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A GUIDE TO ESTABLISHMENT OF INTIB'S NATIONAL FOCAL POINTS

BY

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C O N T E N T S

INTRODUCTION

The main task of the Industrial and Technological Information Bank (INTIB) of the UNIDO is to undertake coordinated activities relating to industrial and technological information, strengthening the information systems in developing countries and to compile and disseminate information requested by them.

With a view to effectively perform its task, it has taken a number of steps and one of them is its effort to establish its National Focal Points in various countries. The present Guidelines define the role of such National Focal Points (NFPs), its modus operendi, its linkages with concerned agencies, its organisation structure and the future trend. It also includes a few suggestions for new activities and methodologies which are considered appropriate for it to play an effective and useful role. Together, it is expected to provide useful input for strengthening or establishment of NFPs. While maintaining the main structure, as suggested in the Guidelines, variations may be necessary to suit the variety of prevailing conditions in different countries. The main objective should be to provide appropriate, uptodate, reliable and quality information to the users leading to further industrial and technological growth.

1 ROLE OF NATIONAL FOCAL POINTS

Importance of Information

The importance of industrial and technological information as a key element in the industrial and technological development of a country has been well acknowledged. Whether the issues relate to investment, technology acquisition, man-power development, research & development, the information is an important prerequisite for a sound decision. In the process of establishment of a new undertaking or during its operation, information is one of the first requirements and the success of subsquent operations largely depends on the quality of information on which the initial decisions were based. Therefore, a sound information base is a sine qua non for healthy industrial and technological growth.

Industrial and Technological Information Bank

Realising, therefore, the importance of information, an Industrial and Technological Information Bank (INTIB) was established by UNIDO. It was first set up in 1977 as a pilot project and became operational in 1980. In 1985, UNIDO member States supported the further strengthening and expansion of INTIB and the introduction of new elements.

The request to establish INTIB was in accordance with the Lima Declaration and Plan of Action, adopted by the Second General Conference of UNIDO, which urged the Executive Director of UNIDO to set it up. In December 1975

the General Assembly of the United Nations, in its resolution 3507 XXX, reaffirmed the "need to enable developing countries to have access to specific information on advanced and other technologies requested by them, as well as on the new uses of existing technologies, new developments, possibilities of adapting them to local needs and ... to select technologies which meet their requirements"

INTIB is part of the UNIDO Industrial and Technological Information Section. Its overall task is to undertake co-ordinated activities relating to industrial and technological information, strengthen the information systems in developing countries and compile and disseminate information requested by these countries.

National Focal Points

Two new developments in the recent years have changed the information scene very drastically. One is what is termed as 'information explosion' and the other, very rapid developments in information handling and transmission. Industry is demanding more and more information with very short lead times. INTIB, therefore, cannot possibly meet these ever increasing demand effectively. In this context networking and the formation of national centers called the National Focal Points (NFPs) becomes very desirable. Such Centers could act on behalf of INTIB in the respective countries and provide information to the users as may be available with the INTIB.

Such Focal Points being near the users can play a very effective role in accelerating the process of development of information

infrastructure within the country. In addition, they could cover the following areas :

- There are Regional Centres such as ALIDE, APCTT, ARCT, ICSTI and others who have wealth of information on industry and technology relevent to the needs of developing countries. The NFPs could provide information to the users as may be available from these Regional Centres.
- Within the country itself, there are a number of sources where industrial and technological related information is available. But the users are generally not informed of the content as also the sources of availability of such information. NFPs can play an effective role in this area as well.
- Information needs of small and medium enterprises need to be kept in view. While it may not be possible to provide all their requirements by the Focal Points, as a first step, however, if the most sought after locally available information is provided by them, it would be of great help. The areas could be identified through appropriate surveys etc. Such an approach, apart from being very useful to the SMEs, will enhance the credibility of NFPs itself.
- The NFPs could also act as depository of UNIDO/ INTIB and Regional Centres publications. They may dissiminate the information contained therein or the publication itself, on a selective basis.

The NFPs, in the above suggested setup, would be an important component of INTIB Network. The process of exchange and cooperation will give momentum to the

Network and help INTIB, in turn, serve its Focal Points and ultimately the users, better. The activities of NFPs should, therefore, cover the collection of locally available information that may be requested by the INTIB, the Regional Centers and the NFPs in other countries and thereafter, dessiminate the same to them.

