60603. Ed. J. J. Svec, adv. charts, illus. mkt. trlt.
 index, circ. 5,155. Indexed: Chem. Abstr. Eng. Ind.
 Bricks

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 CENTRAL GLASS AND CERAMIC RESEARCH
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 Rs.12.50. Central Glass and Ceramic Research
 Institute, P.O. Jadavpur University, Calcutta
 700032, India. (Affiliate: Council of Scientific and
 Industrial Research) Ed. R. L. Thakur, adv. bk. rev.
 charts, illus. stat. index, circ. 650. Indexed:
 Chem. Abstr.

666 US ISSN 0007-0182
 CERAMIC AGE. 1921 bi-m. \$16. Ceramic Age
 Publications, Box 25555, Cleveland, OH 44125.
 (Subscribe to: Box 5, North Olmsted, OH 44070) Ed.
 Charles Mason, adv. bk. rev. mkt. charts, illus.
 mkt. trlt. index, circ. 9,500. Indexed: Ceram.
 Abstr. Chem. Abstr. Eng. Ind.

666 US ISSN 0009-0190
 CERAMIC ARTS & CRAFTS. 1955 m. \$7.50. Scott
 Advertising & Publishing Co., 30595 W. 8 Mile Rd.,
 Livonia, MI 48152. Ed. Lois Scott, adv. illus. trlt.
 circ. 60,000. (also avail. in microfilm from UMI)

666 UK ISSN 0305-7623
 CERAMIC INDUSTRIES JOURNAL. (Text in
 English; summaries occasionally in French, German
 & Italian) 1891 bi-m. £13.10. Taylor & Francis Ltd., 4
 Local Board Rd., Watford, Herts WD1 2JS,
 England. Ed. Neville Davis, adv. bk. rev. abstr. pat.
 stat.
 Incorporating: British Clayworker (ISSN 0300-
 4325) & Ceramics (ISSN 0009-0301)

666 US ISSN 0009-0220
 CERAMIC INDUSTRY. 1924 m. \$8. Cahners
 Publishing Co., Inc., 5 S. Wabash Ave., Chicago, IL
 60603. Ed. J. J. Svec, adv. bk. rev. charts, illus.
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 Chem. Abstr. Eng. Ind.

666 US
 CERAMIC TECHNOLOGY PRODUCTS AND TRADE
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 Publishing Co., 30595 W. 8 Mile Rd., Livonia, MI
 48152. Ed. Lois Scott, adv. bk. rev. circ. 20,000.
 Formerly: Ceramic Trade News & Catalog File
 (ISSN 0009-0263)

650 US ISSN 0007-6753
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 house of business opportunities information. 1963
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 Clarksville, TN 37040. Ed. J. E. (Jim) Straw, adv.

650 US ISSN 0007-7143
 BUSINESS WORLD. business-building hints for small
 & medium-sized firms. 1964 m. \$25. Business
 World Inc., 930 Clifton Avenue, Clifton, NJ 07013.
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 Formerly: Small Business World.

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 Council of Small Business Management
 Development) West Virginia University, Bureau of
 Business Research, Morgantown, WV 26506. Ed.
 James H. Thompson, adv. bk. rev. abstr. circ. 1,200.
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318 II ISSN 0027-5671
 MYSORE INDUSTRIAL DIARY. (Text and
 summaries in English) 1967 q. Rs.4. Karnataka
 Small Industries Development Corporation Ltd.,
 Industrial Estate, Rajaynagar, Bangalore 560004,
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652 II
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 4 y. Rs.15.50. Small Industry Extension Training
 Institute, Yousafguda, Hyderabad 500045, India.
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 (also avail. in microfilm)
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 S.I.M. (Small Industries Magazine) (Text in English)
 1972 m. Rs.25. Enterprise Pvt. Ltd., 117 Chandni
 Chowk, Delhi 6, India. Ed. P.K. Mondal, adv. charts,
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318 II
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 m. Rs.36. Eastern Trade Press Co., 43 Sander
 Mahal, Church Gate, Bombay 400020, India. Ed.
 Bhajan Krishnan.

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 Georgia Institute of Technology, Industrial
 Development Division, Atlanta, GA 30332. Ed.
 Martha Ann Deadmire, bk. rev. circ. 700.

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 SMALLER MANUFACTURER. 1946 11/yr. (Jul.)
 Aug. combined) Smaller Manufacturers Council, 339
 Third of the Allee, Pittsburgh, PA 15222. Ed.
 Thomas J. Mahoney, circ. 1,400. (controlled)
 Indexed: Ind. Hyg. Dig.

ASIAN INDUSTRY: The leading business monthly. Far East Trade
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Business and trade features and articles for and about the region.

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 East Trade Press Ltd, 1908, Princess Building, Des Voeux Road,
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Features and news. News review, new products and production.

ELECTRONICS AND ELECTRICAL PRODUCTS

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ELECTRONICS. 1930. forth. \$12. McGraw-Hill, Inc., 1221 Ave. of the Americas, New York, NY 10020. Ed. Kemp Anderson adv. bk. rev. abstr. charts. illus. tr.lit. index. circ. 87,000 (also avail. in microfilm) Indexed: A.S. & T. Ind. Appl. Mech. Rev. Biol. Abstr. Chem. Abstr. Eng. Ind. Met. Abstr. Photo Abstr. Sci. Abstr.

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ELECTRONICS IN INDUSTRY: electronic technology for the non-electronic engineering manager. 1975. m. \$12. Cahners Publishing Co., Inc., 221 Columbus Ave., Boston, Ma 02116. Ed. Frank Egan.

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ELECTRONICS TODAY INTERNATIONAL. 1971 m. Aus \$3.75 per no. Modern Magazines (Holdings) Ltd., Ryrie House, 15 Boundary St., Rushcutters Bay, N.S.W. 2011, Australia. Ed. Collyn Rivers adv. bk. rev. circ. 45,000
Formerly: Electronics Today (ISSN 0013-5216)

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ELECTROTECHNOLOGY. 1965. q. £2.20
Institution of Electrical & Electronics Technicians, Engineers, 2 Savoy Hill, London WC2R 0BS, Eng. Ed. J.P.G. Channell adv. bk. rev. circ. 17,838
Formerly: Electrical and Electronics Technician Engineer (ISSN 0013-421X)

621.38 IN ISSN 0013-4813
ELECTRONIC APPLICATION NEWS. (Text in English) 1964. sem. Rs 30/\$50 Philips India Ltd. - ELCOMA (Electronic Components and Materials) (subsidiary of Philips India Ltd.) Band Box House, Box 9143, 254-D Dr. Annie Besant Rd., Prabhadevi, Bombay 400075, India. Ed. P. B. Parikh. bk. rev. index. circ. 1,500

621.38 NE ISSN 0013-4821
ELECTRONIC APPLICATIONS BULLETIN. vol. 1, 1975. q. \$6 N.V. Philips Gloeilampenfabrieken, Electronic Components and Materials Division, Eindhoven, Netherlands (U.S. Address: Philips Electronic Equipment, 750 South Fulton Ave., Mount Vernon, N.Y. 10550) Ed. B. bk. rev. charts. illus. index (10 yr. cum. index) circ. 4,500
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621.3 US ISSN 0013-4313
ELECTRICAL EQUIPMENT NEWS. 1956. m. Can \$12(\$15) Southam Business Publications Ltd., 1450 Don Mills Rd., Don Mills, Ont., Canada. Ed. Bryan Barney adv. illus. tr.lit. circ. 19,000 (approx)
Appliances and equipment

621.3 US ISSN 0013-4457
ELECTRICAL WORLD. 1874. sem. \$10.80 McGraw-Hill Inc., 1221 Ave. of Americas, New York, NY 10020 Ed. W. C. Hayes adv. charts. illus. mkt. tr.lit. index. (microform) Indexed: A.S. & T. Ind. Chem. Abstr. Eng. Ind. Met. Abstr. Sci. Abstr.
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JOURNAL OF INDUSTRIAL ENGINEERING. 'West View', 1981, Ghodbunder Road, Santacruz West, Bombay 52. 4. Annual Rs 6.
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FAR EAST ENGINEER. Far East Trade Press Ltd, 1901, Prince's Building, Des Voeux Road, Central, Hong Kong. 12. Controlled circulation. Gratis.

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INDIAN FOUNDRY JOURNAL: Official Organ of the Institute of Indian Foundrymen. Editor, 16, Jayram Road, Jamshedpur 1. 12. n.a.
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MECHANICAL ENGINEERING BULLETIN. Central Mechanical Engineering Research Institute, Durgapur - 9, India. 4. Annual £1.

Articles and papers.

FOOD AND FOOD INDUSTRIES

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FOOD EQUIPMENT, 1965. q. \$2. Putnam Publishing Co., 430 N. Michigan Ave., Chicago, IL 60611. Ed. Romaine L. Chamberlain. adv. illus. circ. 47,500. Formerly: Food Ingredients & Equipment (ISSN 0015-6469)

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FOOD INDUSTRY JOURNAL: the food industry advocate, 1961. m. \$5. Terni Publications, Inc., c/o James Seton Kingston, 121 6543 North 2nd Street, Philadelphia, PA 19126. circ. 15,500. (tabloid format, back issues avail)

664 UK ISSN 0015-6477
FOOD MANUFACTURE, 1927. m. £15(£45). Morgan-Grampian (Publishers) Ltd., 30 Calderwood St., Woolwich, London SE18 6QH, Eng. Ed. Hugh Darrington. adv. bk. rev. abstr. bibl. charts. illus. trlit. circ. 6,407. Indexed: Biol. Abstr., Br. Tech. Ind., Chem. Abstr., Eng. Ind., Nutr. Abstr.

664 US ISSN 0015-6515
FOOD PLANT IDEAS, 1964. bi-m. free. Lakewood Publications, Inc., 731 Hennepin Ave., Minneapolis, MN 55403. Ed. R. W. Anderson. adv. illus. trlit. circ. 65,000.

664 US ISSN 0015-6523
FOOD PROCESSING, 1940. m. \$10. Putnam Publishing Co., 430 North Michigan Ave., Chicago, IL 60611. Ed. Roy G. Hlavacek. adv. bk. rev. charts. illus. trlit. circ. 56,000. (also avail. in microfilm; microfiche) Indexed: B.P.L., Biol. Abstr.

664 UK ISSN 0015-6531
FOOD PROCESSING INDUSTRY, 1931. m. free to qualified personnel; others £1.0. I.P.C. Consumer Industries Press Ltd., 40 Bowling Green Lane, London E.C.1, Eng. Ed. R. D. Cracome. adv. bk. rev. charts. illus. stat. trlit. circ. 6,220. Indexed: Br. Tech. Ind., Chem. Abstr.
Formerly: Food Processing and Marketing

664 US ISSN 0015-654X
FOOD PRODUCT DEVELOPMENT, 1967. 10/yr. \$12 free to qualified personnel. Arlington Publishing Co., 2 N. Riverside Plaza, Chicago, IL 60606. Ed. R. D. McCormick. adv. bk. rev. bibl. charts. illus. stat. trlit. index. circ. 16,500. (also avail. in microfilm from UMI) Indexed: Chem. Abstr.

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FOOD PRODUCTION/MANAGEMENT: monthly publication of the canning, glass-packing and frozen food industry, 1878. m. \$8. Canning Trade, Inc., 2619 Maryland Ave., Baltimore, MD 21218. Ed. Arthur I. Judge, II. adv. illus. mkt. trlit. circ. 4,000. (also avail. in microfilm from UMI) Indexed: Biol. Abstr.
Formerly: Canning Trade (ISSN 0008-560X)
Canning and preserving

664 US ISSN 0015-6619
FOOD TECHNOLOGY, 1947. m. membership (non-members \$30) Institute of Food Technologists, 221 N. LaSalle St., Chicago, IL 60601. Ed. John H. Kins. adv. bk. rev. bibl. charts. illus. pat. stat. trlit. index. circ. 20,000. (also avail. in microfilm from UMI) Indexed: A.S. & T. Ind., Biol. Abstr., Biol. & Agr. Ind., Chem. Abstr., Food Sci. & Tech. Abstr.

664 AU ISSN 0015-6647
FOOD TECHNOLOGY IN AUSTRALIA, 1949. m. Aus. \$15(£24). Council of Australian Food Technology Association, 60 York St., Sydney, N.S.W. 2000, Australia (Co-sponsor: Australian Institute of Food Science and Technology) Ed. F. H. Reuter. adv. bk. rev. abstr. bibl. charts. illus. trlit. index. circ. 2,800. Indexed: Biol. Abstr., Chem. Abstr., Food Sci. & Tech. Abstr.

664 09 UK ISSN 0015-6698
FOODPACK: foodpack news and digest and produce packaging, 1955. q. price not given. † (International Exhibition for the Food and Allied Industries) B.P. S. Exhibitions, 4 Seaford Court, 220 Great Portland St., London W1, Eng. Ed. D. Brooks. adv. bk. rev. charts. illus. index. circ. 6,000.
Incorporating: Produce Packaging.

664 5 US
FOODSERVICE EQUIPMENT DEALER, 1949. m. \$10. Cahners Publishing Co., Inc., 5 S. Wabash Ave., Chicago, IL 60603. Ed. Russ Carpenter. adv. bk. rev. circ. 14,137.

FUEL CONSERVATION

664 7 US
ALTERNATIVE SOURCES OF ENERGY, 1972. 6/yr. \$10. Alternative Sources of Energy, Rt. 2, box 90-A, Milula, MN 56353. Ed. Donald Martin. adv. bk. rev. circ. 4,000. (also avail. in microfilm from UMI)

664 47 US ISSN 0003-700X
APPLIED SOLAR ENERGY: English translation of *energetika*, 1965. 4/yr. \$110. Albert A. Press, Inc., 150 Fifth Ave., New York, NY 10011. adv. abstr. charts. illus. index. Indexed: Chem. Abstr.

664 5 621.3 622 US ISSN 0363-8520
ENERGY REPORTER: Federal Energy Administration citizen newsletter, 1975. m. free. U.S. Federal Energy Administration, National Energy Information Centre, Room 3140, Washington, DC 20461. Ed. David A. Turner. bk. rev. bibl.

664 445 US
ENERGY, THE INTERNATIONAL JOURNAL: technologies, resources, reserves, demands, impact, conservation, management and policy, 1976. q. \$105. Pergamon Press, Inc., Maxwell House, Fairview Park, Elmsford, NY 10523 (And: Headington Hill Hall, Oxford, England) Ed. S. S. Pernar. adv. bk. rev. abstr. illus. stat. index. (also avail. in microfilm; microfiche) Indexed: Chem. Abstr., Sci. Abstr.

664 530 US ISSN 0093-560X
ENERGY TODAY, 1973. s.m. \$120. Trends Publishing, Inc., National Press Bldg., Washington, DC 20045. Ed. A. Krasch. bk. rev. index. (also avail. in microfilm)

664 5 621.3 622 UK ISSN 0098-1221
ENERGY TRENDS, 1974. m. Department of Energy, Thomas House South, Millbank, London SW1P 4JL, England (Avail. from: Centre Office of Information, Hercules Ed., London SE1 1 7JL, England) charts. Stat.

664 7 333 7 UK
ENERGY WORLD, 1974. q. £10 (to clubs) £12 (to institutions) Fuel Technology Institute of Energy, 15 Deacons Street, London E.C.4W1N. Ed. C. Payne. adv. bk. rev. illus. circ. 8,000.

664 570 US
JOURNAL OF ENERGY AND DEVELOPMENT, 1975. sa. \$12 (individuals), subscription \$18. International Research Center for Energy and Economic Development, 116 Economics Bldg., University of Colorado, Boulder, CO 80506. Ed. Raguel Malukh. adv. bk. rev. charts. stat. circ. 1,400. Indexed: Curr. Cont., Excerpta Per Bibli., SSCI

664 570 US
ENERGY DIGEST, 1975. 1/yr. £22.50. Allenscler Presswell Ltd., 99 High St., Wheathampstead, Herts. SG4 8DG, England. Ed. Don Hayes. adv. illus. circ. 2,800. Indexed: Br. Tech. Ind.
Incorporating: Journal of Fuel and Heat Technology (ISSN 0022-121X)

664 570 US ISSN 0013-7570
ENERGY INFO, a monthly executive summary of events occurring in the fields of power generation and research, 1967. m. \$35. Robert Morey Associates, Box 95, Dana Point, CA 92629. Ed. Robert Morey. bk. rev. film. rev. mkt. pat. trlit. trank. circ. 10,000.
Formerly: Cambridge Energy Review.

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675.2 II ISSN 0019-5758
INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION JOURNAL (Text in English) 1952. m. Rs. 35 inland; Rs. 50 foreign. Indian Leather Technologists' Association, Mercantile Bldgs., Talbazar St., Calcutta 700001, India. Ed. Sr. Jyotirmoy Dey. adv. bk. rev. charts. illus. index. circ. 1,300. Indexed: Chem. Abstr.

685 U.S. ISSN 0023-9747
LEATHER AND SHOES 189. m. 58. Rumpf Publishing Division (Subsidiary of Nickerson & Collins Co.) 1900 Oakton St., Des Plaines, IL 60018. Ed. Mike Kraft. adv. illus. mkt. pat. stat. circ. 4,000. Indexed: Chem. Abstr.

675.23 U.S. ISSN 0023-9763
LEATHER MANUFACTURER 1883. m. 55. Shoe Trades Publishing Co., 15 East St., Boston, MA 02111. Ed. F. M. Moynihan. adv. illus. mkt. stat. index. Indexed: Chem. Abstr.

675.2 II ISSN 0023-9771
LEATHER SCIENCE 1954. m. Rs. 15(510) Central Leather Research Institute, Adyar, Madras 600020, India. (Affiliate: Council of Scientific and Industrial Research) Ed. M. Sangappa. adv. bk. rev. abstr. charts. illus. pat. tr. mkt. index. circ. 500. Indexed: Chem. Abstr.

683 U.K. ISSN 0023-9778
LEATHERGOODS, the journal of the British leather goods and allied trades. 1917. m. £9. Benn Brothers Ltd., 25 New Street Square, London EC4A 3JA, England. Ed. Doris Ruffell. adv. circ. 3,744. *Handbags, luggage, small leather goods*

685.3 U.S. ISSN 0003-1038
AMERICAN SHOEMAKING 1896. w. \$8. Shoe Trades Publishing Co., 15 East St., Boston, MA 02111. Ed. James D. Sutton. adv. charts. illus. mkt. stat. circ. 3,500.

685.31 U.S. ISSN 0013-6833
FOOTWEAR NEWS 1945. w. \$15. Fairchild Publications, Inc., 7 E. 12th St., New York, NY 10003. Ed. Allan A. Samuels. illus. mkt. circ. 25,000 (also avail. in microform from FCM)

31 U.K. ISSN 0013-6833
FOOTWEAR WEEKLY 1925. m. £6. F.P.C. Consumer Industries Press Ltd., 40 Bowling Green Lane, London E.C.1, Eng. Ed. Maurice Proust. adv. bk. rev. charts. illus. stat. circ. 8,000. Supersedes: Footwear Weekly (ISSN 0015-6841)

685.31 675 CN ISSN 0037-4032
SHOE AND LEATHER JOURNAL (Annual Directory Number) 1888. m. \$10. Southern Business Publications Ltd., 1450 Don Mills Rd., Don Mills, Ont. M3B 2N7, Canada. Ed. Pat Butts. adv. illus. stat. index. circ. 4,908.

685.31 675 U.K. ISSN 0017-1040
SHOE AND LEATHER NEWS 1916. w. £10.50. New Century Publishing Co. Ltd., 84-88 Great Eastern St., London EC2A 4ED, Eng. Ed. A. W. Chapman. adv. bk. rev. charts. illus. mkt. pat. stat. circ. 8,500.

LOW COST AUTOMATION

620.651.8 U.K. ISSN 0095-4152
AUTOMATION 1966. m. £6.70. E.D. Publications Ltd., 120 Wigmore St., London, W1H 0AS, Eng. Ed. P. Cahn-Speyer. adv. bk. rev. charts. illus. pat. tr. lit. circ. controlled: (also avail. in microfilm)

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE - JOURNAL
 Birla Institute of Technology & Science, Birla, India. L. Grants. Papers in all regions of science and technology.

JOURNAL OF SCIENTIFIC AND INDUSTRIAL RESEARCH - Science

MANAGEMENT

658 U.S. ISSN 0001-8376
ADMINISTRATIVE MANAGEMENT, the systems magazine for administrative executives. 1949. m. \$2. Geyer-McAllister Publications, 51 Madison Ave., New York, NY 10010. Ed. Walter Kleinschrod. adv. bk. rev. illus. tr. lit. index. circ. 52,191 (also avail. in microfilm on reel). Anabr. B.P.I. Data Process. Dig. Ind. Eng. Dig. Work Rel. Abstr.

658.2 690 U.S. ISSN 0004-6908
AREA DEVELOPMENT MAGAZINE, the executive magazine of sites and facility planning. 1965. m. \$12. Haleyon Business Publications, Inc., 432 Park Ave. S., New York, NY 10016. Ed. Albert H. Jaeggin. adv. bk. rev. illus. tr. lit. index. circ. 29,874 (also avail. in microfilm from UMI). Planning aspects involved in the building of new industrial facilities and the relocation of plants.

658.2 NZ ISSN 0046-3094
FACTORY MANAGEMENT 1971. vol. 10. 1971. NZ \$5.50. Trade Publications Ltd., 1 Emily Place, Auckland, New Zealand. Ed. Norman S. Stanton. adv. charts. illus. tr. lit.

658.2 NZ ISSN 0046-3108
FACTORY MANAGEMENT MAINTENANCE AND ENGINEERING 1970. m. NZ \$5.50. Trade Publications Ltd., 1 Emily Place, Auckland, New Zealand. Ed. N. S. Stanton. adv. illus. tr. lit.

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INDUSTRIAL BUSINESS MANAGEMENT 1964. 12 yr. Can. S. Saskatchewan Research Council, Industrial Services Div., 30 Campus Centre, Saskatoon, Sask., Canada. Ed. A. Schart. bk. rev. circ. 5,000. Formerly: Industrial Engineering Management Science (ISSN 0043-5064)

658.5 U.K. ISSN 0007-5929
INDUSTRIAL MANAGEMENT 1969. m. £15. Institute of Factory Management Publications, 100 Great Eastern St., London EC2A 4ED, Eng. Ed. A. W. Chapman. adv. bk. rev. charts. illus. stat. circ. 11,000. Indexed: B.P.I. Formerly: Business Management

658.5 U.S. ISSN 0024-8509
METROJOURNAL OF METHODS-TIME MEASUREMENT 1955. 4 yr. 58. Methods-Time Measurement Association for Standards and Research, 6-10 Sadleir River Rd., Fair Lawn, NJ 07410. Ed. James P. O'Brien. charts. illus. index. circ. 2,200. (also avail. in microform)

658 U.S. ISSN 0024-8509
MANAGEMENT DEVELOPMENT GUIDE 1950. ca. \$1.25 per copy. American Management Associations, 115 West 50th St., New York, NY 10020 (Subscriber: Box 414, Laramie, Wyo. 82001). charts. illus. circ. controlled: (back issues available)

658 U.S. ISSN 0025-1475
MANAGEMENT REVIEW 1921. m. \$18. American Management Associations, 115 W. 50th St., New York, NY 10020 (Subscriber: Box 419, Saratoga Lake, N.Y. 12983). Ed. John M. Roach. bk. rev. charts. illus. index. circ. 65,000 (controlled: (also avail. in microform from UMI) Indexed: B.P.I. Pers. Manage. Abstr. Psychol. Abstr. Work Rel. Abstr.

658 U.K. ISSN 0025-1475
MANAGEMENT TODAY 1966. m. £9. Management Publications Ltd., Regent House, 54-62 Regent St., London, W1A 4YJ, Eng. Ed. Robert Heller. adv. bk. rev. bbl. charts. illus. stat. index. circ. 72,000. Indexed: Anabr. Work Rel. Abstr. Supersedes: Manager

658 U.S. ISSN 0090-3425
MANAGEMENT WORLD devoted to disseminating technical knowledge of the profession of scientific office and administrative management. 1960. m. \$12. Administrative Management Society, Maryland Rd., Willow Grove, PA 19090. Ed. Jim Brown. adv. bk. rev. bibl. illus. tr. lit. index. circ. 16,000. Indexed: Anabr. Formerly: A.M.S. Management Bulletin (ISSN 0001-1967)

658.2 620 CN
PLANT MANAGEMENT AND ENGINEERING 1941. m. Can. \$12. Macdon-Hunter Ltd., 441 University Ave., Toronto, Ont. M5W 1A7, Canada. Ed. John Davies. adv. illus. tr. lit. circ. 12,000 (approx). Indexed: Can. B.P.I. Formerly: Plant Administration and Engineering (ISSN 0032-0773)

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PRODUCTIVITY & TECHNOLOGY 1975. q. Department of Trade and Industry, Productivity Centre, Wellington, New Zealand. illus. circ. 2,500. Supersedes: Industrial Development.

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- 669 IT
IME (Text in English) bi-m. 1.18000. Etas Kompass Periodici Tecnici S. A., Via Mantegna 6, 20154 Milan, Italy.
Metalworking
- 669 SZ
IMF NEWS 1972 forth. free. International Metalworkers Federation, Rue des Acacias 54 bis, CH-1227 Geneva, Switzerland. Ed. Werner Thonnessen
- 6712 II
INDIAN FOUNDRY JOURNAL (Text in English) 1936 m Rs 60. Institute of Indian Foundrymen, 125 Allenby Court, 112 Allenby Road, Calcutta 700020, Bengal, India. Ed. P. Banerjee. adv. film rev. ill. stat. circ. 1,300.
Indexed Chem Abstr.
Founding
- 669 II ISSN 0019-493X
INDIAN INSTITUTE OF METALS TRANSACTIONS (Text in English) 1916 bi-m. 1235 Indian Institute of Metals, 2 Sambhunath Park St., Calcutta 700020, India. Ed. C. V. Sundaram. adv. bk. rev. charts. illus. index. cum index covering 5 yrs. circ. 3,500. Indexed: Eng. Ind. Met Abstr.
- 669 UK ISSN 0020-2967
INSTITUTE OF METAL FINISHING TRANSACTIONS 1951 q. 526. Institute of Metal Finishing, 178 Goswell Rd., London EC1V 7DU, Eng. Ed. Dr. Simon Wernick. adv. bk. rev. charts. illus. index. circ. 2,000-2,500. Indexed: Chem Abstr. Met Abstr. Sci Abstr.
- 6712 US ISSN 0008-7467
INTERNATIONAL CAST METALS JOURNAL 1965 q. 550 to non-members. American Foundrymen's Society, Inc., Gulf & Wolf Rds., Des Plaines, IL 60016. Ed. Jack H. Schaum. bk. rev. abstr. charts. illus. index. circ. 1,000. (also avail. in microform from UMI) Indexed: Chem. Abstr. Eng. Ind. Met Abstr.
Formerly (until 1976) A F S Cast Metals Research Journal (ISSN 0001-1223)
- 669 US ISSN 0022-1516
IRON AGE the national metal working weekly 1855 w. 52. Chilton Co., Inc., Clinton Way, Radnor, PA 19089. Ed. Eugene Beaudet. adv. bk. rev. charts. illus. mkt. tr. lit. index. circ. controlled (also avail. in microform) Indexed: A.S. & T. Ind. B.P.I. Chem Abstr. Eng. Ind. Met Abstr.
Iron
- 669 US ISSN 0022-1516
IRON AGE METALWORKING INTERNATIONAL (Text in English, summaries in French, German and Spanish) 1962 m. 512. Chilton Co., Inc., International Division, Radnor, PA 19089. Ed. George F. Sullivan. adv. bk. rev. film rev. illus. index. circ. 25,152 (controlled)
- 669 US ISSN 0026-0552
IRON & STEEL INDUSTRY PROFILES 1969 w. 57.20. Metals Society, 1 Carlton House Terrace, London SW1Y 5DB, Eng. and. Ed. M. L. Pearl.
- 669 US ISSN 0362-0425
IRONCASTER 1947 m. 56.50. Iron Castings Society, Cast Metals Federation Bldg., 20611 Center Ridge Rd., Rocky River, OH 44116. Ed. T.J. Warden. adv. index. circ. 1,250. (processed)
Former titles: Gray and Ductile Iron News (ISSN 0017-3584), Gray Iron News.
Iron
- 669 UK ISSN 0301-9233
IRONMAKING AND STEELMAKING 1974 bi-m. 127(567) non-members. Metals Society, 1 Carlton House Terrace, London SW1Y 5DB, England (And American Society for Metals, Metals Park, OH 44077) Ed. T. L. Hughes. adv. bk. rev. circ. 3,000. Indexed: ABTICS. Met Abstr.
- 669 US ISSN 0022-1674
JOURNAL OF METALS 1949 m. 524 to non-members. American Institute of Mining, Metallurgical and Petroleum Engineers, Inc., Metallurgical Society, 345 E. 47th St., New York, NY 10017. Ed. Konrad J. A. Kundig. adv. bk. rev. charts. illus. index. circ. 12,000. Indexed: A.S. & T. Ind. Chem. Abstr. Eng. Ind. Met Abstr.
- 669 US ISSN 0022-4723
JOURNAL OF STEEL CASTINGS RESEARCH 1955 q. 510. Steel Founders' Society of America, 20611 Center Ridge Rd., Rocky River, OH 44116. Ed. Dr. Peter F. Wieser. abstr. charts. illus. circ. 500. (also avail. in microfilm from UMI)
Steel
- 669 AT ISSN 0047-6854
METIA NEWS BULLETIN 1969 bi-m. membership. Metal Trades Industry Association of Australia, 105 Walker St., North Sydney, NSW 2060, Australia. Ed. L. R. Davies. bk. rev. stat. circ. 4,000. (processed)
- 669 US ISSN 0026-0552
METAL FABRICATING NEWS vol. 8, 1970. bi-m. 51.50. Metal Fabricating Institute Inc., 724 Forbes St., Rockford, IL 61105. Ed. Ronald L. Fowler. adv. bk. rev. charts. illus. tr. lit. circ. 70,000.
- 669 US ISSN 0026-0552
METAL FINISHING devoted exclusively to metallic surface treatments 1903 m. 510. Metals and Plastics Publications, Inc., One Gateway Plaza, Hackensack, NJ 07601. Ed. Palmer H. Langdon. adv. bk. rev. abstr. illus. mkt. stat. index. circ. 12,500. (also avail. in microfilm from UMI) Indexed: A.S. & T. Ind. Chem. Abstr. Eng. Ind. Met Abstr.
- 669 UK ISSN 0026-0607
METAL FINISHING JOURNAL vol. 19, 1973 m. 1386. Fuel and Metallurgical Journals Ltd., John Adam House, 100 John Adam St., London WC2N 6JH, England. Ed. Edward Lloyd. adv. circ. 2,578.
- 6717 UK ISSN 0026-0607
METAL FINISHING PLANTS AND PROCESSES, six-monthly international market service and production guide 1965 bi-m. 125(566) Finishing Publications Ltd., 1796 High St., Hampton Hill, Middlesex, Eng. Ed. K. J. Draper. adv. bk. rev. abstr. illus. pat. tr. lit. index. cum index. circ. 2,500. (contin.)
Formerly: International Trade Literature Supplement of Metal Finishing Abstracts.
- 669 US ISSN 0026-0552
METALLURGIA AND METAL FORMING the International journal of metals 1929 m. 113. Fuel and Metallurgical Journals Ltd., Queensway House, 2 Queensway, Potters, Surrey RH1 1QS, England. Ed. L. A. Stockdale. adv. bk. rev. charts. illus. tr. lit. index every 6 mos. Indexed: A.S. & T. Ind. Appl. Mech. Rev. Biotech. Ind. Chem. Abstr. Eng. Ind. Met Abstr.
Former titles: Metallurgia (ISSN 0026-0552) & Metal Forming (ISSN 0026-0622)
- 669 US ISSN 0026-0552
METALS AND CERAMICS INFORMATION CENTER NEWS LETTER 1971 m. free to qualified persons. Metals and Ceramics Information Center, Battelle's Columbus Laboratories, 505 Kinn Ave., Columbus, OH 43260. Ed. Harold E. Hock. circ. 4,500 (controlled) (published forth.)
- 669 UK ISSN 0308-4590
INTERNATIONAL METALS REVIEWS 1956 q. 122(555) to non-members. Metals Society, 1 Carlton House Terrace, London SW1 5DB, England (And American Society for Metals, Metals Park, OH 44077) Ed. J. S. Bywater. bk. rev. circ. 1,300. Indexed: ABTICS. Met Abstr.
Former index: International Metallurgical Reviews, Metallurgical Reviews (ISSN 0076-6690)
- 669 UK ISSN 0025-5386
MATERIALS RECLAMATION WEEKLY 1973 w. £10(524) McLaren Publishers Ltd., Box 109, Davis House, 69-77 High St., Croydon, CR9 1QH, Eng. Ed. E. Cooper. adv. bk. rev. charts. illus. mkt. tr. lit. circ. 5,500. (also avail. in microfilm)
Formerly: Waste Trade World and Iron and Steel Scrap Review.

669 AI
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Australasian Institute of Metals, 191 Royal Parade,
Parkville, Vic. 3052, Australia. Ed. H. B. Freeland.
adv. bk. rev. circ. 3,200. Indexed: Chem Abstr.
Formerly: Metals Australia (ISSN 0047-6897)

669 US
METALS SOURCEBOOK, 1973. Ann 5115.
McGraw-Hill, Inc., 1221 Ave. of the Americas,
New York, NY 10020. Ed. Dorothy Fabian, circ.
630. (looseleaf format; back issues avail)

669 UK ISSN 0307-1693
METALS TECHNOLOGY, 1974. m. £38(598) to
non members. Metals Society, 1 Carlton House
Terrace, London SW1Y 5DB, England. Ed. T. L.
Hughes. adv. circ. 2,300. Indexed: ABETCS,
Met. Abstr.

670 US ISSN 0026-7477
MODERN APPLICATIONS NEWS FOR DESIGN
AND MANUFACTURING, 1967. bi-m. \$10. J. A.
Verner Nelson Associates, Ltd. A.V. Nelson, 1282
Old Skokie Rd., Highland Park, IL 60035. adv. illus.
tr. ht. circ. 36,000.
Formerly: Materials Application News for Design
and Manufacturing.

671.2 US ISSN 0026-7562
MODERN CASTING, 1938. m. \$15. American
Foundrymen's Society, Inc., Golf & Wolf Rds., Des
Plaines, IL 60018. Ed. Jack H. Schram. adv. bk.
rev. charts. illus. tr. ht. circ. 28,000. (also avail in
microfilm) Indexed: Chem. Abstr. Eng. Ind.
Met. Abstr.

671 US ISSN 0026-8127
MODERN METALS 1945. m. \$4 W. B. Griffin, 919
N. Michigan Ave., Chicago, IL 60611. Ed. F. I.
Church. adv. charts. illus. mkt. tr. ht. circ. 25,000.
Indexed: A.S. & T. Ind. Chem. Abstr. Eng. Ind.
Met. Abstr.

669 SA
METAL RESEARCH DIGEST, 1974. q. free. National
Institute for Metallurgy, Private Bag X3015,
Randburg 2125, South Africa.

671.737 US ISSN 0160-3164
PLATING AND SURFACE FINISHING,
electroplating, finishing of metals, organic finishing,
1910. m. \$20 in N. America. American
Electroplaters Society, Inc., 1201 Louisiana Ave.,
Winter Park, FL 32789. Ed. Sylvia Baxley. adv. bk.
rev. abstr. bibl. charts. illus. pat. tr. ht. index.
circ. 10,000. (also avail in microfilm from UMI)
Indexed: A.S. & T. Ind. Chem. Abstr. Eng. Ind.
Met. Abstr.

Continues: Plating (ISSN 0022-1397)
Electroplating

669 US ISSN 0046-3922
FINISHING HIGHLIGHTS, painting & chemical
coatings, plating & anodic treatments, polishing &
surface preparation, 1968. bi-m. plus 2 special show
issues) free to qualified personnel. Spec. Tech.
Publications, Inc., c/o Ed. Myron A. Miller, Box
2015, Oxnard, CA 91334. adv. illus. tr. ht. circ.
22,000.

671.2 US ISSN 0040-3999
FOUNDRY MANAGEMENT & TECHNOLOGY,
1892. m. \$35. Penton-100, Penton Plaza, Cleveland,
OH 44114. Ed. Jack C. Moske. adv. bk. rev. illus.
stat. tr. ht. index. circ. 50,000. (also avail in
microfilm from UMI) Indexed: A.S. & T. Ind.
Formerly: Foundry (ISSN 0015-9034)
Founding

671.2 UK ISSN 0015-9042
FOUNDRY TRADE JOURNAL. (Summaries in
French and German) 1902. w. £23. Fuel and
Metallurgical Journals Ltd., Queensway House, 2
Queensway, Redhill, Surrey, England. (Co-Sponsor
National Society of Master Patternmakers) Ed. C.
M. Tombe. adv. bk. rev. film rev. abstr. charts.
illus. mkt. pat. stat. tr. ht. index every 6 months.
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Br. Tech. Ind. Chem. Abstr. Eng. Ind. Met. Abstr.
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671 US ISSN 0017-9345
HEAT TREATING, 1969. m. \$12. George Peterson
Inc., 907 North Elm Office Park, Hinsdale, IL
60521. Ed. George B. Peterson, Jr. adv. bk. rev.
circ. 16,200. (also avail in microfilm from UMI)

670.1 UK ISSN 0007-1157
BRITISH JOURNAL OF NON-DESTRUCTIVE
TESTING, 1959. bi-m. £4(523) British Institute of
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Regular coverage: production, trade, consumption statistics, company and management information, production plans, production technology, standardization, quality control, market information, trade promotion, trade fairs and exhibitions, meetings, conferences, seminars, book reviews.
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Rubber Developments

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56, Twain Road, Welwyn Garden City, Herts., United Kingdom.
Quarterly. English. Free of charge.

RUBBER INDUSTRY: economic, commercial and technical information; world-wide.
Developments in rubber research, technology and use, new products, design, standardization, market information, market surveys, book reviews.

Rubber Journal

MacLaren and Sons Limited,
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Technical papers, reports and observations.

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Technical articles and news on the timber industry.

Woodworking Industry

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 Mercury House, Waterloo Road, London S.W.1, United Kingdom.
 Monthly. English. £4.0.0. p.a.

WOODWORKING TECHNOLOGY: technical and commercial infor-
 mation; United Kingdom and Western Europe.

Regular coverage: production technology and trends, new
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Wood

Woods Brothers Ltd.,
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 Monthly. English. £3.15.0. p.a.

WOOD INDUSTRY AND WOOD WORKING MACHINES TOOLS:
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Forest Industries

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 731 South West Oak Street, Portland, Oregon 97205, USA.
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- 2- One Hundred and Fifty Questions for a Prospective Manufacturer.
- 3- Human Relations in Small Industry.
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- 13- The Small Manufacturer and His Specialized Staff.
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- 20- Ratio Analysis for Small Business.
- 21- Profitable Small Plant Layout.
- 22- Practical Business Use of Government Statistics.
- 23- Research Relations Between Engineering Educational Institutions and Industrial Organizations.
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Suggested
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IN TECHNOLOGICAL COUNTRIES

<u>P.</u>	<u>Source of Technical Information</u>
BSCIC Bangladesh	Jute Research Institute Bangladesh Textile Institute BANSDOC Bangladesh Chamber of Commerce & Industry Agricultural Engineering Department, Agricultural University, Mymensingh
HKPC Hong Kong	---
DP Indonesia	Institute of Soil Research, Bogor Nutrition Research Institute, Bogor Forest Research Institute, Bogor Rubber Research Institute, Bogor Rice Research Institute, Bogor Forest Products Research Institute, Bogor Inland Fisheries Research Institute, Bogor Directorate General of Animal Husbandry, Ministry of Agriculture, Bogor Institute of Chemical Research, Bogor Institute of Textile Technology, Bandung Indonesian Standards Institute, Bandung Institute of Standards, Bandung Ceramics Research Institute, Bandung Directorate of Building Research, Bandung Materials Testing Institute, Bandung Academy of Leather Technology, Jogjakarta Batik Research Institute, Jogjakarta Leather Research Institute, Jogjakarta Industrial Research Institute, Jakarta Food Technology Research Institute, Jakarta Nutrition Institute, Jakarta National Scientific Documentation Centre, Jakarta Experimental Station of the Sugar Industry, Pasuruan

DP Indonesia (contd)

Sugar Research Institute, Java
Surabaya Chemical Research Institute, Java
Metal Industries Research and Development
Centre, Bandung
Standardization Council of Indonesia
Research Institute of Animal Nutrition, Bogor

KORSTIC Korea

Soong Jun University
Institute in Dae Duk Science Town
KIST
Tobacco Research Institute
Forest Research Institute
Fisheries, Ministry of Agriculture
Korean Leather Industry Association
Korean Glass Industry Association
Institute of Agricultural Engineering and
Utilization, Suwon
Korean Plywood Industry Association
Korean Knitting Industry Association
Government Paper Printing Agency Research
Institute, Daegu City, Chang-Nam
National Industrial Research Institute,
c/o Ministry of Commerce & Industry
Korea Paint & Printing Institute
Industry Co-operative Association

SIRIM and MARA Malaysia

Oil Palm Growers Council
Forest Research Institute (Selangor)
Forest Products Laboratory (K L)
Malaysian Agricultural Research and
Development Institute
Rubber Research Institute of Malaysia
MIDAS, Universiti Sains Malaysia
Furniture Makers & Traders Association
Timber Research & Technical Training
Centre, Sarawak
Food Technology Research & Development
Centre
Malayan Pineapple Industry Board (J E)

UP ISSI and EDF
Philippines.

Development Academy of the Philippines
National Cottage Industries Development
Authority

Philippine Coconut Authority

Forest Research Institute, Laguna

Department of Food Science, Technology,
Laguna

National Science Development Board

National Research Council

International Rice Research Institute

Dairy Training & Research Institute, Laguna

Metals Industrial Research & Development
Centre, Rizal

Mindanao Institute of Technology

Board of Investments

Cement Institute of Philippines

Plywood Manufacturers' Association of
Philippines

Philippine Paint Manufacturers' Association

Philippine Society of Mining, Metallurgical
& Geological Engineering

Bureau of Standards of Philippines

Agricultural Engineering Division, Dept of
Agriculture and Natural Resources

Pulp & Paper Manufacturing Association

Philippine Textile Research Institute, Rizal

SISIR Singapore

South East Asian Fisheries Development Centre

Singapore Printing Industry and Allied
Traders Association

IDB Sri Lanka

Bureau of Ceylon Standards

Coconut Research Institute

Agricultural Machinery Design & Testing
Centre, Maha, Illuppalam

Central Agricultural Research Institute,
Gannoruwa

Ceylon Ceramics Corporation

Ceylon Institute of Scientific and
Industrial Research

P 0

Source of Technical Information

DIP Thailand

Thai National Documentation Centre
Centre for Instrument Repair & Calibration
National Building Research & Development
Centre
Department of Science
Fisheries Technological Section, Ministry
of Agriculture
Thai Leather Association
Forest Products Research, Kasetsart
Rubber Research Centre, Songkhla
Applied Scientific Research Corporation
of Thailand
National Research Council of Thailand
Kasetsart University
Royal Forest Department
Department of Livestock Development,
Animal Nutrition & Forage
Department of Medical Science, Division of
Food & Beverage Analysis

Established Links with
SOURCES OF TECHNICAL INFORMATION
(from non-TECHNONET Countries)

ASIA

India

- Ahmedabad Textile Industry's Research Association (ATIRA), Ahmedabad
- Central Fuel Research Institute, Dhanbad
- Central Mining Research Station, Dhanbad
- Central Salt & Marine Chemicals Research Institute, Bhavnagar
- Electrochemical Society of India, Bangalore
- Indian Institute of Science, Bangalore
- National Science Library (TKSOLG), New Delhi
- Protein Food & Nutrition Development Association of India, Bombay
- SIET SENDOC, Hyderabad
- South India Textile Research Association, Coimbatore
- Tata Energy Research Institute, Bombay

Fields of Expertise

all aspects of textile industry
coal science
mining technologies
salt & marine technologies
solar energy
electrochemistry
metallurgy
metal finishing
rural development
natural resources
scientific and technological information
food science and technology
technological information dissemination & industrial information training
textile technology
renewable energy sources

Japan

- Forging Technology Institute of Japan, Tokyo
- Hokkaido Forest Products Research Institute, Hokkaido
- Japan Information Center of Science and Technology (JICST), Tokyo
- Mechanical Engineering Laboratory, Tokyo

forging technology
forest products
documentation service in science & technology
research in engineering fields

Pakistan

- Appropriate Technology Development Organization

A.T.