The main role of NFP should, therefore, be as

a) industrial and technological information supplier on
   i) the full range of information as may be available from INTIB, Regional Centers and NFPs of other countries,
   ii) the sources of information as may be available within the country, if not the information itself,
   iii) the most sought after locally available information particularly those required by entrepreneurs or small and medium enterprises
b) depositor and dessiminator of UNIDO/INTIB and Regional Centers publications
c) source of locally available information and/or information itself as may be requested by INTIB, Regional Centers and NFPs in other countries
d) a catalyst for development of information infrastructure in the country.

It should take all possible measures towards furtherance of achievement of the above assigned role effectively and efficiently.

2 SOURCES OF INFORMATION

Sources of information for NFPs would be :

- INTIB
- Regional Centers
- National Focal Points in other countries
- Publications received from INTIB and Regional Centers
- Specialised organisations within the country
- NFP's own data base

The above are dealt with in some detail, in the following paragraphs :

INTIB

INTIB as information supplier operates in two ways (a) through its Industrial Inquiry Service and (b) through UNIDO/INTIB information systems and data bases.

(a) Through its Industrial Inquiry Service, it provides industrial and technological information as requested by the user. This would be available to the NFP. As soon as a querry is received from a NFP, INTIB will endevour to collect it and transmit the same to the NFP. (and not to the user as hitherto except during the interim period when the NFP is in the process of being established, when the dual system may operate). Statistical details regarding the quantum of inquiries handled by INTIB in the past is given at Annexe 1.

(b) UNIDO/INTIB operate the following information systems and data bases :

Industrial Development Abstracts Database

This database is a specialised guide to

UNIDO documentation on industrialisation in developing countries, much of which is unpublished. They index major studies and reports, publications in series, and selected articles, reports and proceedings of expert working groups, workshops and seminars, internal studies and reports related to technical assistance. The database comprises four sections : a subject index, and author index, a document number index and bibliographic abstracts.

LINK

Link is information generated outside UNIDO, such as directories of research and development institutions on specific topics such as metallurgy, non-ferrous metals, industrial bio-mass and solar energy.

The Technological Information Exchange System (TIES)

This contains information abstracted from technology transfer agreements of the participating countries. The information is only accessible to those who provide it on a confidential, reciprocal and mutually beneficial basis. The details of the system are at Annexe 2.

The Computerised Registry Information System (CORIS)

This is a micro-computer version of the main frame TIES system used by TIES members in their local environment and local data sent to the UNIDO TIES system on floppy disks or by direct on-line entry over a network.

The Investment Promotion Information System (INPRIS)

It consists of a number of computerised data files. The project file contains summarized information on some 2,700 industrial investment project proposals in developing countries. The investor file is a directory of about 3,100 public and

private enterprises. The bank file contains information on about 600 development finance institutions. The institution file has sources that include ministries of industries, investment promotion agencies etc. The sponsor file is a data bank of firms in developing countries that could be interested in the redeployment possibilities. Country investment profiles provide general country data.

The Energy Information System (EIS)

This is an on-line system with an established thesaurus of energy key words. It contains periodical reports on UNIDO enegy activities.

The Technology Supply Data Base

The Data Base has information on offers of technology, joint venture opportunities and requests for technology, which has been collected and fed into the IBM PC or other compatible computer, using a subset of Micro CDS/ISIS software in order to respond effectively and efficiently to industrial inquiries.

UNIDO Statistical Data Base

This provides a central reference point for statistical data in the manufacturing sectors. At present it contains information on 80 countries.

External data base

The joint UNIDO/International Atomic Energy Agency (IAEA) library at the Vienna International Centre has access to a number of bibiliographic and directory type data bases in various subject areas.

Information contained in any of the above data bases would be available to the NFPs.

Infact these would, in the near future, be stored on a CDROM disk which would be available to the NPPs. As such the information could reach the users almost instantly.

REGIONAL CENTRES

These organisations such as ALIDE, APCTT, ARCT, ICSTI have also wealth of information relevent to the needs of industrial users. Areas of operation in respect of a few organisations are as under :

Latin-American Association of Development Financing Institution (ALIDE)

The objective of the organisation is to provide information to development banks, international banks, buisnessmen, investors and other parties interested in co-participating in medium and small investment projects contributing to the economic development of Latin-American and Caribbean countries. It has in its network, information on technologies which may be used in projects promoted by development banks. The details of the organisation are at Annexe 3.