<u>AUSTRALASIA</u>	<u>Australia</u>	<u>Field of expertise</u>
	- Commonwealth Scientific and Industrial Research Organization (CSIRO), Melbourne	most fields of science and technology incl. clinical medicine
	- Australian Mineral Foundation, S.A.	Geoscience
	- Australian Mineral Foundation, S.Australia	Geoscience
	- Division of Building Research, CSIRO, Highett	forest-based industries
	- Zinc and Lead International Service (ZALIS), Melbourne	all end uses of lead and zinc
	<u>Papua New Guinea</u>	
	- South Pacific Appropriate Technology Foundation, Boroko	alternative technology, technical assistance/training, waste recycling
	<u>New Zealand</u>	
	- Dept. of Science & Industrial Research	Metrology, acoustics, production engineering, earthquake engineering
<u>UK and EUROPE</u>	<u>England</u>	
	- Building research station, Herts	low cost housing and building science
	- Intermediate Technology Industrial Services, Rugby	appropriate technologies for small-scale application
	- International Food Information Service, Reading	Food science and technology
	- Paint Research Association, Middlesex	all aspects of surface coatings
	- Timber Research and Development Association, Bucks	timber research
	- Tropical Products Institute	post-harvest aspects of plant and animal products
	- Water Research Centre, Herts	water research, industrial waste treatment
	<u>Germany</u>	
	- German Appropriate Technology Exchange	technology transfer

Netherlands

Fields of Expertise

- Royal Tropical Institute, Amsterdam

processing tropical
agricultural products

- TOOL

appropriate technology

AMERICAS

USA

- National Technical Information Service
(NTIS), Washington
- Office of Water Research and Technology
US Department of the Interior, Washington

wide range of
information service

water

Colombia

- Centro Internacional de Agricultura
Tropical (CIAT), Cali

beans
cassava

AFRICA

Ghana

- Oil Palm Research Centre, Kade

all aspects of
oil palm research

West Indies

- Christian Action for Development in the
Caribbean

Agriculture, Energy,
Housing

1. 9th Edition Encyclopedia of Associations, Volume 1, National Organizations of the U.S. Publisher: Gale Research Co. Book Tower, Detroit Michigan 48226, USA.
2. Directories of Science Information Sources - International Bibliography Publisher: International Federation for Documentation, Hofweg 7, The Hague, Netherlands. FID publ. 421, April 1967.
3. Information Sources in Science and Technology by C C Parker and R V Turley Publisher: Butterworths, London and Boston.
4. A Brief Guide to Sources of Scientific and Technical Information by Saul Herner Publisher: Information Resources Press, Washington DC, 1970
5. Guide to European Sources of Technical Information compiled by Colin H Williams Publisher: Francis Hodgson
6. Index of Sources of Industrial Information, Committee of Directors of Research Associations
7. Technical Information - How to Manage and Use Technical Information by Freeman H Dyke Jr. Publisher: Industrial Education Institute
8. The World of Learning 1976-77, Volume 1. Publisher: Europa Publications Limited, 18 Bedford Square, London WC1B 3JN, England.
9. National Referral Services for Industry - Worldwide Directory. Publisher: Federation Internationale de Documentation (FID), 7 Hofweg, The Hague, Netherlands.
10. Yearbook of International Organizations, 15th Edition. Publisher: Union of International Associations, 1 rue aux Laines, 1000 Brussels, Belgium Publication No 226, UDC 061 (100) (058).
11. Animal Industry Groups in the Asian and Pacific Region compiled by the Registry of Scientific and Technical Services. Publisher: Registry of Scientific and Technical Services for the Asian and Pacific Region, Canberra 1972.
12. A Brief Guide to Sources of Metals Information by Marjorie R Hyslop. Publisher: Information Resources Press, Washington D C. 1973.
13. The Directory of Scientific Research Institutions in India, 1969 by T S Rajagopalan and R Satyanarayana. Publisher: Indian National Scientific Documentation Centre, Delhi-12.
14. Science Information Sources - A Universal and International Guide, Second Edition - Revised and Enlarged by Herman-Karel De Jaeger. Publisher: Association Scientifique Et Technique Pour La Recherche En Informatique Documentaire.
15. Industrial Technology - A Guide to Sources of Information in Britain Available to Developing Countries, January 1971. Publisher: Tropical Products Institute, 56/62 Gray's Inn Road, London WC1X 8LU, England.
16. Handbook of Special Librarianship and Information Work by W E Batten. Publisher: Aslib, 3 Belgrave Square, London SW1X 8PL, England. 1975.
17. Information Retrieval Systems - Characteristics, Testing and Evaluation by F Wilfrid Lancaster. Publisher: John Wiley & Sons Ltd - New York, London, Sydney. Toronto.
18. Encyclopedia of Business Information Sources in Two Volumes. Volume 1 - General Subjects. Publisher: Gale Research Co, Book Tower, Detroit, USA. 1970
19. Commonwealth Directory of Periodicals. Publisher: Commonwealth Secretariat.
20. Annotated Directory of Product and Industry Journals by International Trade Centre UNCTAD/GATT, Geneva 1970.
21. Appropriate Technology Sourcebook - A Guide to Plans and Methods for Village and Intermediate Technology by Kenneth Darror and Rick Pam of Volunteers in Asia.
22. Guides to Information Sources - Information Sources on the Meat Processing Industry. Publisher: UNIDO.

TECHNICAL INFORMATION ACTIVITIES
AND FUTURE PLANS OF BSCIC

BSCIC has undertaken a comprehensive programme for developing its technical information unit by strengthening the Extension and Information services department. This department is trying to put maximum efforts to provide industrial information to the users. We are pursuing government policy towards rapid industrialisation programme, with particular emphasis on the development of small & cottage industries. Our technical information services would be acting as a catalyst in this process. Appreciable awareness has been created amongst users. Increased number of technical enquiries are pouring in from the general public/institutions. In order to provide information to the users, the specific functions being carried out are described below:

a) Dissemination of selective information materials

We have started disseminating selective information materials to the concerned industrial enterprises and agencies by providing printed information sheets as obtained from various sources. This helps in diffusing latest technological activities in their specific fields and introduction of new processes and products.

b) Publication of technical bulletin

In its new dimension of information activities, BSCIC has started publishing a bi-monthly technical bulletin in the local language. The bulletin contains information on industrial processes, investment briefs, new products development, potential industrial project profiles etc. The bulletin also contains a brief resume of BSCIC's activities in organizing workshops, training courses, seminars, entrepreneurial development programme, providing guidelines for investment in priority sectors to attract new entrepreneurs. Articles are obtained from different professional engaged in specific fields and provision has been made for remuneration also. This bulletin is distributed free-of-charge to the chambers, government offices and all POs of TECHNINET ASIA. We hope to make it a monthly publication in the near future.

c) Current Awareness Services

This is a very useful medium of disseminating useful information package to different quarters. The people are kept abreast of latest technological advancement by providing them current awareness services. These are mostly borrowed information materials from different sources. The articles are provided free of cost as per enquirer's need. At the moment, we are putting the articles serial in an assorted way, but on getting more information materials we hope to put it sectorally.

d) Information communication

We are also undertaking unconventional information exchanges by arranging visits to research and development departments of different organizations, pilot project construction and demonstration in collaboration with other organizations, arranging meetings with experts, attending conferences, etc. Certain types of information seldom finds its way in the formal published journals because they are too difficult to verbalize as is the case with practical details on the use of techniques and apparatus.

e) Library facilities

Our library is extensively used. The books are mostly on industrial interest. This is providing reference services also. It maintains cooperation and coordination with other national information systems.

f) Relation or Linkages with:

i) Participating Organizations

The relationship between BSCIC and other POs has been quite satisfactory. Response to our requests for information materials is encouraging, except on certain occasions. This may be due to the postal services. Endeavours are also made to reciprocate the same. Considerable assistance has been obtained from the TECNINET Centre which are of immense help to our activities.

ii) National Organizations

Contacts are being made with the following national organizations dealing with industrial information:

1. BCSIR - Bangladesh Council of Scientific Industrial Research
2. BANSDOC - Bangladesh Scientific & Technical Documentation Centre
3. BUET - Bangladesh University of Engineering and Technology
4. BSD - Bangladesh Shilpa Bank
5. BSRS - Bangladesh Shilpa Rin Sangtha
6. IIAS - Industrial Investment Advisory Service
7. BTI - Bangladesh Textile Institute
8. LTI - Leather Technology Institute
9. BGCI - Bangladesh Glass and Ceramic Institute
10. BITAC - Bangladesh Industrial Technical Assistance Centre
11. MDC - Management Development Centre
12. BSI - Bangladesh Standard Institute
13. BIE - Bangladesh Institute of Engineers
14. BAU - Bangladesh Agricultural University
15. DPI - Dacca Polytechnique Institute

g) Reprographic facilities available

Since the beginning, we had been facing difficulties in production of printed documents due to non-availability of sufficient facilities. At the moment, our institution has one copying machine which is mainly engaged for design centre works. We are hoping to improve our activities in this field on commissioning the TECNINET gift of a photocopying machine in the near future. The Microfiche Reader is used for scanning the microfiches but we have no printing facility for its dissemination. Cyclostyling facilities are available.

BSCIC'S PROPOSAL FOR NETWORKING

Today, technology is mankind's main enterprise. The greater the capacity of the nation to generate, acquire, transfer and utilize technology, the faster is its growth and development. The main object of dissemination of knowledge is to bring socio-economic balance to the world population. To achieve this objective the speed of development in the developing countries should be greater than that of the advanced countries, but in reality the situation is quite the reversed. The valuable information generated around the world are being channelled through all possible sources only to a few developed countries. As a result these few countries are becoming the hoarder of all information. The store of information can be gainfully utilized only by the developing countries through effective international information networking system.

Our main constraint in this activity is insufficient inflow of appropriate information. The information gap between developed and developing countries is widening ever since. It is a fact that unfortunately, we are not yet in a position to generate sufficient new information for our need and hence remained at the receiving end. This lack of generation of sufficient information is a major crisis in the inflow of information to us.

Time has come to think very carefully regarding the need of useful technical information for carrying out our developmental activities. Sufficient awareness has not yet created amongst the institution who are actually using technical information for the need of national networking. But it is a fact, that all institutions are running in short of sufficient information and even the scanty information that is available is neither fully utilized nor properly disseminated to the users. We have the feeling that, to overcome these problems by designing an effective information system, the main inputs should be users' orientation and interactions, orientation of sources and resources towards satisfaction of the users' need and the users' feedback.

In order to achieve the above goals of a national industrial information networking we have already identified the national institutions who use the industrial informations and preliminary contacts have been made to assess the individual's resource and area of interest. To begin with the programme we are contemplating to arrange one national seminar amongst the users with a hope of building effective networking to exchange useful information for the mutual benefit. The main objective would be to bring closer contacts with similar institutions so as to enable maximizing the utilization of existing information. Responsibility will be allocated to participants to build up specialised information resources and keep easy access for the information seekers.

Necessary inputs would be sought from TECHNUNET Centre on finalization of the programme. The networking of POs has been functioning since a few years back through the active assistance of TECHNUNET ASIA. This networking is now working more or less satisfactorily. Even though there is still room to improve the efficiency of this system. Since the scope of industrial services offered by our PO to others is an inter country matter and it will be logical to make TECHNUNET, the focal point of international networking system to coordinate the specialised nature of information enquiry. This may work as a referral centre for all POs in order to locate the area where the efforts should be put. Gradually the POs would be linked up with the different international organizations relevant to the growth of individual PO. This matter needs to be coordinated by TECHNUNET Centre. TECHNUNET Centre may maintain a detailed profile on the nature of information need of the individual PO to grasp the exactness of the enquiry and its requirement. Lastly, we want to say that the information materials which are exchanged amongst the POs should be made free of cost as far as possible, otherwise it would be very difficult on our part to procure information

materials due to government restriction on the remittance system. This issue may be resolved by TECHNONET Centre through consultation with each PO and which I believe would be of immense help to us.

LIST OF NATIONAL INFORMATION SOURCES
FOR INDUSTRY IN BANGLADESH

1. BSCIC - Chairman
Bangladesh Small & Cottage Industries Corporation
137-8, Motijheel Commercial Area, Dacca
2. BCSIR - Chairman
Bangladesh Council of Scientific Industrial Research
Mirpur Road, Dacca
3. BANSDOC - Secretary
Bangladesh Scientific & Technical Documentation Centre
Mirpur Road, Dacca
4. BUET - Director (Research & Education)
Bangladesh University of Engineering & Technology, Dacca
5. BSD - Managing Director
Bangladesh Shilpa Bank, Agrani Bank Building
Motijheel Commercial Area, Dacca
6. BSRS - Managing Director
Bangladesh Shilpa Rin Sangtha
Agrani Bank Building, Motijheel C/A., Dacca
7. IIAS - General Manager
Industrial Investment Advisory Service
HAQ Mansion, Dacca
8. BTI - Principal
Bangladesh Textile Institute
Tejgaon Industrial Area, Dacca
9. LTI - Principal
Leather Technology Institute, Hazaribag, Dacca
10. BGCI - Principal
Bangladesh Glass & Ceramic Institute
Tejgaon Industrial Area, Dacca
11. BITAC - Director
Bangladesh Industrial Technical Assistance Centre
Tejgaon Industrial Area, Dacca
12. MDC - Director
Management Development Centre, Mirpur Road, Dacca
13. BSI - Director
Bangladesh Standard Institute
Motijheel C/A., Dacca
14. BIE - Secretary
Bangladesh Engineers' Institute, Ramna, Dacca
15. BAU - Vice Chancellor
Bangladesh Agricultural University, Mymensingh
16. DPI - Principal
Dacca Polytechnique Institute
Tejgaon Industrial Area, Dacca

SUGGESTED SYLLABUS OF INFOTRAC II

1. Need for obtaining technological information.
2. How to correctly identify the information users' needs.
3. How to procure information materials from home and abroad and store it for retrieval.
4. Identifying the problems relating to inflow of technical information to the institutions and arranging appropriate steps to remove it as far as possible.
5. How to build up effective linkages with institutions dealing with research and development of industries and its actual purpose for mutual benefit.
6. Familiarization of reprography equipment used for information processing and dissemination.
7. Participants' exposure to an information centre and assigning to write a report on methodology followed from information procurement to dissemination.

Profile of INFOTRAC participant

- Qualification : Preferably graduate in any applied science and technology or economics.
- Experience : Participant should be familiar with the activities of Technical Information Services of the respective institutions. Experience in handling information materials would be necessary. The participant should have a clear idea about information need in the field of his activities.
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Annex V

HONG KONG PRODUCTIVITY CENTRE
TECHNICAL INFORMATION ACTIVITIES

Introduction

The sixteen months that have elapsed since TIC2 have seen major developments in the information activities of HKPC. An integrated Information Section has been formed, staffed by two consultants - shortly to be joined by a third, a Librarian, a part-time draughtsman and three secretarial/clerical assistants, as well as the Section Head. The Section thus offers a flexible combination of three vital elements necessary to promote industrial development: technical information services, back-up library/photocopying facilities; and technical consultancy/extension services.

In addition to maintaining a general library service and a current awareness system covering the whole of Hong Kong industry, the Section now provides more exacting and specialized services for particular sectors of industry that are thought most likely to benefit from technical information as an aid to industrial development. The two industrial sectors selected - the plastics and furniture industries - are soon to be augmented by a third field of interest, that of environmental technology.

Plastics and Furniture Information Units

The primary interface with each of the two industrial sectors is in the form of information bulletins, the HKPC Plastics Bulletin and the PHKFM-HKPC Bulletin, which are distributed free to all bona fide Hong Kong manufacturers in these industries and, of course, to TECHNET POs. Companies both in Hong Kong and overseas which are not entitled to free copies can obtain the Bulletins on a subscription basis. The basic aim of the Bulletins is to present practical information, readily adoptable at shop floor or production planning level, in the form of digest articles on specific topics of interest and abstracts of current literature, together with technology transfer information and business opportunities. Both Bulletins are of course bi-lingual.

Readers are encouraged to request photocopies of original articles mentioned, and more importantly to utilize the Sector's technical enquiry, information searching and consultancy (extension) services. The response has been most encouraging, and there has been a marked trend of late towards a demand for literature searches as opposed to on-the-spot technical advice. There seems to be a growing consciousness of the need for technical information amongst Hong Kong manufacturers, to whom the concept was totally unknown a year ago.

Efforts have been made to establish mutual cooperation with the plastics and furniture industries, to keep abreast of each industry's needs and interests to promote the services offered and maximize their influence on actual production. Liaison with the furniture industry has been consolidated by the formation of the Federation of Hong Kong Furniture Manufacturers, which actively supports the relevant information and industrial development programmes of HKPC. Communication with the plastics industry is less formal but attempts are still being made to unify the industry.

Environmental Information Unit

Environmental control legislation is in the process of being drawn up in Hong Kong. It is expected that there will be a considerable market for information in this field, not least from the appropriate government department, with which the Section has already established a good working relationship.

On-line retrieval system

Within the next month, it is expected that a computer terminal will be installed in the Information Section and an on-line link established with the Systems Development Corporation Orbit System, or the Lockheed Dialog System in the USA. The decision to go on-line was primarily motivated by the need for rapid access to environmental technology information but the link will give access to some fifty data bases on a wide range of subject fields, in addition to environmental technology, that are relevant to Hong Kong's information needs. Search facilities will be freely available to HKPC staff working in relevant fields, and also to external users on a fee-paying basis. As far as other Technonet POs are concerned, on line searching will be made available at cost price (based on computer connect time + telecommunications time + manpower/overheads).

Although an on-line retrieval system may appear to be the ultimate in international networking, the new development in no way eliminates the need for HKPC's other networking arrangements. Liaison with TECHNUNET and other POs, with UNIDO, APO, and organizations such as the Rubber and Plastics Research Association and the Furniture Industry Research Association in the UK will continue as before.

Current Awareness System

The Technical Information Checklist, which has been produced in the HKPC Library for a number of years, continues to be published as usual. Although undoubtedly of value to HKPC staff and certain external subscribers, its cost-effectiveness in its present form is under scrutiny and other forms of CAS, perhaps associated with the on-line retrieval system, are being considered.

Technology Transfer Service

HKPC has recently launched a technology transfer service for local industry, whereby it acts as an intermediary between organizations offering technical know-how and business opportunities, and those seeking them. Through its world-wide contacts with numerous organizations, HKPC compiles a quarterly Technology Transfer Package, which is circulated to 200 selected companies in Hong Kong. All type of business opportunities are covered, including licensing agreements, export opportunities, joint ventures, acquisitions, investments and mergers. Included in the Package is the publication "International Business Proposals (IBP)" produced by Hazan International, for which HKPC is the sole representative in Hong Kong. Appropriate items are also included in the Plastics and Furniture Bulletins.

Training Activities

The need for training courses in information work for PO staff was discussed at some length at TIC2. The first Information Officers' Training Course (INFOTRAC) was jointly organized by HKPC and the Hong Kong Polytechnic from 24 April to 12 May 1978. The course was attended by 18 participants from 9 different countries. Taking into account that the course was the first of its kind and therefore experimental, it was undoubtedly successful, especially as a prototype for future development. INFOTRAC II is expected to be held in September 1979, again in Hong Kong.

In August 1978, HKPC participated in a TECNONET PO Personnel Exchange Programme, receiving four PO staff for on-the-job training. The informal atmosphere and opportunity for exchange of ideas made the experience valuable and stimulating both for the participants and for the HKPC Information Staff.

Associated Activities

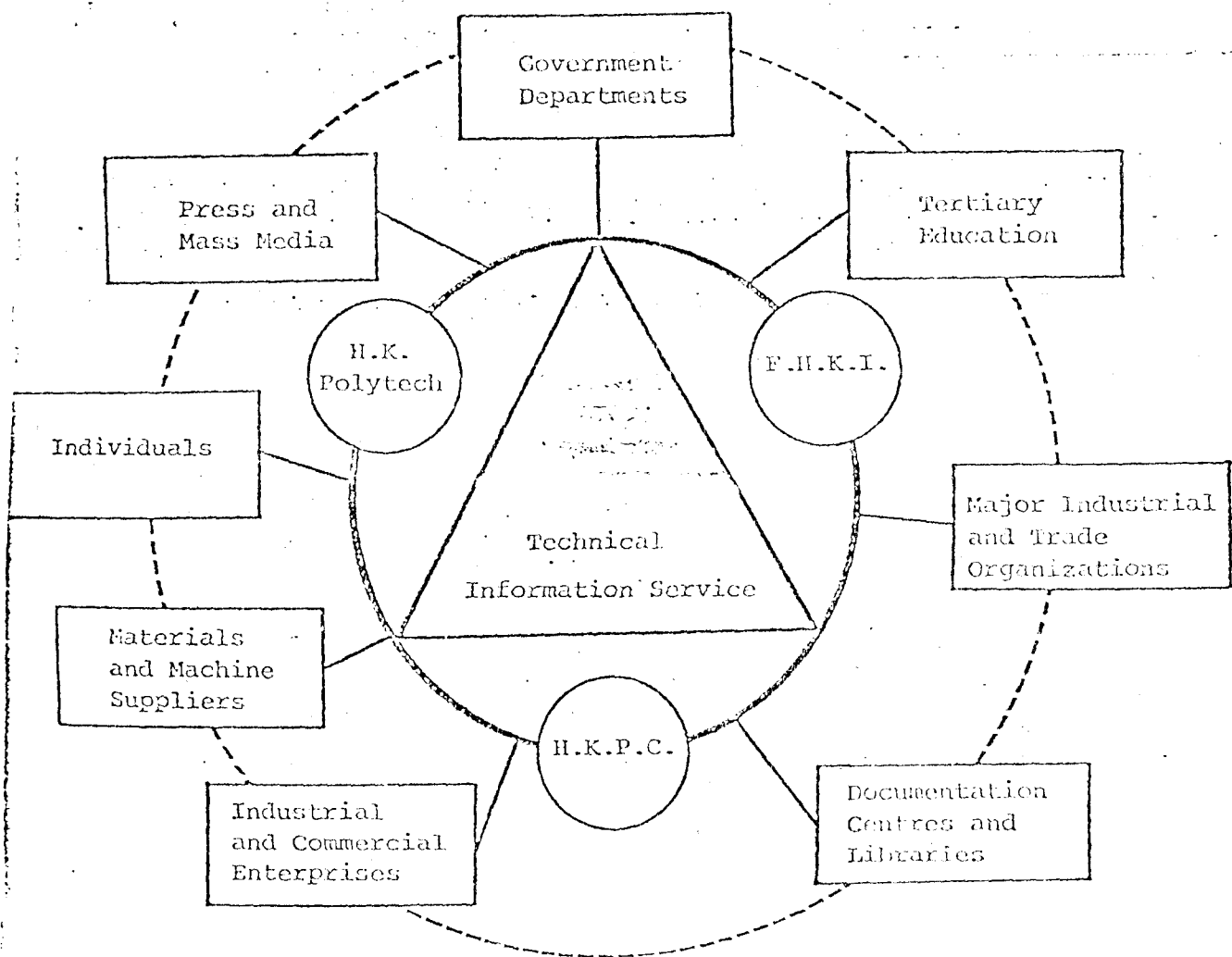
The provision of information, in HKPC's view, involves far more than the printed word. With this in mind, mention should be made here of some other industrial development activities in which the Information Section has been involved. These include: a Furniture Industry Study Mission to Europe; a Study Mission to Japan on the Industrial Engineering of Mould Making (of vital importance to the plastics industry); a Feasibility Study on Communal Raw Materials Preparation Facilities for the Furniture Industry; and the organization of a Furniture Materials and Equipment Exhibition to be held in August 1979.

NATIONAL SOURCES OF INFORMATION FOR INDUSTRY

<u>Organization/Address</u>	<u>Speciality</u>
1. Agriculture and Fisheries Department 393 Canton Road, 12-14th floors Canton Road Government Offices Kowloon, Hong Kong	agriculture, horticulture, livestock breeding, and marine science
2. Census and Statistics Department 608 International Building Des Voeux Road Central, Hong Kong	statistics and economics
3. Trade, Industry and Customs Department Ocean Centre, Canton Road Kowloon, Hong Kong	all matters related to trade and industry

- | | |
|--|--|
| <p>4. Federation of Hong Kong Industries
(including:
 The Hong Kong Packaging Council
 The Standards and Testing Centre)
21 Ma Tau Wei Road, 12/F
Eldex Industrial Building
Hung Hom,
Kowloon, Hong Kong</p> | <p>trade enquiries, standard specifications, packaging information</p> |
| <p>5. Hong Kong General Chamber of Commerce
902-906 Swire House
Chater Road
Hong Kong</p> | <p>comprehensive library for reference books, handbooks, guides and directory on trade and manufacturing</p> |
| <p>6. Hong Kong Polytechnic Library & Learning Resources Centre
Hong Kong Polytechnic
Hung Hom
Kowloon, Hong Kong</p> | <p>comprehensive and specialized collection with main subject fields in engineering business, accountancy, textiles and national studies</p> |
| <p>7. Hong Kong Productivity Centre
The Bank Centre 13/F
636 Nathan Road
Mongkok
Kowloon, Hong Kong</p> | <p>management productivity techniques and manufacturing technology, specialized plastics and furniture collection</p> |
| <p>8. Hong Kong Trade Development Council
Connaught Centre
Connaught Place
Central, Hong Kong</p> | <p>economics and trade</p> |
| <p>9. Hong Kong Tourist Association
Connaught Centre
Connaught Place
Central, Hong Kong</p> | <p>tourism</p> |
| <p>10. Urban Council Public Libraries
The City Hall
Edinburgh Place
Central, Hong Kong</p> | <p>comprehensive except law and medicine</p> |
| <p>11. The Chinese University of Hong Kong
University Library System
Shatin
New Territories
Hong Kong</p> | <p>comprehensive</p> |
| <p>12. University of Hong Kong
University Library
Pokfulam Road
Hong Kong</p> | <p>comprehensive</p> |

National Information Networking



MAJOR DEVELOPMENT PROGRAMS OF KORSTICAnnex VII Computer-based Information Services

Advanced computer technology provides the capability to handle large amounts of information and makes possible the integration of scattered information activities into a more efficient form. This has strengthened the motivation, throughout the world, for computerization of information services.

As early as 1974, KORSTIC developed a long term plan for computerization of its major activities, and subsequently the Computer Systems Laboratory was established in April 1975 within KORSTIC.

Since then, KORSTIC has been making every effort towards the automation of information processing and the establishment of a National Science Data Bank (NSDB) with nationwide on-line access. However, KORSTIC had been hampered in developing its overall plan, because the capacity of its computer was too small to store large bibliographic data files. Under previous arrangements only off-line batch SDI services could be offered because KORSTIC was processing information requests on a time-sharing basis with another institution's computer system.

In order to pursue the overall plan, KORSTIC acquired a medium-scale computer, an IBM 370/138 with 512 KB of core memory and 700 MB of magnetic disc units, in December 1978.

On-line experiments had been performed in the past but delivery of the new computer system will enable KORSTIC to put their on-line network into practical operation. Development of the on-line system is now in progress with software being compiled to interface the new IBM system with KORSTIC's Korean language processing and printing peripheral hardware. On-line access is currently being carried out at the computer center, but the plan calls for the relocation of the computer center to the new Daeduk Science Park and upgrading the computer system with newer generation hardware having a larger disc capacity in order to handle larger files such as CAC and to provide simultaneous access to several data bases.

As a beginning for the implementation of the master plan for establishing NSDB, a branch office of KORSTIC (Daeduk branch) is about to open in July 1979 to take up preparatory work for the construction of permanent buildings as well as to meet the information requirements of various R & D institutes in the new science town and local industries in and around the region. Along with the new computer systems, NSDB will have 4 switching centers and 21 terminals throughout the country by the end of 1982. (Refer to Appendix 1)

Meanwhile, KORSTIC has embarked on an ambitious expansion of its tape library. Past off-line SDI services had been limited to CAC, INSPEC, ISMEC, and INIS. From April of this year access to CIN, DERWENT, USGRA, and COMPENDEX will be offered to the public. In addition to these data base acquisitions, the possibility of linking up with other international data base services via data transmission networks is being explored.

Another major advantage of the new system is that KORSTIC will for the first time be able to offer Retrospective Search (RS) services for all holdings in the tape library instead of being limited to current awareness searches of the most recently received tapes. With both SDI and RS services being offered on-line throughout the country from July of this year, the receptivity of computer-based reference services by Korean users will take a giant step forward.

II Information Review and Analysis

To help industry improve products and develop new technology, KORSTIC has been engaged in the review of foreign technical developments and highlights, and thus publishing a monthly journal entitled "New Products and New Technology".

Furthermore, KORSTIC has embarked on an information analysis project which aims at promoting the machine and tools industry by providing detailed information and analysis on a specific technology, the owner of industrial proprietary rights, development levels not only in the country but in other countries. To carry out this project effectively, a specialist group is organized, which is comprised of prominent scientists and engineers working at various universities, while an internal task force assists them in acquiring necessary comprehensive information. As a result, a monthly publication containing a number of state-of-the-art reviews (STAR) on selected technology has been issued since 1978.

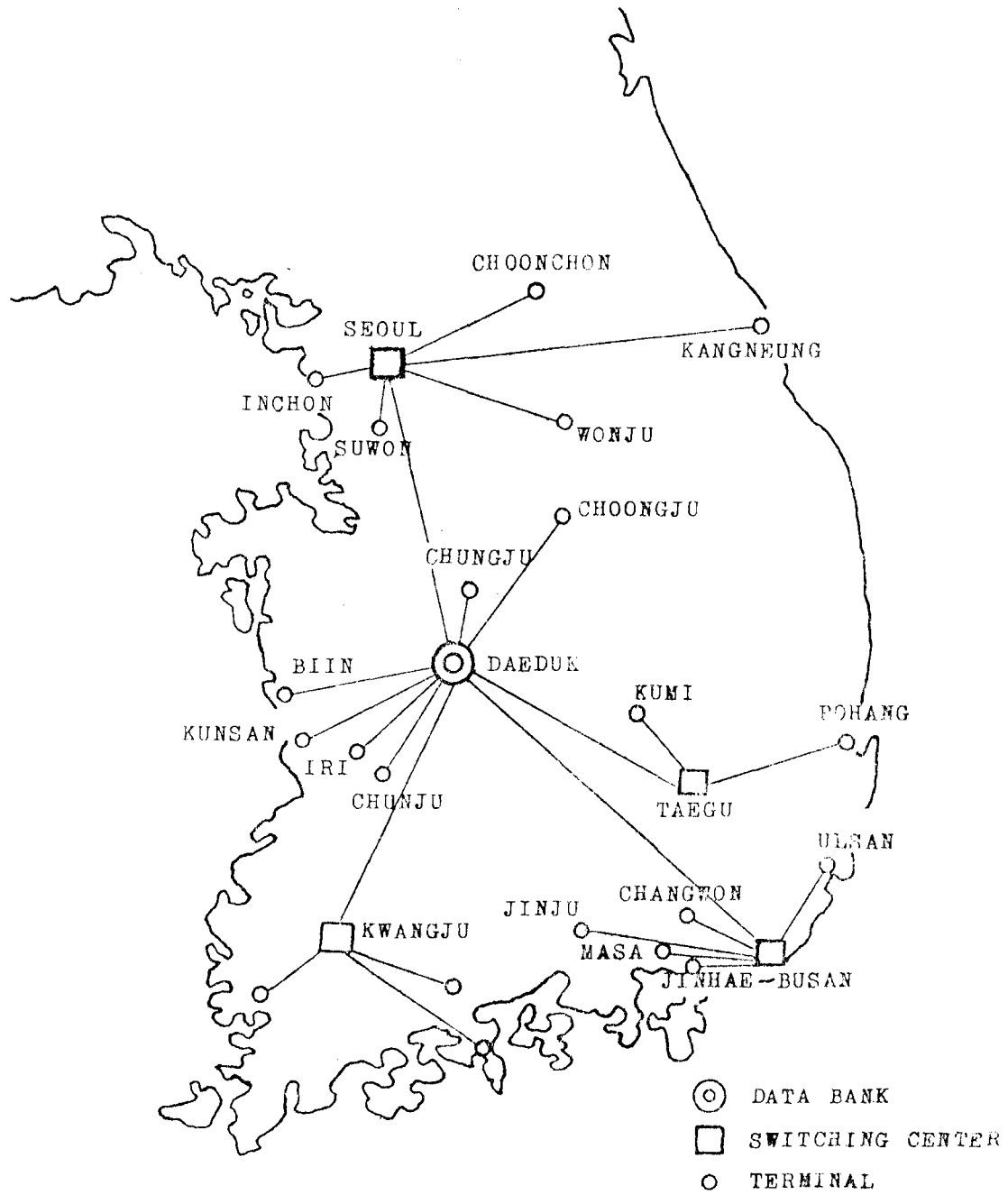
III On-going Research

It has been found that scientists and researchers often spend up to 50% of their R & D time in procuring necessary information for their research projects. To assist their researches in this regard, most countries have established a system which facilitates information exchange among researchers and provides easy access to information on research currently being planned, under way, or recently completed. UNISIST initiated a worldwide compilation of on-going research projects and issued a directory in 1977. Services of this sort save time and help identify current trends in research, allowing a more efficient use of manpower and funds.

In 1975, a comprehensive survey of on-going research projects was carried out on a national basis in Korea. KORSTIC set out a pilot compilation of projects in science and technology and published a directory which contained information on 3,000 projects and 4,700 scientists involved. In recognition of the importance of this survey, KORSTIC continues to enhance its scope and effectiveness.

Currently, KORSTIC is implementing an On-going Research Retrieval System (ORRS). The file is now being compiled in machine-readable form enabling continual updating. Access to the ORRS data base will be available to researchers through KORSTIC's nationwide on-line information retrieval network.

Appendix 1. Data Bank Communication Network



INFORMATION/NETWORKING; EXTENSION-ENQUIRY

- III. Status: At present 2 fully qualified librarians on research and standards section respectively. Regular publications of SIRIM are Berita SIRIM, 2 journals contents, standards received for the month and Aliran Teknologi.

Future Plan: Bibliographies, holdings, translations, audiovisuals computer facilities.

- V. Information Resources: Universities, Colleges, USIS, British Council, statutory bodies, government departments, standards bodies, private firms.

Linkage: National Library grid system on computer? Local specialized agencies.

Distribution and subscription on publications to POs (and the above-mentioned bodies).

TECHNONET: Digest quite useful for development of extension work. NRC/TIS TECH BRIEFS to be continued. Asian supplement due?

- VI. Networking: Mainly arising from technical enquiries.

Outside sources: To develop UNIDO's Question & Answer Service. Interest in SEAMEO/UNESCO Documentation Centre. Satisfactory cooperation received.

- IX. INFOTRAC II: Possible candidate familiar with TIS, TIC. Exposure to resource personnel, observer, experts. Suggest course syllabus include Computer.

Action Plans: Agrees to proposal on stock of specialized information, films. Suggests listing of extension, enquiry work, identification for expert consultancy.

TECHNICAL INFORMATION SERVICES
PROVIDED BY MARA

Annex VIII

Current Activities

- i) Direct contact with potential and current entrepreneurs through its extension officers at the State and District levels.
- ii) Publications, Mass Media and Question and Answer Services.

MARA has 216 extension officers posted at State and District levels. These officers are in direct contact with potential entrepreneurs (those who have attended the motivational training courses) and current entrepreneurs. Basic information on business opportunities, technical and business know-how is provided by these extension officers. More advanced or highly technical information is provided by specialised staff at headquarters.

MARA publishes a pamphlet titled 'MARANIAGA' once in two months. 5,000 copies are distributed mainly to the Malay Chamber of Commerce, Universities and Colleges, secondary schools, libraries and to MARA extension officers in the State and Districts. The contents are mainly:

- a) Success stories of Bumiputra individuals which would inspire and serve as an example for other Bumiputra in business.
- b) Seminars and dialogues conducted by MARA.
- c) Summary of speeches and advice given by MARA Senior Officers and Ministers.
- d) Relevant abstracts from local newspapers.
- e) Answers to problems posed by entrepreneurs
- f) To a small extent business opportunities available and technical or business guidance on setting up and operating a successful business.

Project profiles and information guide booklets are distributed either directly to entrepreneurs on request or to those attending the Entrepreneurial Development Courses. As to date, MARA has published 16 project profiles.

Technical enquiry services is provided by answering directly to entrepreneurs by post or verbally. This is done at Headquarters level.

Radio Malaysia's National Network has weekly programmes called 'USAHANIAGA' covering:

- a) information and news related to the latest commercial and industrial developments relevant to small-scale enterprises
- b) campaigns to change attitudes to the non-traditional fields of investment and enterprise.

Articles are also put in the newspapers on success stories and business opportunities to make potential entrepreneurs aware of types of assistance provided by MARA and other Government Agencies.

Lectures given at the Entrepreneur Development Courses is also one of the channels used to disseminate information on MARA's facilities and opportunities available.

Future Plans

The Entrepreneurial Development Division of MARA is currently being reorganized to provide more intensive campaigns in opportunity awareness and the dissemination of information to larger areas. Plans are at hand to store information on business opportunities, markets and technical information by computers in order to alleviate the short supply of human resources.

Information centres will be set up at regional bases to provide continuous and sustained information to potential and existing entrepreneurs who are ignorant of opportunities and facilities provided by MARA and other Government Agencies.

The current passive role of waiting for enquiries is to be replaced by dynamic and systematic campaigns to encourage greater participation of Malays in industrial and commercial activities. This is to be achieved by the following:

- i) Conducting and updating techno-economic studies to assess the potential for industrial development and possibilities for expanding existing industries.
- ii) Informing potential entrepreneurs by dialogues and visits by Senior Government officials to dispel any doubts they may have of benefits accrued in operating their own business.
- iii) Mobile vans equipped with visual display aids will be operating at State and District levels.
- iv) Exhibitions of small industry products to inform the entrepreneurs of the wide range of products that can be made by small-scale industries and the machinery required. This is currently being tried out in Kedah, a State in West Malaysia. The exhibition will also provide technical bulletins, economic studies and means of obtaining assistance. Project profiles will be tailored to the requirements of the individual entrepreneur. This will be followed by study visits in order to motivate new entrepreneurs to go into business.

The newly formed Entrepreneurial Development Division in MARA will provide integrated assistance commencing with the development project to counselling in getting the business through its initial operations until the entrepreneur is able to manage the unit profitably. To this end, plans are at hand to recruit an additional 170 District MARA officers. Information collection and dissemination will play a crucial role in the gigantic task ahead of developing some 3,000 new entrepreneurs by 1980.

TIC3, Singapore
22-27 February 1979

UP ISSI Philippines
Mrs Leticia E Aquino

Annex IX

STATUS/UPDATE ON THE DEVELOPMENT OF
UP ISSI INFORMATION ACTIVITIES AND ITS FUTURE PLANS

Status/Update on Information Activities

The UP Institute for Small-Scale Industries (UP ISSI) through its Industrial Information Department responds to environmental and internal challenges in the area of small and medium industry (SMI) development by providing appropriate and timely industrial packages to small and medium industries, policy makers and institutions engaged in the development of SMIs. With this in view, UP ISSI assumes a dynamic stance in industrial information selection acquisition, processing, analysis/synthesis and dissemination. It took off from its traditional hit and miss approach to a more fluid and integrated industrial information system.

The major information activities of UP ISSI in 1978 have been:

1. Multi Media Information Processing and Documentation

(Acquisition, cataloguing, indexing, abstracting, storage and retrieval of both print and non-print resource materials.)

2. Technical Inquiry Service

(Analysis/synthesis of technical inquiries and packaging of technical information requirements.)

3. Publication of Information Bulletins

(Quarterly "Small Industry Journal", monthly "Current Awareness Lists", "Current Contents" and "Newsletter" and weekly "Newsbriefs".)

4. Reprography

(Audiovisual documentation and production.)

5. Special Projects

(Small Industry Information Management Training Courses (SINFOMAN) for Processors and for Users; Countryside Selective Dissemination of Information (SDI) through Trade and Industry Associations and Compilation of a Directory of National Sources of Information for Small Scale Industries in the Philippines.)

Review of 1979 Targets

This year will mark the launching of new projects and activities:

1. Special Collection Development - the building up of a special collection of all published researches on SMI in the Philippines and other countries.
2. Operationalization of Management Information System for SMI policy makers.

3. New Publications
 - (a) SDI Current Awareness List and SDI Bulletins for Coconut Industry and two more industries based in the SDI users survey.
 - (b) Monographs - digest of completed UP ISSI projects.
 - (c) Manufacturers and Suppliers Directory this will be an output of countryside SDI.
4. Micro-documentation of UP ISSI reports and industry reports.
5. Operationalization of the Technical Information Services in the SDI Pilot Centers.
6. Internationalization of the SINFOMAN for Processors and for Users.
7. Operationalization of the National Industrial Information Networking (NIIS) for Small Scale Industries in the Philippines (subject to availability of funds).
8. Strengthening foreign linkages especially with TECHNONET POs and other agencies.

Future Plans

Except for a few activities/projects started in 1979 and which will be carried over until 1980, more projects in line will be implemented. In the pipeline are as follows:

1. In 1980, it is projected that the Special Collection of RMDC will reach the 1 000 volume level.
 2. Launching of New Publications
 - (1) Course Catalog - an annual course catalog which will consolidate into one handy booklet all relevant information regarding UP ISSI's training programs.
 - (2) Supplement of the National Directory of Information Sources for SMSI.
 3. Documentation Activities
 - (1) National Industrial Information System (NIIS) Documentation - this video and slide presentation will show the network Mechanism of NIIS with UP ISSI as the centre node linking with the regional centres.
 - (2) Updating of UP ISSI Briefing.
 4. Countryside SDI Update

The countryside SDI will be evaluated after one (1) year of operation. Based on this evaluation, the outputs of this project will be modified so as to be dynamically responsive to the varied and diverse needs of the target clients. It is envisioned that this project will have been computerized by this time.
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PROPOSAL FOR INDUSTRIAL INFORMATION NETWORKING SYSTEM

Rationale

The ideal and basic approach to small-scale industries information dissemination process is the enrichment of information resources within a centre node for transference to subnode and much smaller nodes until the information reaches a target clientele. This is coupled with the aim of maximizing the utilization of information. However, constraints are met in the use of this approach. Firstly, POs of TECHNONET are characterized by varying small industrial and technological activities. Compounding the situation is the existence of various libraries, documentation and information centres of various libraries, documentation and information centres of varying functions, scope and efficiency in different institutions, departments and agencies, engaged wholly or in part in the assistance of small industries. In an effort to service their own target clientele and specialized group of staff, these sources of industrial information have been organized individually and separately. Moreover, there exists a minimum of coordination, cooperation and complementation among the POs, despite the commonality in socio-economic goals.