The African Regional Centre for Technology (ARCT)

This is an intergovernmental organisation under the auspices of the United Nations Economic Commission for Africa (UNECA) and the Organisation of African Unity (OAU). It has 30 member states. Specifically, the Centre is mandated to carry out the following functions :

- Strngthen technological capabilities and the application of technology
- Stimulate the awareness of technological development
- Promote the use of such technology as is

suitable for national development objectives

- Assist in the formulation of technology policies, as an integral part of planned scientific, technological and socio-economic development
- Encourage research and training in methodologies of technology planning
- Improve, for the benefit of its member states, the terms and conditions under which technology is imported e.g. through technology acquisition agreements
- Promote the diffusion and dissemination of technology and the collection and encouragement of the use of technological information and
- Assess the social implications of the development, importation and adaptation of technology and promote the understanding of such implications.

More details are at Annexe 4.

International Centre for Scientific and Technical Information (ICSTI)

The main tasks of ICSTI ara as follows :

- Drafting proposals concerning methods and hardware for scientific and technological information services in the ICSTI member countries, providing for the establishment and expansion of International System of Scientific and Technical Information
- Offering information services, based on the extensive use of advanced technology, to various organisations in the ICSTI member countries, primarily in the problem areas crucial for the national economy and for promoting scintific and technological progress
- Publishing the necessary information, and the use of other forms of popularising scintific and technological achievements

- Carrying out research projects in the field of scientific and technical information theory and practice
- Providing, on damand from interested parties, organisational, methodological, scientific and technical assistance in the scientific and technical information field
- Rendering assistance in education and advanced training of information specialists from ICSTI member countries, as well as in the excahange of experience in the field of education and advanced training of information personnel.

More details are at Annexe 5.

The above List is only illustrative in nature.

Information as may be required by a NFP and if available with the above Organisations shall be furnished to the NFP.

PUBLICATIONS

UNIDO/INTIB's printed publications include Newsletters, Serials and special Reports, Directories and Abstracts.

Newsletters

- The UNIDO Newsletter which is published in 5 languages (in addition to UNIDO-wide news) contains information on resources sought by developing countries, resources available to them from industrial enterprises world-wide and lists of UNIDO publications and reports
- Genetic Engineering and Biotechnology Monitor contains articles and news from developing country specialists and policy makers on

policy, national developments, research, applications, patents and intellectual properties issues and bio-informatics.

- Microelectronics Monitor covers micro-electronics and informatics technology, contains articles and news for developing country specialists and policy makers on new developments, market trends and company news, legislation and standardisation, socio-economic implications applications, software, national news, robotics and factory automation and recent UNIDO Publications.
- Advances in Materials Technology covers mainly advanced materials (new alloys, composites, ceramics, plastics) contains articles and news for developing country specialists and policy makers on recent developments, market trends, publications and coming events.
- TIES Newsletter contains news and developments in technology acquisition, legislation, national registries and the UNIDO Technological Information Exchange System.

Directories and information sources

- Guides to information sources : Covering over 40 subject areas, they list organisations, societies, information sources, directories, statistical and market data sources, books and monographs, reports and periodicals.
- Sectoral directories of technological and related institutions : These emphasize developing country organisations; listings include areas of interest, staffing, budget, publications and joint projects.

Abstracts

Industrial Development Abstracts : This series contains abstracts of the latest UNIDO Publications and reports, including field reports on implemented technical co-operation projects.

Guidelines for policy and decision makers

- Development and transfer of technology : Series of over 24 publications dealing with issues such as technology policy, strengthening national capabilities and technology acquisition; offers state-of-the-art surveys in specific industrial technologies. Recent topics include brick making plant (industrial profile) iron and steel industry (technological profiles) and guidelines for evaluation of transfer of technology agreements.
- Technology trends : Trends in progress, equipment and the industry sector; trends in national policy; technology flow and collaboration; market trends; institutional linkages, government-university-industry relationships, R and D arrangements; manufacturers market strategies.

Guidelines for entrepeneurs

- Sectoral dossiers : Detailed specialist level information for technology decision makers in industrial sectors and sub-sectors e,g. iron and steel emphasis on the impact of new technology on developing country operations.
- Technological information packages : Compilations of material giving basic information on technological choices in selected areas with emphasis on the experience of developing countries e.g. mini-steel, cement or fertilizer plants. Describes raw materials preperations, production and processing methods, machinery and equipment requirements and covers technology, economic and financial aspects of particular projects. Includes lists of process and equipment

supplies and a bibliography.