The need for information networking their countries' both on the national (within the country), regional (within TECHNONET) and international (other foreign linkages) level is, therefore, felt in the face of economic and environmental pressures created on the need to deliver industrial information more consequentially and with progressive direction. These pressures demand that organizations share rather than duplicate resources, including information facilities.

Towards this end, this paper presents a proposal for networking arrangements among various POs of TECHNONET. Further, it stresses the need to link a regional node of industrial information with a bigger node.

The networking arrangements is anchored in the following objectives:

1. To coordinate the information activities and services of participating centres into a flexible but cohesive information network in order to provide appropriate and efficient information to small industries.
2. To provide national, regional and international information services relevant to current needs and with potentials for development, to meet the needs of future generators, processors, dissemination agents and users of information.
3. To maximize the utilization of existing information services and to develop new ones.
4. To promote national, regional and international linkages and foster for exchange of information.
5. To support and encourage the development of facilities for education and training in information science and technology in order to have a pool of manpower.
6. To support and actively participate in research, development and innovation in information science, technology and communications to provide efficient information services and to improve the quality of information provided by these services.

Brief Description of the Network on the National Level

A TECHNONET PO of one country will be designated as the centre node, and major organizations directly engaged in small industry will constitute the subnodes of the system. The nodes will develop as an integrated national system by utilizing the existing information facilities and potential information facilities for small industries in the country. The centre node will coordinate the activities and seek the cooperation of the individual information centres (sub-nodes) according to well-defined guidelines and division of responsibilities. A committee representing all participating agencies will be organized to formulate short and long range programs in order to ensure necessary inputs of men and materials, to assign priorities and to evaluate performance.

On the Regional Level and Relevant International Organizations

The present set-up of TECHNONET and its linkages with international organizations are well defined and acceptable, except for some recommended implementation strategies which are enumerated in this proposal.

Implementation Strategies

National Networking

1. Organization of project team, which will be composed of both information and extension officers with basic training in the field;
2. Information process capability survey which involves the POs' (centre node) information management capabilities. TECHNONET may consider the project proposed by UP ISSI entitled "Information Centres of TECHNONET Participating Organizations (POs): An Assessment".
3. Identification of possible sub-nodes.
4. Holding of series of meetings to define commonalities and differences among the different agencies.
5. Information resources survey which involves the collation of all information available in each agency and an interview on the possible outputs they can undertake.
6. Conceptual framework of a national network within the PO country.
7. Training of information processors.
8. Signing of memoranda of network agreement.
9. Operationalization of information services.
10. Monitoring and evaluation of the network.

Regional Networking (Expected to be accomplished through TIC3)

1. Review of present activities of TECHNONET and assessment of each information centre (tie up with UP ISSI proposed project).
2. Designation of TECHNONET Centre and an Alternate PO as the Centre Node.
3. Conceptual framework of a regional network within TECHNONET defining the responsibilities of the Centre Node and its subnodes.
4. Training of information officers.
5. Operationalization of the network.
6. Monitoring and evaluation of the network.

It will be noted that the above strategies as defined are already being implemented by TECHNUNET. Thus, it is viewed that what is necessary is the strengthening of the network and the pledging of commitments and full support by each PO. Strengthening of the network can be done easily by defining the problem confronting the POs and TECHNUNET Centre.

International Networking

It is perceived that networking with international organizations will automatically be achieved as soon as a strong national and regional networking system is in operation.

Project Timetable

Since Regional Networking is now in operation, the immediate problem foreseen is National Networking. If immediately implemented with the full support of IDRC/TECHNUNET Centre, the project may be operational within one year. But again, the timetable will depend on the POs suggested activities.

Budget

Each PO should be able to propose its own budget.

NATIONAL SOURCES OF INFORMATION FOR INDUSTRY

Directory of National Sources of Information for Small Scale Industries in the Philippines

The UP Institute for Small Scale Industries (UP ISSI) has just completed through the generous assistance of IDRC the completion of a directory of national sources of information for small scale industries. This gave UP ISSI an opportunity to assess the capability of various organizations in the country in terms of supplying raw data to strengthen the collection of UP ISSI in supporting its Technical Information Services on the domestic front as well as with TECHNUNET and other international linkages engaged in small industry development.

Networking Arrangements

Informal networking arrangements in terms of resource sharing is presently being practised between UP ISSI and the organizations included in the directory. Written formal memorandum of agreement follows as soon as the National Industrial Information System (NIIS) for Small Scale Industries in the Philippines becomes operational.

National Industrial Information System (NIIS) for Small Scale Industries in the Philippines

UP ISSI has conceived of a system to coordinate and integrate the information activities of information centres of various organizations of varying scope, functions, sophistication and efficiency. As a starting point, the 11 member agencies of the Commission on Small and Medium Industries (CSMI) have been identified. The network's ultimate aim is to assure all those in need of information have access to the systems various points as well as that at least a copy of all worthwhile information is available somewhere in the network.

As preliminary strategies for the network, UP ISSI initiated a series of workshops participated in by representatives from CSMI member agencies to familiarize the participants on the concept of a national network for SMSI and the rationale why UP ISSI is looking into the capabilities of each member agency as a source of information in order to arrive at an overview of the possible respective output these agencies can undertake.

After the series of workshops, UP ISSI, through IDRC/TECHNUNET's assistance, launched an information resource survey, the expected output of which is the National Sources of Information for Small Scale Industries in the Philippines. A training course also initiated for both processors and users aptly called Small Industry Information Management Course for Processors (SINFOMAN-PROCESSORS) and the SINFOMAN for Users. Again, through the assistance of TECHNUNET ASIA, a Countryside Selective Dissemination of Information Through Industry Associations was also launched.

At this point in time, UP ISSI is preparing another workshop to formalize a Memorandum Working Agreement with selected information centres both of private and government agencies capable of networking with UP ISSI and the Technology Resource Center as centre nodes.

It is hoped that by 1980 the National Network for SMSI will be in full operation.

ART 1 : CSMI MEMBER AGENCIES

ORGANIZATION	ADDRESS	HEAD/TITLE	MAJOR THRUST/S
Central Bank of the Philippines (CBP)	A Mabini Street, Manila Tel: 50-70-51 to 89 Cab: PHILCENBANK	Gregario S Licaros Governor	Financing
Development Bank of the Philippines (DBP)	P O Box 800 MCC 3117, Makati, Metro Manila Tel: 89-10-11 Tlx: PHILDEBANK/7222197	Placido L Mapa, Jr Chairman	Financing
Institute for Small-Scale Industries University of the Philippines (UP ISSI)	E Virata Hall, E Jacinto Street, Diliman Quezon City Tel: 99-70-76 / 98-10-34 / 98-92-38 Cab: INSMASCIND	Dr Paterno V Viloria Director	Training, Research, Consultancy, Information
Ministry of Agriculture (MA)	Diliman, Quezon City Tel: 99-87-41 to 47 Tlx: SECAGRI/7726 DDAPH	Arturo R Tangco, Jr Minister	Agricultural Growth and Productivity
Ministry of Industry (MI)	Industry & Investment Bldg. Buendia Ave. Ext., Makati Metro Manila Tel: 85-82-32 Tlx: ITT-5666	Vicente T Paterno Minister	Coordination of Activities of CSMI Member Agencies and Extension Service
Ministry of Local Government and Community Development	13th Floor, City Hall Quezon City, Metro Manila Tel: 97-70-61	Jose A Rono Minister	Industry Surveys, Socio-Economic Profile Studies, Small & Medium Industry Promotion
Ministry of Natural Resources (MNR)	MNR/BFD Bldg., Visayas Ave. Quezon City, Metro Manila Tel: 99-97-10	Jose J Leido, Jr Minister	

ORGANIZATION	ADDRESS	HEAD/TITLE	MAJOR THRUST/S
Ministry of Trade (MT)	Filcapital Bldg., Ayala Ave Makati, Metro Manila Tel: 86-14-11/86-18-11 Cab: MINTRADE/MINTRADE PM Tlx: MANILA/5466	Troadio T Quiazon, Jr Minister	Foreign and Domestic Trade Promotion, Consumer Protection and Education
National Economic Development Authority (NEDA)	Padre Faura Street, Manila Tel: 50-39-71 Tlx: NEDAPHIL 7780	Gerardo P Sicat Director-General	National Economic Planning
National Manpower and Youth Council (NMYC)	Central Office: Bookman Bldg Quezon Avenue, Quezon City Branch Office: Taguig, Metro Manila Tel: 61-60-14/60-98-44	Jose R Vergara	Manpower Skills and Training
National Science Development	General Santos Avenue Tel: 88-99-31	Molecio S Magno Chairman	Research in Science and Technology

PART 11 : GOVERNMENT AND PRIVATE AGENCIES

ORGANIZATION	ADDRESS	HEAD/TITLE	MAJOR THRUST/S
Agricultural Credit Administration (ACA)	2544 Taft Avenue, Manila, P O Box 310 Tel: 59-48-42/50-59-56/ 59-31-60 Cab: ACAMANILA	Teofilo T Azada	Agricultural Credit
Agricultural Information Bank for Asia (AIBA)	College, Laguna Tel: 24-77 Cab: ASIANBANK-MANILA Tlx: ITT 7425071/7420571 RCA 7222094/7222301 EASTERN 3587/3584	Mrs Filomena M Tann Project Manager	Preparation of Bibliographies of Agricultural Literature

ORGANIZATION	ADDRESS	HEAD/TITLE	MAJOR THRUST/S
Asian Development Bank (ADB)	2330 Roxas Blvd. Pasay, Metro Manila Tel: 80-72-51	Taroichi Yoshida President	Financing, Technical Assistance, Research, Investment Promotions
Asian Social Institute (ASI)	1518 Leon Guinto St Malate, Manila Tel: 59-56-13	Ms Mina Ramirez President	Teaching, Research, Conducting Seminars
Australian Embassy (AE)	3rd Floor, China Banking Corp. Bldg., Paseo de Roxas Makati, Metro Manila Tel: 87-49-61 to 65	Daniel Gerald Mutter Ambassador	Strengthening Australian-Philippine Relations
Bancom Development Corporation (BANCOM)	Bancom Building Pasay Road, Makati Tel: 85-00-11 to 60 Tlx: BANCOMDEV/7425059	Sixto K Roxas President	Investment Banking
Bureau of Agricultural Economics (BAECON)	De los Santos Bldg. Quezon Avenue, Quezon City Tel: 62-36-62/62-45-48	Jesus C Alix Director	Economic Research, Agricultural Marketing Services, Collection and Compilation of Agricultural Statistics
Bureau of Agricultural Extension (BAE)	Elliptical Road, Diliman Quezon City, Metro Manila Tel: 97-85-41	Francisco G Rentuter Director	Extension Service in Agriculture
Bureau of Animal Industry (BAI)	Rita Legarda Bldg Sta. Mesa, Manila Tel: 60-45-61/61-02-42 Cab: FIBERBOARD	Arcadio D Sarmiento Acting Director	Fiber Research and Development, Market Development and Trade Regulation

ORGANIZATION	ADDRESS	HEAD/TITLE	MAJOR THRUST/S
Bureau of Foreign Trade (BFT)	6th Floor, Filcapital Bldg Ayala Avenue, Makati Metro Manila Tel: 87-59-07/87-34-51 Tlx: 2604 DPTPH 5467 MINTRADE PN	Francisco G Valeda Officer-in-Charge	Foreign Trade Promotions, Export Services
Bureau of Forest Development (BFD)	MNR/BFD Bldg., Visayas Ave Diliman, Quezon City Tel: 96-22-01	Edmundo V Cortes Director	Protection, Development, Management, Regeneration and Reforestation of Forest Lands, Regulation of the Establishment and Operation of Sawmills Veneer and Plywood Mills and other Wood Processing Plants; Conduct studies of Domestic and World markets of Forest Products
Bureau of Labor Standards and Labor Standards Commission (BLS), Ministry of Labor	6th Floor, Phoenix Bldg Intramuros, Manila Tel: 40-39-91/40-30-78	Antonio M Nuesa Director	Planning and Policy-making of Labor Standards Laws
Bureau of Plant Industry (BPI)	692 San Andres St Malate, Manila Tel: 59-47-12/50-07-18	Domingo T Panganiban Director	Crop Production, Research, Protection; Training, Workshops
Center for Research and Communications (CRC)	1607 Jorge Bocobo St Malate, Manila Tel: 58-20-11 to 14 Cab: CLNTECOM	Dr Jesus P Estanislao	Research and Communication Work
Design Center, Philippines (DCP)	CCP Complex, Roxas Blvd Manila Tel: 50-12-61 to 68 Cab: DESIGNPHIL MANILA	Arturo R Luz Executive-Director	Product Development

ORGANIZATION	ADDRESS	HEAD/TITLE	MAJOR THRUST/S
Development Academy of the Philippines (DAP)	Main Office: Tagaytay City Metro Manila Office: Cocofed Building Amorsolo St., Legaspi Village, Makati Metro Manila Tel: 89-77-46 to 49 Cab: ACADEMYPHIL	Dr Onofre D Corpuz President	Training, Research, Management Consultancy
Economic Development Foundation (EDF)	3rd Floor, FTI Administra- tion Bldg., Food Terminal, Inc., Taguig, Metro Manila Tel: 83-00-31 to 39 Cab: EDEFOINC	Cesar M Sarino President	Economic Research, Management Consultan Training, Engineering & Industrial Research, Rural Development Services
Engineering and Development Corporation of the Philippines (EDCOP)	Ground Floor, Bloomingdale Bldg/2nd Floor, Phinma Bldg., Salcedo St Makati, Metro Manila Tel: 87-57-21/87-57-23 Cab: EDCOP MAKATI	Filemon C Rodriguez Chairman of the Board	Consultancy, Pre-feasibility Studies and Feasibility Studies
Forest Products Research and Industries Development Commission (FORPRIDECCOM)	College, Laguna Tel: 23-77	Dr Francisco D Tamalong Commissioner	Maximum Utilization of Wood and Products of the Forest
Government Service Insurance System (GSIS)			
International Rice Research Institute (IRRI)	Los Banos, Laguna P O Box 933, Manila Tel: 88-48-69 Cab: RICEFOUND, MANILA Tlx: 7425365 via ITT 7222456 via RCA	Dr Nyle C Brady Director-General	Rice Research

ORGANIZATIONS	ADDRESS	HEAD/TITLE	MAJOR THRUST/S
Ministry of Agrarian Reform (MAR)	Diliman, Quezon City Tel: 99-70-31	Conrado F Estrella Minister	Rural Development, Information Dissemination, Operation Research and Development
Metals Industry Research and Development Center (MIRDC)	5th Floor, Ortigas Building Ortigas Avenue, Pasig Metro Manila Tel: 692-66-20/692-66-23/ 692-16-88	Dr Antonio Arizabal Director	Business and Technical Consultancy Services, Industry Studies, Informati- Services, Training and Skills Upgradin Research and Development
National Census and Statistics Office (NCSO)	R Magsaysay Blvd. Sta Mesa, Manila Tel: 61-07-94/61-08-09	Tito A Mijares Executive Director	
National Computer Center (NCC)	Camp Aguinaldo, Quezon City Tel: 78-90-41 Tlx: NCCPHIL 7422000	Dr Pedro F Baraoidan	Management, Computers Training & Research Services
National Institute of Science and Technology (NIST)	Pedro Gil Street Pamita, Manila Tel: 50-30-41/50-30-00/ 50-30-51 to 53	Dr Vedasto Jose Commissioner	Industrial and Biological Research, Techno-Economic Feasibility Studies on Research Results
National Investment and Development Corporation (NIDC)	169-265 Buendia Avenue Makati, Metro Tel: 87-10-21 Tlx: NATINDEC 7222117	Panfilo O Domingo President	Development Financing, Industry Studies, Technical and Management Services
Nutrition Center of the Philippines (NCP)			

ORGANIZATION	ADDRESS	HEAD/TITLE	MAJOR THRUST/S
Philippine Atomic Energy Commission (PAEC)	Don Mariano Marcos Avenue Diliman, Quezon City Tel: 97-60-11 to 15/ 97-44-19/97-46-45	Dr Librado D Ibe Commissioner	
Philippine Coconut Authority (PCA)	Don Mariano Marcos Avenue Diliman, Quezon City Tel: 95-45-01/98-87-06 Tlx: PHILCOA/ITT 2016 PN EASTERN 3371 PN	Luis R Balta Administrator	Coconut Studies & Research, Training & Extension Services
Philippine Council for Agriculture and Resources Research (PCARR)	Los Banos, Laguna Tel: 23-08/23-75/22-69/ 24-96/23-50	Dr Jose D Dela Cruz Jr Director-General	Development of a National Research Program in Support of the Development of Agriculture, Fisheries, Forestry and Mining
Philippine Inventors Commission (PIC)	3rd Floor, PTRI Building Gen. Santos Avenue, Bicutan Taguig, Metro Manila	Felipe D Saetillat Commissioner for Invention	
Philippine National Bank (PNB)	237-275 Escolta, Manila P O Box 1844 Manila Tel: 40-20-51 Cab: PHILNABANK Tlx: ITT 0170/PNA 7362	Amelio O Domingo President	Preparation of Economic Industry & Project Studies, Publications
Philippine Sugar Commission (PHILSUCOM)	North Avenue, Diliman Quezon City Tel: 98-06-61 to 66 Tlx: 4038 PSUCOM PN	Roberco S Benedicto Commissioner	Research and Development of Sugar Industry
Philippine Textile Research Institute (PTRI)	PTRI Bldg., Bicutan, Taguig Metro Manila Tel: 78-86-62/78-27-22 (local 213)	Ricardo Cruz Director	Textile Research Programs, Technical Manpower Training, Information Processing and Dissemination

ORGANIZATION	ADDRESS	HEAD/TITLE	MAJOR THRUST/S
Private Development Corporation of the Philippines (PDCP)	PDCP Building, Ayala Avenue Makati, Metro Manila Tel: 85-06-86 to 97 Tlx: PRIDECOP/ITT 5055 PHILCOM 2028	Vicente R Jayme President	Development & Financing, Investment, Management Consultancy, Research, Publications
Science Foundation of the Philippines (SFP)	PTRI Building, Bicutan Taguig, Metro Manila Tel: 78-23-93/78-86-62 locals 214 & 215	Soledad Anchiola Director	Science Education
Small Business Development Foundation Inc (SBDF)	c/o CCP Building Magallanes Drive Intramuros, Manila Tel: 49-83-21 to 25	Gil J Puyat Chairman	Small and Medium Industry Profiles Preparation; Conduct of Project Feasibility Studies

PART 111 - ACADEMIC INSTITUTIONS

ORGANIZATION	ADDRESS	HEAD/TITLE	MAJOR THRUST/S
Asian Institute of Management (AIM)	Paseo de Roxas, Makati Metro Manila Tel: 87-40-11 to 19 Cab: AIM MANILA	Gabino A Mendoza President	Management Education; Case Writing and Development
Asian Labor Education Center University of the Philippines (UP ALEC)	UP Campus, Diliman Quezon City Tel: 99-65-96 Cab: UP ALEC	Manuel A Dia Dean	Teaching, Conduct of Seminars on Industrial Relations; Extension Services on Worker's Education
Baguio Central University (BCU)	18 Bonifacio St., Baguio City Tel: 48-49	Dr Margarita J Fernandez President	Academic Institution offering degrees in Commerce, Education, Public Administration, and Engineering

ORGANIZATION	ADDRESS	HEAD/TITLE	MAJOR THRUST/S
Cebu Central College (CCC)	Juan Luna-Sanciangco Street Cebu City Tel: 7-22-06/7-22-07/ 7-22-08/9-11-64	Atty Augusto W Go Director/Treasurer	
Colegio de San Jose Recoletos (CSJR)	Magallanes Street, Cebu City Tel: 7-56-00/7-50-83	Fr Blas Montenegro President	Teaching, Conducting of Seminars
College of Business Administration University of the Philippines (UP CBA)	Conrado Benitez Hall UP Campus, Diliman, Quezon City Tel: 98-58-18/97-74-66 97-79-91 Cab: BIZADUP	Dr Emmanuel T Velasco Dean	Teaching, Research, Development of Curricular Materials including case studies, extension-oriented seminars for business community
College of Engineering (UPCE) University of the Philippines	Diliman, Quezon City Tel: 97-60-61 loc. 260, 509	Alfredo L Juino Dean	Teaching, Research, Extension Services
De La Salle University (DLSU)	Taft Avenue, Manila Tel: 50-46-11 to 19 Cab: DELASAL	Bro H Gabriel Conon FSC	Teaching, Training, Research, Development of Curricular Materials, including case studies, extension-oriented studies, publications
Iloilo School of Arts & Trades (ISAT)	La Paz, Iloilo City Tel: 7-47-74/7-57-28	Mr Alfonso F Albason Vocational College Superintendent	Teaching, Extension Services, In-Service Training, Socio-cultural Activities
Mindanao State Agricultural College (MSAC)	La Trinidad, Benguet 0211 Tel: 483	Dr Bruno M Santos President	Teaching, Research, Extension Services in Agriculture
Mindanao State University - Iligan Institute of Technology (MSU-IIT)	Tibanga, Iligan City Tel: 20-99-6/20-99-8	Mr Manaros B Boransing Vice President for MSU-IIT	Teaching, Research, Publication, Organ- ization and Development of data bank for MINSUPALA, Training

ORGANIZATION	ADDRESS	HEAD/TITLE	MAJOR THRUST/S
Regional Adaptive Technology Center (RATC)	Mindanao State University Marawi City Tel: 37-C	Bienvenido S Tabada Jr	Provision of Technology Packages, Entrepreneurship Development Programs, Research and Documentation
Saint Louis University (SLU)	P O Box 71, Baguio Tel: 30-43/27-93	Rev Ghisleen De Vos Acting President	Mini-courses on Small Business Management, Research, Industry Dialogues
St Peter's College (SPC)	Iligan City Tel: 20-86-2	Mr Danila A Pumongbayan President and Chairman of the Board of Trustees	Teaching, Research
University of Baguio (UB)	General Luna St., Baguio City Tel: 35-40/30-71/49-15	Dr Fernando Bautista Chairman of the Board of Trustees	Academic Institution granting degrees on Commerce & Civil Engineering
University of the Philippines College Baguio (UP CB)	Baguio City		
University of the Philippines College in Cebu (UP CC)	Gerardo Avenue, Lahug, Cebu City Tel: 7-73-35/9-77-46	Nestor M Nisperos Dean	Teaching, Research, Seminars
Southeast Asian Regional Center for Graduate Study and Research	College, Laguna, P O Box 720, MCC, Makati, Metro Manila Tel: 23-17/22-90 Cab: SEARCA, Manila	Dr Jose D Drilon, Jr Director	Teaching, Training, Research develop- ment, Publications on crop and livestock producing, Agricultural consultancy Services
Sycip, Gorres, Velayo & Co (SGV)	6760 Ayala Avenue Makati, Metro Manila Tel: 89-30-11 Tlx: MANILA RCA 2160/IIT 5096 EASTERN 63743	Roberto V Ongrin Chairman, Management Committee	Financial Auditing, Management Consul- tancy, Tax Advisory Services, Project Management
Technology Resource Center (TRC)	TRC Bldg., Buendia Ave Extension Makati, Metro Manila Tel: 85-98-11 to 26 TECHCENTER/4373 TRCPN	Arthur M Alvendia Officer-in-Charge	Information Technology, Technical Services, Project Development Services

SUGGESTIONS ON THE SYLLABUS OF INFOTRAC II

Assuming that the participants will be non-librarians as with INFOTRAC I, the following suggestions are given based on last year's Syllabus:

1. Session III - Library Organization lecture should be shortened and provide a time for discussion and questions from participants. Perhaps volunteer participants should be allowed to discuss the type of library they have in their organization and the problems they encounter in using them. We should bear in mind that the participants will be users of libraries not librarians.
2. Practical Work or Exercises should be given after the lecture-discussion on a particular topic. (Example, Practical Work on Indexes and Abstract Usage should be given after the lecture discussion on Information Retrieval II.)

By this method the participants will be able to do their exercises with ease, the theoretical portion being still fresh in their minds.

3. Session XI should be expanded. The lecture should cover one session, demonstration and discussion another. This is very important for an information officer because this is one area of information handling wherein librarians have to depend on the information officers. Initial briefing on Project Work should also be a separate session.
4. Session XIII Industrial Profiling and Session XIV Technical Inquiries should be supplemented with Practical Work.

Based on INFOTRAC I evaluation, suggestions are as follows:

1. Practical Work should supplement the lectures in the form of mini-workshop. This will help the participants in accomplishing their projects.
 2. Projects to be done by the participants should be geared towards future implementation in their own POs or used to innovate the existing Information system/services.
 3. Practical Work or Exercises may be done by groups.
 4. A training staff or a coach should be assigned to a group of three or four participants who will be on hand as the problem arises in preparing their projects.
 5. Evaluation of lectures/topics and lectures should be done after every session.
-

TYPES OF TRAINING NEEDED BY UP ISSI INFORMATION STAFF

TYPE OF TRAINING	BRIEF DESCRIPTION OF REQUIREMENTS	RECOMMENDED DURATION	REMARKS
1. Information handling	Information Analysis/Synthesis; technical information services; information bulletins (preparation and publication) and national networking	3-5 weeks	For INFOTRAC II
2. Audio Visual Documentation	Multi-Media resources organization from selection, acquisition, cataloging, indexing, storage and retrieval	2-3 weeks	On-the-job Training Course
3. Computers	An overview of how computers work in a national network; storage and retrieval by computers	3-4 weeks	On-the-job Training Course for Senior Information Officer
4. Information Services Operations	An overview on the operations of an Information Center, preparation of CAS for computer print outs	3-4 weeks	On-the-job Training Course

TIC3, Singapore
22-27 February 1979

EDF Philippines
Mrs Purita M Festin

Annex X

EDF'S TECHNICAL INFORMATION
DISSEMINATION PROGRAM

This paper describes briefly the Economic Development Foundation's (EDF) TIS Program which was started in 1975. Originally conceived to serve the small- and medium-scale industries, the service has since been expanded to meet the information needs of large industries, government institutions and individual researchers and the rural sector. As a component of the EDF's TIES program, technical information dissemination has, during the last 40 months, essentially accomplished its goal as enunciated in the EDF-TIES 3-year Forward Programme.

With the wealth of Information contained in the Tech-Briefs sent in from TECHNINET Centre, TIES felt it necessary to create a demand for these. Initially, an annotated subject list of articles deemed relevant to local small- and medium-scale industries were published. Thus, "TIES", the publication, was born.

"TIES" featured articles of concern to specific sectors and invited readers to send in their requests for the complete articles. However, owing to the poor reader response generated, "TIES" was decirculated after three (3) issues.

In the hope of increasing readership outreach, TIES published the annotated list in a leading business daily, the Business Day, which has a circulation of 35,000. The first installment appeared under a column titled "Techno-Briefs" in September 1975. Intended as a weekly feature, Techno-Briefs had appeared a total of 40 times by June 1977. The publication generated request for hard copies (6,330 to date) and encouraged a significant number of readers to browse through the entire Tech-Briefs collection at EDF.

However, a users survey in early 1976 revealed that the information has primarily served the needs of large industries, more than the small entrepreneurs. EDF-TIES then decided to reorient the service so as to provide the small industry sector the greatest possible benefits from improved productivity through the transfer of appropriate technical information. Thus, in October 1978, with the support of TECHNINET ASIA, the Technical Information Service (TIS) was geared toward the following areas:

- * Technology Packaging - The preparation of primers for small business management and the publication of an Appropriate Technology series.
- * Selective Dissemination of Information (SDI) Service - To make the technical information service more relevant to target users, the SDI service was launched. Initially, the program covered the food and furniture industries. The results of the first phase, which was essentially a survey of the subject interests of the sectors, was not very encouraging, however. The poor response could be attributed to a number of factors, chief among which is the lack of basic information on small industries at the firm level. Nevertheless, EDF feels the service will work with a more selective industry sample.

During this period efforts were made to link up with other information centres and data banks, both local and foreign. The formal link-up with the National Science Development Board (NSDB), the local institution which functions as the key referral and coordinating center of a Philippine network of scientific and technological information service, was firmed up in the 2nd year.

Arrangements for retrieval services between foreign information centers such as the Alberta Research Center, ITDG of England and Battelle Memorial Institute and EDF have been made by the EDF's information staff.

Looking back, what remains to be implemented in the original (TIS) program** is the assistance to NSDB in the setting up of the Philippine Scientific and Technological Information Center. This was not really shelved but the operationalization of the center has been delayed. However, the funds for the Science and Technology Center in the Philippines was approved last year, the implementation of which will take 3 years.

Plans call for deepening and reorienting the present information service of EDF through the on-going and proposed projects which include:

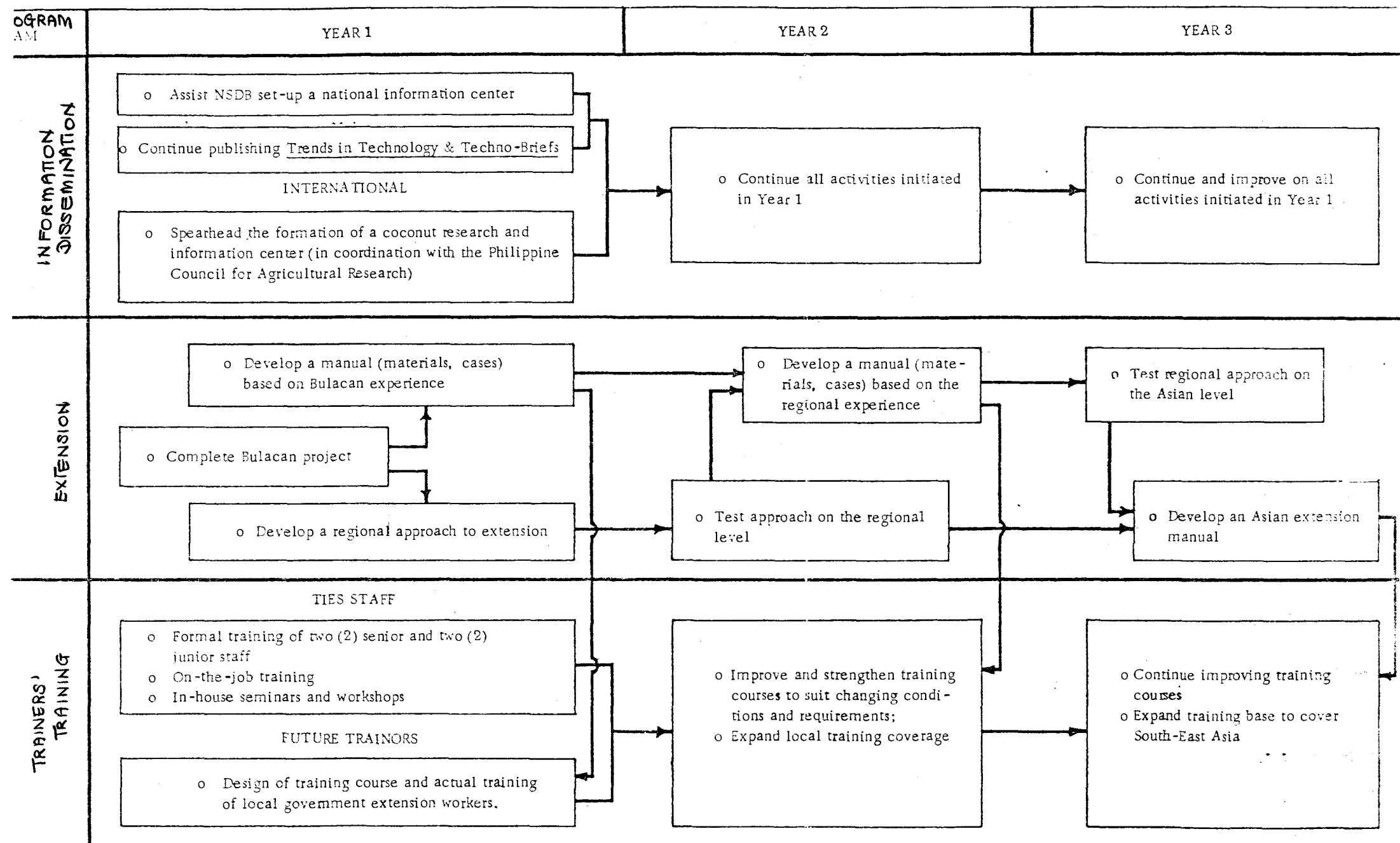
1. Documentation of technology transfer models in print and other appropriate audio-visual modes. The documentation effort will encompass the source and availability of technical information, both local and foreign, as well as the means by which the technology is disseminated, adapted and utilized by the small and medium industries.
2. Jointly with the NSDB, identification of the EDF's role in the overall program of setting up the Center for which a pilot project is being developed for implementation this year.

The collaborative project is envisioned to be piloted in Region 7 or 8 in the Philippines and will have as components 1) the active information service for small and medium industries, 2) a training component for both the generators and users of the information service.
3. The continued publication of "Trends in Technology" under a different title and oriented more towards appropriate technology information. A series of publications on the state of the traditional and adaptive technologies is also envisioned.
4. The continuation of the SDI service to small and medium industries.
5. To upgrade EDF's resources, both manpower and infrastructure, operationalization of a 5-year program (to be tied up with the NSDB project) starting in 1979.
6. Continuation of all other technical information dissemination activities started in years 1 and 2.

** See timetable

WORK DESCRIPTION	MONTHS																																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Survey, identification of types of information needs and assessment of over-all information requirements																																				
Setting up of components of information service:																																				
(1) Field Liaison Service																																				
(2) Active Information Service																																				
(3) Question and Answer Service																																				
(4) Conference and Training Service																																				
Established link with local, foreign and international information centers																																				
Establish system for information storage and retrieval																																				
Networking, national, international																																				
Put NSDB in the setting up of Philippine Scientific & Technological Information Center																																				

EDF-TIES 3-YEAR FORWARD PROGRAMME



NATIONAL SOURCES OF INFORMATION

Department of Industry and the Board of Investments (BOI)

Industry profiles, exports, imports, foreign investment and related data and information.

Department of Agriculture with its various agencies, i.e. Bureau of Plant Industry, Bureau of Agricultural Extension, Bureau of Animal Industry, Bureau of Agricultural Economics, Bureau of Soils, National Grains Authority, Philippine Coconut Authority, Philippine Sugar Institute, Philippine Tobacco Administration, Philippine Virginia Tobacco Administration

Agricultural data and information: on crops, livestock and natural resources.

Department of Natural Resources and its various agencies, namely: Bureau of Mines, Bureau of Forest Development, Bureau of Lands, Bureau of Fisheries and Aquatic Resources, Forest Research Institute, Fishery Industry Development Council, Surigao Mineral Reservation Board, Natural Resources Development and Management Council, National Water Resources Council.

Department of Trade and its implementing agencies: the Philippines Patent Office, Bureau of Standards, the National Cottage Industries Development Authority, Trade Assistance Centers and the Design Center of the Philippines.

On exports, imports; trade opportunities

Technology Resource Center

Clearing house and Data Bank

Energy Development Board

Energy documents

NATIONAL SOURCES OF INFORMATION FOR INDUSTRY

National Science Development Board (NSDB) and its organic agencies and attached agencies.

NSDB on Science and Technology; social sciences; science policy; science information; bibliographic reference materials.

Forest Products and Industries Development Commission (FORPRIDECOM): Forest products industry

Philippine Textile Research Institute (PTRI): textiles industrial fibers and allied fields

Philippine Inventors Commission (PIC): Inventions, patents

Commission on Volcanology (Comvol): Volcanology and allied fields

Food and Nutrition Research Institute (FNRI): Food and Nutrition

Metals Industry Research & Development Center (MIRDC): Metals industry and metallurgy

National Research Center of the Philippines (PNRCP): Basic or pure sciences

Philippine Council for Agriculture Resource & Research (PCARR): Agricultural sciences

National Institute of Science & Technology (NIST): Applied sciences, medical and biological science, specification standards

Philippine Atomic Energy Commission (PAEC): Atomic, nuclear and other related fields

National Pollution Control Commission (NPCC): Pollution and Environmental matters

University of the Philippines Institute of Small Scale Industries (UP ISSI): small scale industries

TIC3, Singapore
22-27 February 1979

SISIR Singapore
Freddy Soon

Annex XI

STATUS REPORT ON THE INDUSTRIAL TECHNICAL
INFORMATION SERVICE OF THE SINGAPORE INSTITUTE
OF STANDARDS AND INDUSTRIAL RESEARCH

I. PREAMBLE

This report is based on the report which was submitted at the Fifth Council Meeting of TECHNONET ASIA held in August 1978. Information and data have been updated, otherwise the form and content remain basically unchanged.

II. TECHNICAL INFORMATION PROGRAM

2. SISIR's Technical Information Service Program comprises:

- a. Current Awareness Service;
- b. Question & Answer Service; and
- c. Industrial Liaison Service.

3. Under the Current Awareness Service Program, to date some 21,668 articles were requested by subscribing members from commerce and industry. The subjects provided under this Program are as indicated in the attached subject checklist (Appendix I). It has been a policy of the Institute to continually revise these subjects based upon requests and priorities of members. 1,300 articles were also requested by Participating Organizations of TECHNONET ASIA who have taken advantage of this program.

...

4. The Packaged Information Program developed for architects and professionals in the building and construction industry was well supported. 328 architects and professionals are subscribing to this service. Subjects given under this packaged program are as attached in Appendix II.

...

5. The packaged program developed for production and quality control engineers continued to be well supported. 384 are subscribing to this service. Subjects given under this program are attached as Appendix III.

...

6. For all the Current Awareness Service programs offered by the Institute, scanning of journals was performed by some 45 staff from SISIR based on their disciplines. In addition, 39 Polytechnic staff are also scanning journals held in the Polytechnic Library. Staff of the National Library are also collaborating with SISIR in this project and 6 are involved in scanning journals from selected fields. The result is that the fields of interests available under the Current Awareness Service have expanded considerably and actual numbers of journals being scanned under this Service have exceeded 1,000.

7. Under the Question & Answer Service Program, an average of ten written enquiries are received every month. Questions received are posed to TECHNONET Centre or to our direct links overseas. Verbal enquiries are received at the rate of 100 per month. These are enquiries which can be handled by information staff directly over the phone or by staff of SISIR.

- 8 The Industrial Liaison Service carried out a number of State-of-the-Art surveys of industries strategic to SISIR's future development. Studies were carried out on the food industry; the electrical/electronics industry; the furniture industry; as well as the plastics industry. These studies have enabled SISIR to assess and understand some of the technical problems faced by these industries and have enabled the Institute to formulate appropriate programs and strategies.

III INTERNATIONAL LINKAGES

- 9 Staff of POs made frequent visits to SISIR for short-term attachments or for discussions about the Institute's Information Service. Last year, visitors to SISIR come from the following POs: UP ISSI; HKPC; BSCIC; IDB; and DIP. Staff of SISIR were also made available through the support of IDRC to assist Member POs in developing their information programs.

IV FUTURE PLANS

- 10 Over the next five years, SISIR intends to further diversify its Current Awareness Service Program to include information on patents, innovations and discoveries. This would mean an increase in the journals collection to include patents literature and journals on innovations and development.
- 11 State-of-the-Art studies will continue to be carried out not only as an information gathering process but also to enable management to formulate appropriate programs vis-a-vis specific industries.
-

INDUSTRIAL TECHNICAL INFORMATION SERVICE

SUBJECT LIST FOR CURRENT AWARENESS

SUBJECT

011	Metals and Alloys			
021	Plastics and Synthetic Resins	022	Rubber	
031	Ceramics	032	Glass	033 Refractories
041	Wood and Woodworking	042	Furniture	043 Textiles
045	Upholstery	046	Footwear	
051	Food	052	Beverages	053 Microbiology
061	Chemistry or Chemicals	062	Petrochemicals	
071	Forming	072	Casting	073 Foundry
075	Forging	076	Wire	077 Extruding
				078 Moulding
081	Machining and Cutting	083	Grinding	084 Machines
				085 Tools
091	Joining	092	Welding and Soldering	093 Bonding
				094 Adhesives
101	Coating, Finishing and Painting	102	Plating	104 Corrosion
106	Curing			
111	Assembly	112	Handling	113 Packaging
115	Automation	117	Storing	114 Control
121	Heating	122	Cooling and Refrigeration	123 Temperatures
124	Furnaces, Kilns and Boilers	126	Drying	127 Air-Conditioning
131	Fluids	132	Seals	133 Pressures
135	Pumps	136	Valves	134 Flows
		137	Pneumatics	138 Hydraulics
141	Drives and Bearings	143	Lubrication	144 Suspensions
151	Power and Energy	152	Engines	153 Batteries
154	Motors and Generators			
161	Electrical	162	Electronics	
171	Acoustics	172	Ultrasonics	173 Vibrations
				174 Non-destructive Testing
181	Instruments and Measurements	183	Radiography and Radioactivity	
191	Reprography	192	Printing	193 Photography
				194 Optics
201	Communications	202	Computer	
211	Civil Engineering	212	Architecture and Landscape	213 Building and Construction
214	Lighting and Fixtures	215	Concrete, Cement and Aggregates	217 Building Materials
221	Pollution	222	Water Pollution	223 Air Pollution
225	Industrial Waste Disposal			224 Environmental Control
231	Safety Protection	232	Human Engineering	
241	Management	242	Personnel	243 Training
245	Quality Control	246	Marketing	244 Production and Productivity
251	Pharmaceuticals	252	Cosmetics	
261	Vehicles	262	Transportation	263 Automobile
265	Marine and Shipbuilding			264 Aircraft
271	Industrial Design	272	Interior Design	273 Graphic Design

APPENDIX II

Packaged Information Program for
Architects

Subjects

Acoustics	171
Civil Engineering	211
Architecture & Landscape	212
Buildings and structures) 213
Building by-laws and regulations	
Lighting and fixtures	214
Building materials	217
Heating and air-conditioning	121, 127
Design	271, 272, 273
Management	241

APPENDIX III

Packaged Information Program for
Production and Quality Control Engineers

Subjects

Management	241
Production and Productivity	244
Quality	245
Two other areas (specified by members themselves)	

- 11 -

PROPOSAL FOR INDUSTRIAL INFORMATION
NETWORKING SYSTEM

I PREAMBLE

SISIR has always advocated in its annual report to the Council that linkages with POs must be strengthened and reinforced if TECHNINET ASIA is to survive. TECHNINET ASIA was formed on the basis of a network concept with funding from an external source. When TECHNINET ASIA assumes a legal entity, and when funding of the project becomes uncertain, the only tangible fact that will enable TECHNINET ASIA to continue will be the survival of the network. For POs to effectively network, certain conditions must exist. Otherwise, networking may become only a one-sided affair.

II CONDITIONS FOR NETWORKING

Networking at national level

- 2 The first basic condition to foster networking between POs must be that each PO should have a developed technical information service or program. Without such a program in each PO, there will be little to share among POs. Even if there are things to be shared, each PO must have a focal point to deal with one another. This focal point is the information service unit or section of each PO.
- 3 With a well-developed information service program, it will be easier for each PO to develop a national network within its country. National networking in information is an activity strongly advocated by UNIDO, and other UNDP organizations and PO member countries should be familiar with such programs of assistance. The formula for networking in information at a national level is in fact standard and would involve national libraries, university libraries, national information service centres, etc. In Singapore, although there is no formal networking arrangements as yet, organizations are already assisting SISIR in its Current Awareness Service and collaborating on joint projects. These organizations are the National Library of Singapore, the Singapore Polytechnic and the Science Council of Singapore. In addition, being part of SISIR ensures that ITIS is always working closely with associations such as the Singapore Manufacturers' Association, the Singapore Federation of Chambers of Commerce and Industry, the Singapore Quality & Reliability Association, the Consumers' Association of Singapore, the Singapore Institute of Architects, and many other professional bodies. Singapore has been able to achieve this perhaps because of its limited size. In other countries, more formal arrangements may be required to network on a national level, e.g. formation of a National Information Systems Committee (NATIS) as recommended by UNESCO. In the final analysis, networking at national level must remain a function of each PO. TECHNINET ASIA or TECHNINET Centre can only provide the umbrella but each PO must develop its own national network.