- Guidelines on technological and information policy : Practical considerations for policy makers and senior excutives. Series includes guidelines on formulating a national industrial information policy based on country-experiences, and advice industrial and technological information centres, their redesign and selection of minicomputers and software for them.
- Technology profiles : Technological and economic information on selected industrial processes, including descriptions of developing country experience, quality and environmental control aspects and technology transfer considerations.
- Technical memoranda : Appropriate technology choices in critical and priority areas for small and medium scale industries. Series covers tanning, footwear, weaving, vegetable oil extraction, brick making, maize milling and paper making.
- How to start manufacturing industries : Brief descriptions of manufacturing processes, machinery and equipment, labour, investment and production costs.

Likewise Regional Centres have Publications relevent to the needs of industrial users.

The above publications would be forwarded by the INTIB and the Regional Centres to the NTPs. These would, therefore, be available to the users.

SPECIALISED ORGANISATIONS WITHIN THE COUNTRY

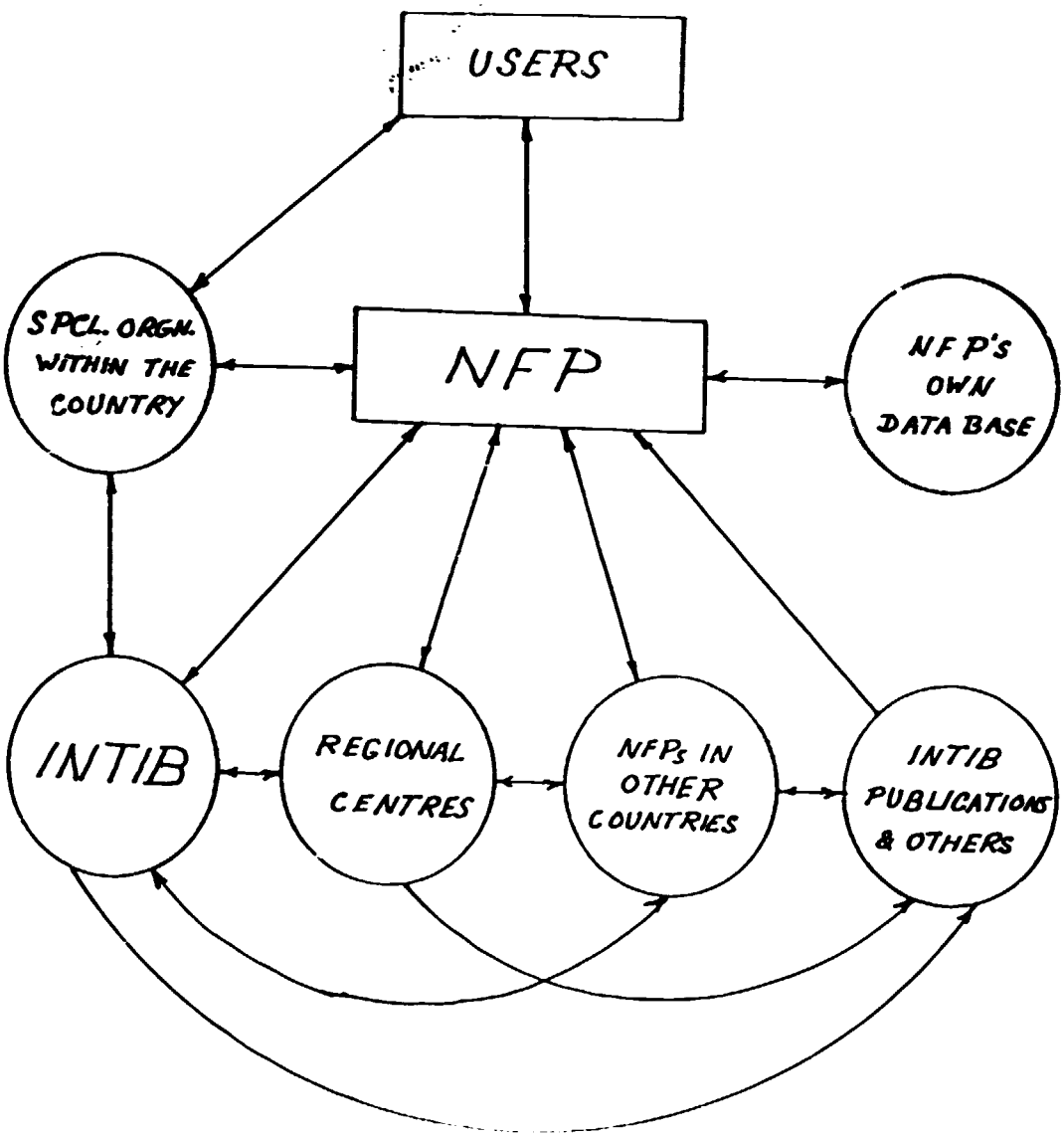
There would be organisations such as Federation of Industries, Chambers of Commerce, Association of Small and Medium Industries, Research and Development Organisations, Consultancy Organisations, Developmental Financial Institutions, National Productivity Centres, Technology Transfer and Promotion Organisations, Agencies for commercialisation of research results etc. Each one of them would be important source of information for the NFPs.