Networking between POs

- 4 Networking between POs can only succeed when POs are either established in their own country or have developed established information services. Because TECHNINET ASIA covers not only information but also extension services, networking between POs can involve either information or extension. However, for POs to network, it is essential that each PO would need to know the strength and limitations of one another. Networking must also be a two-way affair and not be regarded as a program whereby one PO should help another PO free of charge. Some

POs must realise that sometime, one has to pay for things worth one's while. It is proposed that to enable POs to really understand the organization and strength of each other, a sum of C\$5,000 for each PO be set aside under the TECHNINET ASIA budget to allow PO staff to travel between POs on short-term attachment programs or to work out joint projects. Money not expended within one year could be carried forward to the next. This must not be viewed as a free-for-all to allow PO staff to travel freely. Specific programs must be indicated and reports must be submitted to TECHNINET ASIA concerning such visits.

- 5 In the area of extension, some POs have indicated that they would like to acquire technology appropriate to the needs of their organizations or to the needs of their country. Some POs may have know-how to sell to other POs or to organize exposure courses for PO staff to be familiar with certain technologies. TECHNINET ASIA could set aside a sum of money to fund such programs. POs must however be clear that there is a lot of difference between "information" and "technology". Information usually can be provided free of charge but technology and its provision require much more effort and will cost much more. Networking between POs can also be promoted by TECHNINET Centre through using staff of POs to help another PO in areas within the competency of the staff concerned. This will also enable POs to understand better the organization and limitations of another PO.

Networking between TECHNINET ASIA and
other international organizations

- 6 TECHNINET ASIA has already established links with many international organizations, dealing with both information and extension. These links should continue to be maintained and further expanded as it would not incur any further expenditure on the part of TECHNINET ASIA. Specifically, in the area of information, TECHNINET should maintain closer ties and keep tabs of UN programs in the area of information, e.g. the UNISIST Program of UNESCO; and the INTIB Program of UNIDO. TECHNINET ASIA should also establish links with national information organizations in the developed countries. TECHNINET ASIA could also be a source for information packages available from the more developed countries and which are not computer based. A central purchasing source would benefit POs which would otherwise find such information packages too expensive to subscribe to. For TECHNINET Centre to maintain such linkages with information service organizations and aid agencies, it is essential for the Centre to be staffed by one experienced information personnel.

III CONCLUSION

- 7 To summarise, it is proposed that TECHNINET ASIA set aside the following sums of money to promote networking between POs:
- a. A sum of C\$55,000 to be budgetted to allow PO staff to travel between POs on specific programs of information or extension. This fund should be managed by TECHNINET Centre and not given to the POs. Funds would only be utilized on the understanding that each PO staff concerned should submit reports to TECHNINET ASIA after the visits. The purpose and objectives of the visits must be made clear.
 - b. A sum of C\$30,000 be set aside under the Extension Services Program for POs to acquire technology or know-how from other POs. This fund could also be utilized for POs to conduct courses on technologies relevant to the needs of other POs.

NATIONAL SOURCES OF INFORMATION
FOR INDUSTRY

(with their corresponding competence)

I Government & Quasi-Government Bodies

Changi Fishery Training Centre Library
Primary Production Department
Changi Point, Singapore 17

Major holdings on : fishing, fisheries, navigation,
naval architecture, marine engineering

City Veterinary Centre Library
Primary Production Department
Ministry of National Development
40 Kampong Java Road, Singapore 9

Major holdings on : veterinary science, medical sciences,
meat and food technology, nutrition
and public health

Customs & Excise Library
Customs House, Maxwell Road
Singapore 2

Major holdings on : computer science, customs legislations,
laws, tariffs, administration

Department of Chemistry Library
Outram Road, Singapore 3

Major holdings on : chemistry and related subjects

Department of Trade Library
Ministry of Finance
Ground Floor, Fullerton Building
Singapore 1

Major holdings on : economics and commerce, statistics,
business, trade and industry, markets and
marketing

Services provided : trade inquiry service

Economic Development Board Library
2nd Floor, Fullerton Building
Singapore 1

Major holdings on : economics, commerce and statistics

Economic Research Centre Library
House no 6, University of Singapore
Cluny Road, Singapore 10

Major holdings on : economics, commerce, statistics with
special emphasis on Singapore and Malaysia

Housing & Development Board Library
20th Floor, National Development Building
Maxwell Road, Singapore 2

Major holdings on : architecture, civil, structural, electrical,
mechanical engineering, building industry,
planning, public services and utilities,
management, economics, statistics, law

Services provided : library service, bibliographies

Industrial Training Board Library
Kay Siang Road, Singapore 10

Major holdings on : industrial training, management and technology

Jurong Town Corporation (JTC) Library
Jurong Town Hall, Singapore 22

Major holdings on : engineering architecture, building, surveying

Services provided : library service, enquiries service, distribution
of lists of new publications received

Marine Department Library
1st Floor, Fullerton Building
Singapore 1

Major holdings on : shipping statistics, marine engineering,
naval architecture, navigation, transportation

Marine Fisheries Research Centre Library
300-C Nicoll Drive, Singapore 17

Major holdings on : fisheries and aquatic science

Services provided : library science

Metrickation Board Library
1 Anson Road, Singapore 2

Major holdings on : metrickation

Services provided : enquiries on metrickation

Ministry of Labour Library
Havelock Road, Singapore 3

Library holdings on : industrial relations, economics, management etc

Ministry of Science & Technology Library
Kay Siang Road, Singapore 10

Major holdings on : science and technology

The Monetary Authority of Singapore Library
SIA Building, Singapore 1

Major holdings on : money, banking etc

Services provided : retrospective information searches, bibliographies,
distribution of lists of new periodicals received,
routing of new periodicals received, distribution
of content pages

National Library
Stamford Road, Singapore 6

Major holdings on : economic and social policy, economic system,
industry and commerce, finance, management
and productivity, biology, food and health,
science, research and methodology, information
and documentation etc

Services provided : distribution of lists of new publications
received, routing of new periodicals received,
distribution of content pages, retrospective
information searches, and self-initiated
bibliographies

National Productivity Board Library
off Corporation Road, Jurong Town
Singapore 22

Major holdings on : management and production

Nanyang University Library
Upper Jurong Road, Singapore 22

Major holdings on : economic and social policy, economic research,
commerce and trade, management and productivity,
biology, food and health, industry, transport etc

Services provided : distribution of lists of new publications received,
distribution of content pages, and self-initiated
bibliographies

Ngee Ann Technical College Library
535 Clementi Road, Singapore 21

Major holdings on : electrical and electronic engineering, mechanical
engineering and business studies

Pig and Poultry Research & Training
Institute Library
Primary Production Department
10½ ms Sembawang Road, Singapore 26

Major holdings on : agriculture with emphasis on animal science

Port of Singapore Authority Library
P O Box 300, Singapore

Major holdings on : shipping, law, engineering and safety,
fire engineering and fighting

Primary Production Department Library
Ministry of National Department
7th Floor, National Development Building
Maxwell Road, Singapore 2

Major holdings on : veterinary science, agriculture, fisheries
and aquatic sciences

Public Works Department Library
10th Floor, National Development Building
Maxwell Road, Singapore 2

Major holdings on : civil, electrical, mechanical engineering,
transportation and architecture

Public Utilities Board
PUB Building, Somerset Road
Singapore 9

Registry of Business (for business information)
Colombo Court, Singapore 6

Registry of Companies (for company information)
Colombo Court, Singapore 6

Rubber Association of Singapore
Rubber House, Singapore 1

Library holdings on : rubber specifications

Services provided : enquiries service

Singapore Institute of Standards and Industrial
Research
179 River Valley Road, Singapore 1

Major holdings on : economics/marketing, mechanical/civil engineering, metallurgy, physics, material science, non-destructive testing, chemistry and chemical engineering, food technology, electrical/electronic engineering, standardization and quality control, standard specifications, packaging, productivity and product development, furniture and woodworking management

Services provided : Selective dissemination of information (individual interest, group interest) on above subject areas, question & answer service, retrospective information searches, self-initiated bibliographies, distribution of lists of new publications received, routing of new periodicals received

Singapore Polytechnic Library
Dover Road, Singapore 5

Major holdings on : civil engineering, mechanical engineering, electrical engineering, production engineering, marine engineering, electronics, navigation, rubber and plastics, chemical process technology, mathematics, technical education and building

Services provided : selected bibliographies, library reference service, distribution of new publications received, routing of journals received

Singapore Science Centre Library
Singapore Science Centre Building
Science Centre Road, Singapore 22

Major holdings on : all aspects of science with emphasis on life science and technological science

Statistical Department Library
Fullerton Building, Singapore 2

Major holdings on : statistics, trade, demography, economics and commerce, agriculture, public services and utilities, official statistics etc

Stock Exchange of Singapore Library
Clifford Centre, Raffles Place, Singapore 1

Major holdings on : banking, finance and investment

Telecentre Library
Telecommunication Authority of Singapore
Dunearn/Hillcrest Road, Singapore 11

Major holdings on : telecommunication, radio communication, telegraphy,
telephony, television data transmission

Services provided : distribution of new publications received,
bibliographies, enquiry service

Timber Industry Board
4th Floor, Realty Centre
15-16 Enggor Street, Singapore 2

Holdings on : timber, furniture and woodworking

Services provided : dissemination of trade information to industry
via publications on timber statistics etc

University of Singapore
Kent Ridge Library*
Kent Ridge, Singapore 5

Major holdings on : economic and social policy, economic research,
commerce and trade, management and productivity
science and technology, finance, law, engineering,
life science, accountancy etc

Services provided : distribution of lists of new publications received,
routing of new periodicals received, distribution
of content pages, retrospective information searches,
self-initiated bibliographies

* The present library system comprises the Main Library, the Architectural Library, the Chinese Library, the Engineering Library, Law Library and the Medical Library.

II Trade Associations/Research Institutions

Asian Mass Communication Research & Information Centre (AMIC)
39 Newton Road, Singapore 11

Major holdings on : mass communications, food and nutrition, agricultural
production, personnel management

Services provided : distribution of lists of new publications received,
routing of new periodicals received, distribution of
lists of new reports acquired, selective dissemination
of information (individual interest profiles),
retrospective information searches, self-initiated
bibliographies, state-of-the-art reviews or repackaged
information

Automobile Association of Singapore
336 River Valley Road, Singapore 9

Major holdings on : motoring and automotive engineering

Services provided : library service, distribution of its monthly newsletter

Confederation of French Mechanical, Electrical
and Electronics Industries
2813 International Plaza, Singapore 2

Services provided : trade enquiries of French made products of mechanical,
electrical and electronics industries

Consumer Association of Singapore (CASE)
Trade Union House, Singapore 1

Major holdings on : consumerism

Services provided : reference work and inquiry service

Singapore Association of Shipbuilders and Repairers
325 Telok Blangah, Singapore 4

Services provided : compilation, distribution of members' directory
and newsletters, inquiry service on shipbuilding
services in Singapore

Singapore Chinese Chamber of Commerce & Industry
47 Hill Street, Singapore 6

Library holdings : trade directories and government publications

Services provided : distribution of lists of new publications received,
compilation and publication of journals on investment
economics, enquiry service

Singapore Indian Chamber of Commerce
55-A Robinson Road, Singapore 1

Library holdings : international and regional trade directories

Service provided : library service

Singapore Institute of Architects Building Centre
Block 19, Outram Park, Singapore 3

Services provided : handling enquiries on building materials and suppliers

Singapore International Chamber of Commerce (SICC)
Denmark House, Singapore 1

Library major holdings on : trade directories

Services provided : distribution of monthly annotated library and
publication lists, enquiry service

Singapore Manufacturers' Association
Suite 118, World Trade Centre, 1st Floor
1 Maritime Square, Telok Blangah, Singapore 4

Library holdings : trade directories and government regulations

Services provided : trade enquiries service

Singapore Shipping Association
4th Floor, Malayan Bank Chambers
Fullerton Square, Singapore 1

Library holdings : shipping, company and employment legislations

Services provided : library/enquiry service

South East Asia Iron & Steel Institute
Tower 1003, DBS Building
6 Shenton Way, Singapore 1

Services provided : advisory service on scientific, technological and economic aspects of iron and steel industry, collect, collate and publish statistics of iron and steel production, consumption, trade of member countries for distribution

III Embassies and Consulates (*where trade information may be obtained*)

American Embassy
United States Information Service
30 Hill Street, Singapore 6

Arab Republic of Egypt Embassy
20C/22C Paterson Road, Singapore 9

Argentina Embajada de La Republica
11th Floor, L1 International Building
Singapore 9

Australian Trade Commissioner's Office
25 Napier Road, Singapore 10

Austrian Trade Commissioner
2004/5 Shaw Centre, Singapore 9

Bangladesh Trade Commission
43 King's Road, Singapore 10

Belgium Embassy of
6 Shenton Way, 2202 DBS Building
Singapore 1

Brazil, Consul of
267 Cantonment Road, Singapore 2

British High Commission
Tanglin Circus, Singapore 10

Bulgaria, Embassy of the People's Republic of
808/809 Thong Teck Building
Singapore 9

Burma, Embassy of the Union of
15 St Martin's Drive, Singapore 10

Canadian High Commission
8-E 6th Floor, Faber House
230 Orchard Road, Singapore 9

Commercial Counsellor for France
404 Thong Teck Building, Singapore 9

Consulate General of Greece
Eng Cheong Tower, Singapore 7

Danish Embassy
Penang Road, 815/817 Supreme House
Singapore 9

Egypt Central Marketing Board
Ngee Ann Building, Singapore 9

Export Council of Norway
16th Floor, 1603 Hong Leong Building
Singapore 1

Finland Embassy
15th Floor, Goldhill Plaza, Singapore 11

Germany, Embassy of the Federal Republic of
Far East Shopping Centre, Singapore 9

Indian High Commission
Trade Section
31 Grange Road, Singapore 9

Indonesian Embassy
435 Orchard Road, Singapore 9

Ireland, Consulate General of
475 River Valley Road, Singapore 10

Israel Embassy
10th Floor, Faber House, Singapore 9

Italian Trade Office - ICE
37-A Podium Block, Goldhill Plaza
Singapore 11

Japan, Embassy of
16 Nassim Road, Singapore 10

Korea, Embassy of the Democratic People's
Republic of
Commercial Section
37 Stevens Road, Singapore 10

Korea, Embassy of the Republic of
Shaw Centre, Singapore 9

Malaysia High Commission
301 Jervois Road, Singapore 10

Netherlands Embassy, Royal
International Building
Singapore 9

New Zealand Trade Commissioner
13 Nassim Road, Singapore 10

Norwegian Embassy
1601 Hong Leong Building, Singapore 1

Panama, Consulate General of
Raffles Quay, 29th Floor
3906 Hong Leong Building, Singapore 1

Philippines, Embassy of the Republic of the
Thong Teck Building, Singapore 9

Polish People's Republic, Embassy of
Bank of China Building, Singapore 1

Romania, Embassy of the Socialist Republic of
64 Sime Road, Singapore 11

Saudi Arabia, Royal Consulate-General of
10 Nassim Road, Singapore 10

Spain, Vice-Consul for
CPF Building, Singapore 1

Swedish Embassy
1403 Goldhill Plaza, Singapore 11

Switzerland Embassy
Shaw House, Singapore 9

Thailand, Embassy of
370 Orchard Road, Singapore 9

Trade Mission of the Republic of China
UIC Building, Singapore 1

USSR Embassy
51 Nassim Road, Singapore 10

USSR, Trade Representation of the
81-B Cairnhill Road, Singapore 9

United States Trade Centre
Malayan Credit House, Singapore 9

Washington State of USA Department of
Commerce & Economic Development
306 Shaw House, Singapore 9

Western Australian Government Trade Office
Ocean Building, Singapore 1

Yugoslavia, Embassy of the SFR of
52 Stevens Road, Singapore 9

TECHNICAL INFORMATION ACTIVITIES

1.1 Introduction

The Industrial Development Board is the premier institution which has been entrusted with the task of planning the country's small and medium scale industrial development strategy. It was established under the Industrial Development Act No 36 of 1969. The Board is entrusted with the responsibility of promoting and developing the small scale industrial sector in Sri Lanka. This includes industries whose investment in machinery and equipment does not exceed Rs 500,000.

- 1.2 The objectives of the Industrial Development Board are setting up new industrial units and assisting in the encouragement, promotion and development of small-scale industries in Sri Lanka. Small industrialists are assisted by the provision of credit technical, marketing and managerial advice. A wide range of technical consultancy services is provided which smaller firms may not be able to afford by themselves. Special reference has to be made to the introduction of appropriate technology in the manufacture of machinery for modern small-scale industries and technical training by the Industrial Development Board.
- 1.3 The Documentation and Publications Division of the Industrial Development Board is responsible for the collection of books, periodicals and reports in different fields of industry for reference by the small-scale industry sector and managerial and technical personnel engaged in industry. The acquisition and dissemination of information on current developments and on matters of interest locally and abroad to the small-scale industry sector takes place through the Industrial Information Service, Abstracting Service, Current Awareness Service and Pamphlet series. The Division also sends out the monthly publication 'KARMANTHA' carrying current information relevant to the small-scale industry sector. Offset lithographic colour printing including designing and layout for the small-scale industry sector as well as public and private organizations are undertaken by the Documentation and Publications Division. Orders for printing and publication of books are also undertaken.

2. IDB's functions as a Participating Organization of TECHNUNET

- a) We contribute to the TECHNUNET Digest and Newsletter on new innovations. (The Extension Services Division, the Ceylon Institute of Scientific and Industrial Research (CISIR) and the Rubber Research Institute (RRI) have been the main contributors so far.)
- b) The TECHNUNET Digest and the Newsletter are circulated among the members of our Industrial Information Service, the personnel of the Ministry of Industries and Ministry of Planning, selected government organizations such as the Ceylon Institute of Scientific and Industrial Research (CISIR), the Board of Directors, Regional Managers and the Development Officers of IDB.

2.2 IDB's functions in the field of information

The Industrial Information Service serves 256 members at present. In this service, IDB provides information to industrialists in their relevant fields.

Under this service, the following publications are supplied:

- (i) The Current Awareness Service, where information in all industrial fields, contained in the periodicals received each month, is abstracted and organized according to the relevant subjects and sent monthly to the Industrial Information Service members.
- (ii) The Documentation Bulletin contains abstracted information on a particular topic. The topic is chosen according to the needs and demands of information. It is a quarterly bulletin available in both English and Sinhala.
- (iii) According to their various fields of interest, articles are also compiled with reference to several books on the topic. These information packages are compiled on special request by the Industrial Information Service members sometimes. When not requested for, they are compiled according to the fields of interest of each member.

- 2.3 The information officers of IDB visit industrialists to popularise and show the value of the Information Service. Such canvassing has brought in quite a number of industrialists to the service membership. Industrialists in several regions have been visited (e.g. Matara, Kandy, Kurunegala and Anuradhapura).

As a follow-up the information officers have visited the Industrial Information Service members themselves, to ensure maximum benefit whereby new fields of interest, problems regarding their industry and drawbacks in communication with IDB on the service itself could be discussed.

- 2.4 In providing information, the small industrialists who are obtaining financial assistance from the banks and who are at the lowest development level are given priority.
- 2.5 There are general enquiries sent by industrialists as a result of articles appearing in the KARMANTHA magazine. Other enquiries are based on paper advertisements, news items, etc. Information is sent to them as a part of our information activities.
- 2.6 Bibliographies and reading lists are compiled for the use of Industrial Information Service members, the extension staff and the readers.
- 2.7 A monthly distribution of the New Accession List is carried out.
- 2.8 A photocopy service is carried out, where original articles from periodicals abstracted in the Current Awareness Service could be obtained by Industrial Information Service members, according to their requirements and requests.
- 2.9 A translation service is provided where Industrial Information Service members could obtain their information in the language they prefer, priority being given to the Industrial Information Service.
- 2.10 Microfiche slides are obtained from the National Research and Development Council (NRDC) of Canada. A few of them are found relevant to the fields of industrialists in Sri Lanka. Abstracts of some of these articles appear in the 'KARMANTHA' and the Current Awareness Services thereby enabling the readers to obtain a reprint of the slide they require. A reader printer is available for the purpose.

3. Development of Participating Organizations:

Information Activities and their future plans

- 3.1 Through our Information Service, we hope to continue to provide information to prospective industrialists on technologies and latest developments in various fields of industry. Special consideration will be given to the small industrialists in rural areas.
- 3.2 Information packages which are prepared presently in Sinhala and English only could be prepared in three languages, namely, Sinhala, Tamil and English.
- 3.3 It has also been speculated to bring down the cost of the service and enrol small industrialists specially in areas far away from Colombo.
- 3.4 It has been arranged to provide industrialists with information on specific enquiries by:
 - (i) A monthly feature which will be published in the KARMANTHA magazine, and
 - (ii) Setting up an Industrial Information Centre. Specialization in information work should be established. Each information officer could be allocated a particular field of study where he would be able to give expert advice regarding information on that field. More formal contacts between persons, Government and private institutions in each field could be established so that industrialists could be served with accurate and ready information in their field. The sources of information to this Centre would be mainly the various divisions of IDB itself and outside sources such as the Ceylon Institute of Scientific and Industrial Research (CISIR), Trade Information Service (TIS) and Rubber Research Institute (RRI).
- 3.5 Publicising the information activities by means of film, radio and newspapers by means of special programmes and features pertaining to small scale industry.
- 3.6 Canvassing in the regions will be promoted so as to increase the Industrial Information Service membership.

4. National Sources of Information for Industry

- 4.1 Efficient exchange of information and networking with local organizations such as the divisions of the Industrial Development Board, Ceylon Institute of Scientific and Industrial Research (CISIR), Coconut Research Institute (CRI), National Science Council (NSC), Trade Information Service (TIS), the Ministry of Industries, other relevant Government organizations and certain international organizations such as the National Technical Information Service (NTIS) through the Sri Lanka Scientific & Technical Information Centre (SLSTIC) takes place as a function of the Industrial Information Centre (Annexure 1).
- 4.2 Information obtained from already existing industries, which have been visited by the information officers of the Industrial Development Board, could be made use of by other industrialists through the Industrial Information Service.

4.3 Communication could be established by the information officers, between industrialists themselves and between industrialists and Government institutions, for the advantage of the developing industrialists. For example, a request was made on behalf of an Industrial Information Service member to observe the manufacture of mammoties at the State Hardware Corporation factory at Yakkala.

5. Actions that should be taken by Participating Organizations and TECHINONET Centre

- 5.1 It would be useful if arrangements are made to enable industrialists to visit other industries relevant to their field, among the participating organizations, so that they get a wider knowledge of the practical aspect of their industry.
- 5.2 Some kind of arrangement made by the TECHINONET Centre would be useful to provide opportunities for local industrialists to attend seminars, workshops and undertake study tours relevant to their field.
- 5.3 A very important facility that could be provided is the training of information officers themselves.
- 5.4 As the library allocation is reduced grants for books and periodicals, such materials for the library would be most welcome.
- 5.5 An information exchange scheme to make all POs aware of one another's current activities would be very helpful.
- 5.6 Patents which have expired if made available to the other POs, through the Centre would be a helpful gesture for the developing industries.
- 5.7 Success stories should be regularly exchanged from which encouragement to industrialists and incentives for the improvement of their industries could be derived.
- 5.8 Catalogues on new equipment and machinery in each PO if exchanged among the other POs through some scheme organized by the Centre, would prove very useful.
- 5.9 POs exchange microfiche of publications within the region so that the information they carry would be more relevant.

6. a) Networking within TECHINONET

Networking with all POs to exchange information.

The Current Awareness Services from the Philippines, Hong Kong Productivity Centre (HKPC), Singapore Institute of Standards and Industrial Research (SISIR), and Standards and Industrial Research Institute of Malaysia (SIRIM) enable us to request articles on relevant fields, and acquire them.

b) Networking with outside sources of information

We keep contacts with organizations like Volunteers In Technical Assistance (VITA), United Nations Industrial Development Organization (UNIDO), National Research & Development Council (NRDC) (Canada), National Research & Development Corporation (NRDC) (India), Tropical Products Institute (TPI), Food and Agricultural Organization (FAO), Organization for the Economic Corporation & Development (OECD), Economic Social Commission for Asia and the Pacific (ESCAP), Small Industry Extension Training Institute (SIET), Forest Products Research and Industries Development (FORPRIDE) and the British Library and Federal Industrial Development Authority (FIDA). (Mainly for information on enquiries.)

Networking with these organizations through TECHNONET ASIA so that TECHNONET may sponsor such contacts, may be useful for all POs, institutionalization of links with these organizations would be useful.

INFOTRAC II (Annexure 2)

Special training facilities should be awarded to information officers of all POs. The training for information officers should include:

- 1) Extension methods
- 2) Modern mechanical methods of information storage and retrieval and various modes of dissemination (Annexure 3).

Under these training programmes publication of industrial literature also should be included. Methods of preparation of publications for industrialists so that they serve a useful purpose in guiding them with the production, management, marketing, etc., should be included.

Summary of recommendations

1. Organization of Seminars, workshops and study tours for industrialists.
2. Training of information officers.
3. Exchange of information on expired patents, exchange of success stories, catalogues of equipment and machinery and current industrial activities of Participating Organizations.
4. Provide grants for periodicals and books to Participating Organizations who need them.

ANNEXURE 1

NATIONAL SOURCES OF INFORMATION FOR INDUSTRY

Traditional Sources of Information

1. The Department of Agriculture
2. The Central Bank of Ceylon
3. The People's Bank
4. Bureau of Ceylon Standards
5. Central Agricultural Research Institute
6. Ceylon Chamber of Commerce
7. The Ceylon Institute of Scientific & Industrial Research
8. Coconut Research Institute

9. Coconut Development Authority
10. Geological Survey Department
11. Government Publications Bureau
12. National Science Council
13. Tea Research Institute
14. State Engineering Corporation
15. National Engineering & Research Division
16. Survey Department
17. Department of Census & Statistics
18. Marga Institute
19. Sri Lanka Association for the Advancement of Science
20. University of Ceylon - Katubedde Campus

Other Sources of Information

1. Ayurvedic College (library)
2. Ceylon Cement Corporation
3. Ceylon Ceramics Corporation
4. Ceylon Fertilizer Corporation
5. Ceylon Fisheries Corporation
6. Leather Products Corporation
7. Ceylon Chamber of Industries
8. Ceylon Mineral Sands Corporation
9. Oils & Fats Corporation
10. Ceylon Petroleum Corporation
11. Ceylon Plywoods Corporation
12. State Hardware Corporation
13. Steel Corporation
14. Ceylon Tyre Corporation
15. Coconut Cultivation Board
16. Coconut Marketing Board
17. Coconut Processing Board
18. Ministry of Fisheries
19. Ministry of Food, Cooperatives and Small Industries
20. Forest Department
21. Jute Industries Corporation
22. Marketing Department
23. Ministry of Agriculture & Lands
24. Ministry of Scientific & Industrial Affairs
25. Ministry of Plantation Industries
26. National Paper Corporation

27. National Salt Corporation
28. National Textile Corporation
29. Paddy Marketing Board
30. Paranthan Chemicals Corporation
31. Department of Small Industries
32. Sri Lanka Sugar Corporation
33. State Engineering Corporation
34. State Timber Corporation
35. Department of Census and Statistics
36. Corporative Development & Management Services

ANNEXURE 2

COMMENTS ON THE SYLLABUS OF INFOTRAC II

1. A thorough knowledge of extension methods should be given to the trainees so that they could coordinate better with the extension officials in providing information to the industrialists.
 2. Application of what has been learnt in the information methods to an industry by the participants would be useful. Finally, a report on this application could be written by the participants.
 3. At present information packages are prepared on a particular subject for industrialists. All books, reports and periodicals which contain information are scanned by the information officer and by combining information from all those publications, he prepares an article comprising of 15 to 20 typed pages. This is known as an information package. A detailed study of the preparation of such information packages would be a useful guide line such that all aspects for various types of named industries are covered. This would provide a general guideline for the information officer to work on, at the technological level of his home country. This guideline will then help the information officer to draw up his own format for each different industry.
 4. The group should be made to meet a selected gathering of industrialists who have been receiving such industrial information. At this meeting the reception of the information could be evaluated, so that the information officers could know how far their information would have been useful.
-

TYPE OF WORK HANDLED AT THE IDB

This involves mainly the Library and Documentation Services offered to industrialists by the IDB, through the Industrial Information Service (IIS). This programme is designed to keep the managerial and technical personnel of the industrial sector informed of the more recent developments in their fields. Available information is brought to them through:

- i) The Current Awareness Service (CAS), a monthly publication with titles and annotations of articles received in the Library.
- ii) Documentation Bulletin, a quarterly bulletin which carries information on a particular subject.
- iii) Enquiry Service - Information would be provided on any ad hoc inquiries directed by subscribers.
- iv) Referral Service - Enquiries would be referred to other personnel who are capable of advising them on particular subject fields.

The nature of the officer's work in relation to the above is as follows:

- i) Disseminating information to the industrialists and members of the IIS through compilation of Information packages relevant to their interest, on an SDI basis.
- ii) Handling general and subject inquiries.
- iii) Establishing personal contact with the management personnel of enterprises, in order to determine the information requirements and preparing these accordingly. This is done by visiting industrialists in all parts of the country with the idea of reaching the smallest entrepreneur in the remotest areas.
- iv) Preparation of Subject Bibliographies.
- v) Preparation of Documentation Bulletin.
- vi) Assisting the Librarian in compiling the Current Awareness Bulletin.
- vii) Assisting in the management of lending system.

ACQUISITION:

- i) Collection of information on Industrial Technology, Management, Marketing and other fields relevant to the development projects of the organizations.
- ii) Maintaining contact with Research and Development organizations, local and foreign, in order to obtain up-to-date information.
- iii) Selection of books and serials.
- iv) Assisting the Librarian in all acquisition matters related to the Library.

ORGANISATION:

- i) Organisation of specialized information sources on topics of relevance to the organization:
 - a) Marketing Information Catalogue
 - b) Industrial Machinery Catalogue
 - c) Reading Lists.
- ii) Scanning the microfiche cards for research organizations, Universities, etc, based on SDI.
- iii) Assisting the Librarian in all other procedures carried out in the Library.

DIP TECHNICAL INFORMATION ACTIVITIES
AND FUTURE PLANS

1. At the request of DIP, Mr Freddy H C Soon of SISIR visited DIP to assess its TIS program and to provide greater thrust to its services to serve the Thai industries.

Following Mr Soon's recommendation, DIP has strengthened its TIS program by providing Current Awareness Service in Thai, through the ISI, in addition to its newsletter and Question & Answer Service.

2. Lack of periodicals is one problem faced in publicising Current Awareness Service. DIP tries to overcome this constraint by subscribing to more journals. In the initial stage, TECHNONET ASIA is asked to provide a grant for this. However, DIP will allocate an amount of money for this next year. DIP now also requests for some free journals.
 3. Presently, ISI/DIP collects catalogues of machinery, including distribution agents, manufacturers, manufacturing processes and approximate costs of machines.
 4. After the Second TECHNONET Information Committee Workshop in Pattaya, Thailand, DIP tries to strengthen the national networking. Nowadays, DIP keeps contact with many other government agencies such as the Thai National Documentation Centre, ASRCT, Department of Science Library, Department of Agriculture, and some private organizations such as the Library of Thai Cement Company, Technological Promotion Association, and also some international agencies located in Thailand such as the Asian Institute of Technology, and the Japan Trade Centre.
-

STATUS/UPDATE ON TECHNICAL INFORMATION
ACTIVITIES AND FUTURE PLANS

The Documentation and Publications Branch of the Industrial Services Centre (ISC) is a part of the Industrial Planning, Promotion, Feasibility Division which together with Documentation and Publication Branch, also contains Promotion Branch, Planning Branch and Feasibility Studies Branch. ISC is a service oriented agency established in November 1974 by His Majesty's Government to help promote industrial development in Nepal and is directly supervised by the Ministry of Industry and Commerce. It is basically a research and consultancy organization which is also responsible for the operation of industrial districts within the kingdom. Of the varied functions that ISC is concerned with, its chief concern is techno-feasibility studies on industrial and subsidiary industries based on agriculture, forestry, mining etc., methods for modernization expansion in productive efficiency of industries, performance of industries within the context of existing industrial policy, case studies on industrial management, management training and industrial districts administration.

In a similar situation with most emerging nations, the need for an organized information base becomes acute when there is no focal point for obtaining the information. In Nepal today there are a few operable information cells for assistance in obtaining data concerning technology on a practical and theoretical scale. The Centre must consider it a high priority area to strengthen its publication and documentation activities on a level to meet desk research and supplementary field work information requirements.

Presently the Branch consists of a Library with a fairly large collection of titles on basically industry and technology. An acquisitions list is brought out every two or three months. A quarterly bulletin called ISDOC Bulletin is a regular feature, the readership of which has gradually increased within these few years. This bulletin has recently been priced and is also supplied to institutions, both local and foreign, on an exchange basis. Information needs within the Centre is the first priority of the Branch. A Technical Enquiry Service scheme has been recently started which we hope will gradually encompass the needs of outside clients, both private and institutional.

There are undoubtedly certain areas within the documentation services operation that need to be attended to. Presently the collection and classification system is done on an accession basis. A consecutive number is assigned to each document as received. Only an author card is prepared. The need to collect new subject areas as well as the need to expand the present holdings, including updated material is ever present. Most titles are vague and do not necessarily contain the substantial subject of its contents. A subject analysis is needed for publications received so that a user is aware of the content and scope of the material. Scanning of articles in journals has not yet been started on a scientific way. Training of manpower in the Branch is of vital importance so as to equip staff members with skills and knowledge necessary in abstracting, classifying, cataloguing data collection and retrieval, bibliographic references, etc. Such specific skills need training and practice whereby each staff member may be assigned a specific job. Together with training of individual staff members, overall guidance in setting up a scientific documentation unit is necessary in the form of expert services.

Future activities of Documentation and Publication needs must focus due attention on the mentioned areas of weakness. However the Documentation and Publication Branch plans to improve and expand in certain areas, e.g. the Acquisitions list shall be made a monthly feature, with due emphasis on increased acquisition of library holdings in the form of books. Subscription towards technical journals and periodicals will be increased gradually. Current Awareness Service will be started. Technical Enquiry Service will be upgraded and expanded. Users' profiles will be prepared on an experimental basis within the Centre to see the effect of selected Dissemination of Information to such users. This tool will undoubtedly help anticipate future information needs. Classification by subject approach will be given priority. The abstracting of publication received will be started. The present collection will also incorporate machinery catalogues and updated directories. Profiles of products and manufacturers will be maintained. The establishment of a data bank is also an important venture that has been envisaged. Publication activities need expansion. We plan to launch a bi-monthly publication entitled 'Management Journal' since management training is one of the important activities of the Branch and there is growing awareness of the importance of management in Nepal.

The importance of budgetary allocation is not to be overlooked. Adequate library equipment and furniture will have to be considered together with allocation and space requirements. The present budgetary allocation allotted to the Branch is highly inadequate to meet the demands of scientific documentation needs.

LIST OF NATIONAL SOURCES OF INFORMATION FOR INDUSTRY

Internal Resources

1. Documents or information generated within the Industrial Services Centre, Kathmandu (these include Research Reports, Technical Memoranda, Annual and Monthly Reports, Seminar papers, Feasibility Reports, Research projects and Projects reports of ISC, and other miscellaneous publications):
 - * Library and documentation facility in the Institute
 - * Colleagues
 - * Personal experience in similar and related field
 - * Other information sources.

External Sources

- * Documentary sources - The primary sources comprise books, periodicals, articles in journals, reviews, research reports, standards and specifications, technical bulletins and notes, etc.
- * Information systems comprising special libraries, information service/centre, data bank, etc.
- * Industry
- * Courses

- * Meetings, conferences, seminars, workshops, etc.
- * Consultancy service organizations
- * Mass Media
- * Vendor/Supplier/Contractor or documents generated by such a source particularly in the areas of trade and industry.

SOURCES OF INDUSTRIAL INFORMATION IN NEPAL

<u>Types of Information</u>	<u>Sources</u>
Business Information in general	Information centres; special lineary services to industry; Business information bureau; Government departments and agencies; Trade and Business Associations; Published documents, etc
Finance and Shareholders	Banks, financing organizations (e.g. Nepal Rastra Bank, Nepal Industrial Development Corporation, Agricultural Development Bank); Shareholders' meetings, etc
Supplies and services, equipment, water and electric power	Suppliers of raw materials. Equipment manufacturers and importers, Engineering Consultants. Marketing organizations, e.g. National Trading Ltd., Government Agencies, Industry and Nepal Chamber of Commerce
Special Professional Services	Legal, accounting and auditing bodies, patents. Publicity agencies
Employment recruitment and training labour relations	Employment exchange, Ministry of Labour, Industrial training funds, University and Technical training institutions, facilities for in-service training, apprenticeship, etc. Trade unions, periodical interviews, etc.
Consumer of goods or services: their requirements and preferences	Local sales organizations or distributors, Chamber of Commerce and Industry, Market Research Consultants, etc.
Sales Publicity	Distributors, selling agents, Export Promotion Board, State Trading Corporations e.g. National Trading Ltd
External regulations, including government regulations, other general recommendations	Principal authorities in regard to principal laws. Government departments (local, district and zonal levels), Ministry of Industry & Commerce, Ministry of Labour, Public Health Departments, Ministry of Law & Justice. Acts and Regulations, Standards Bodies e.g. Institute of Standards Trade Agreements, Employers Association etc.
Research and Development	Facilities for research know-how. Facilities for sponsored research corporations and organizations (e.g. University, National Development Service, Tea Development Corporation, Jute Development Corp, etc). Government Departments and Laboratories, Research Associations, Professional Institutions, Patents Office, Publications of all levels etc.

TYPES OF TRAINING NEEDED BY INFORMATION STAFF

Information handling requires considerable exposure to the system. In Nepal, however, where the importance of documentation has yet to gain considerable grounds, the importance of trained manpower requirements in the handling of scientific documentation activities has generally been overlooked. Documentation units are largely considered to be mere libraries where books are stored and where activities are limited to mere lending and borrowing of books. This faulty trend has led to a hesitant tendency towards entering into the profession on the one hand, and the accordence of less priority to this subject, on the other. Unless manpower requirements are duly recognized as a very important input in this field, documentation services will remain synonymous with library activities.

The staff members presently involved in such activities in the Centre are not specialists, either in the theoretical aspect of the subject or in any specific aspect involving a practical approach. This would mean that none have had a long enough exposure to the system either theoretically or practically. As per the Centre's present policy of sending staff members to short term courses, the present senior staff of the Branch - myself and the Documentation Officer - have attended the Information Storage and Retrieval System course of 8 weeks duration held at SIET Institute in India. Such courses are undoubtedly helpful in as much as they introduce the subject, its general concepts, its historical background, the terms and methods involved in information handling procedures. Classification systems of different kinds are discussed and one or two examples are taken as exercises. However, the right kind of classification to be introduced in each of the participants' own field of work is yet unsolved, for the participant is not able to initiate this on his own. As a result, the introduction of a classification scheme still needs expert guidance. Considering the short period of time within which the entire subject area is to be covered, it is quite natural that specific issues like abstracting, indexing, how to operate a Central Search File, etc cannot be dealt with in detail. Moreover it is not the job of one person to abstract, index, classify, catalogue, etc. These are specific jobs to be performed by individuals. Hence arises the importance of sending individuals to either training courses that deal with one or two such topics or for on-the-job training to well-known institutions in neighbouring countries (for a period of at least 6 months) which are geared towards scientific, technical and industrial information where they work and learn such skills whereby on their return, they are able to work independently in their own fields. Responsible staff members who are concerned with overall functioning of the Branch require professional administration and guidance, which is also an important component for proper documentation purposes. A year's academic programme on the Master's Degree level will fulfill these varied requirements.

This therefore requires a reorientation of the training policy at the Centre as well as assistance in the form of training fellowships and a system by which trainees may be sent to member countries or a particular country within the TECHINONET set-up for on-the-job training facilities

MATRIX OF TECHNET POS' CAPABILITIES (INFORMATION)

Annex XV

Activity		BSCIC	HKPC	KORSTIC	SIRIM	MARA	UP ISSI	EDF	SISIR	IDB	DIP	ISC	T Centre
Informatn Processing	Abstracting	X	✓	✓	✓ Selective	X	✓	✓ Limited	X	✓	✓ For CAS	X	X
	Indexing	X	✓	✓	X Basic	X	✓	✓	X	✓	✓ For CAS	X	X
	Repackaging	✓ On request dep. level enquirer	✓	✓	- Limited	X	✓	✓ Limited	X	✓	X		X
Informatn Handling	Manual	X	✓	✓	✓	✓ Limited	✓	✓	✓	✓	✓	X	✓
	Computerized	X	✓ On-line Operational w/in 1-3 mths @ cost	✓	X	X	X		✓	X	X	X	X
Translations - If yes, indicate + cost		✓ Bengali - English at no cost	✓ Eng-Chinese Chinese-Eng at cost if manpower available	✓ Korean-Eng Jap.-Eng Under 5 pg no cost; Over @ cost	X	✓ Malay-Eng Limited to brief and simple papers	X	✓ Filipino	X	✓	✓ Thai/Eng	Eng-Nepali Nepali-Eng Not priced yet	X
Library Service - If yes, indicate whether part of Info Activity or independent		✓ Part of Information activity	✓ Gen library & Special Collectns part of info	✓ Independent	✓ Essential Service for Stdn res. & ext. servs.	not organd. Lib. service central & separate fm Tech. Info.	✓ Part of Information activity	✓ Part of Information activity	✓ Part of Information activity	✓ Part of Information activity	✓ Independent	✓ Part of Information activity	✓ Part of Information activity
Active Info. Dissemination (SDI, CAS)		✓ At formation stage	✓	✓	✓ Certain Publicatns	✓	✓	✓ SDI, CAS Bulletins	✓	✓	✓	X	X
POs Info Storage & Retrieval		Unsystematic Stor. info	✓	✓	✓ viz inhouse enquiries	✓ research papers only	✓	✓	✓	✓	✓	X	✓
Participatn in Organized National Info. System		Under formation stage	Pending	X	not formally established	X	✓	Just starting	Not yet	X	X	X	X
Reprography	microfilm + cost	X	X	✓ At cost	no demand	X	X		X	X	X	X	X
	microfiche + cost	X	X	✓ At cost	no demand	X	startg soon	✓ Minimal	X	X	✓ Free	X	X
	hard copies + cost	X	Free to POs	✓ Over 10 pg at cost	✓ M ² 10/pg	X	Free to POs	✓ App P1/pg	Subsidized Rates	X	✓ Free	Not priced	✓ Free

Activity		BSCIC	HKPC	KORSTIC	SIRIM	MARA	UP ISSI	EDF	SISIR	IDB	DIP	ISC	T Centre
Training	Formal	X	✓INFOTRAC	X	Starting up	X	✓	✓	X	X	X	X	
	Attachment - Long Term	X	✓	X	Open to consideration	X	X	X	X	X	X	X	
	Attachment - Short Term	X	✓	✓	✓	✓	✓	X	✓Free	✓	X	X	
	Provision of Resource Person	X	✓	X	✓	X	✓	Only local training prog. limited cap.	✓Charge	✓	X	X	
Professional Information Manpower		2	4	40	2 qualified librarians	2 unqualified	5	4	2	1	4	X	4

✓ = Yes
X = No