NATIONAL FOCAL POINT'S OWN DATA BASE

As per the role assigned to the NFPs they would be developing their own data bases relating to most sought after locally available information particularly those required by entrepeneurs or small and medium enterprises (SMEs). For example it could be : What are the sources of supply of a particular plant or equipment? Who could supply technology, locally, for manufacture of a particular product? Which Institutes / Organisations are undertaking Research in a particular field in the country etc?

NFPs will also have information on the sources of availability of industrial and technological information within the country.

NFPs information Network is depicted at Figure 1.



NATIONAL FOCAL POINT INFORMATION NETWORK

FIGURE 1

3 PROCESSING TRANSMISSION AND MARKETING OF INFORMATION

Information is a vital input for industrial and technological development. Adoption of modern methods of information processing and transmission has become almost a necessity. The quantity and variety of information that is available is increasing every day. In the competitive environment in which many of the industrial units are placed today, they require efficiently processed up to the minute information.

A few words about the basic telecommunication technology as is applicable to information services. Telecommunication networks of today, can carry data as well as voice. The telephone network which is normally used for transmission of voice can be adapted to transmit computer generated signals, through the use of modems. But for more economically efficient transmission of data, it is desirable that it is routed on specialised networks and switched seperately. In modern systems the data to be transmitted is cumulated into fixed sized 'envelopes' and then transmitted - called packet switched networking. The same transmission facility is thus shared by many users without any mix-up of data. For those who wish to have access to modern on-line information services this mode is found to be efficient and cost effetive.

The scenario of information processing and transmission is varying from country to country particularly in the developing world. On the one hand there are a few countries who use

up-to-date methods of information processing and transmission including satellite communication, on the other, there are countries who do not have such facilities due to resource constraints or other factors. In between, there are countries who have certain facilities but not so much up-to-date. In fact, approaches and methods vary in quantity and quality of hardware, software, communication facilities and manpower capabilities. Therefore, no one system could be suggested which could have universal application. NFPs would, therefore, have to select and make optimum use of the available systems within the given resources. The objective should be that the information is processed and transmitted efficiently, fast and at reasonable cost. Various modes such as computers, telephones, Telex, FAX or even satellite communication may have to be used, as appropriate. INTIB has to focus attention to the development of systems which can ensure on-line access by NFPs within reasonable financial reach.

For proper and efficient inter-linkage between the INTIB and its NFPs, it is desirable that the system used by the NFP are compatible with those used by INTIB. The coding system, where applicable, is also the same.

A number of INTIB data bases are operated on IBM PC XT/AT compatible micro computer. They propose to use, in the near future, CDROM for the purpose. INTIB is considering possibility of transfer of such data bases to NFPs where ever such a request is made. In that case INTIB

data bases would virtually be available with the NFPs, on-line. Establishment of on-line linkage with INTIB in Vienna, through a dedicated line, could be considered depending upon the load and economic viability.

While the requirements of hardware and software would vary from Focal Point to Focal Point, depending upon the various factors involved, a suggested sample is as under :

1. IBM compatible personal computer with hard disk ❷
   Minimum configuration
   Processor : 8088 or 80286 or 80386
   Memory : 640 Kb
   Floppy Disk : 5¼" 360 Kb or 3½" 720 Kb
   Hard Disk : 20 Mb (min)
   Prefer 60 to 80 Mb
   Ports : 1 Serial, 1 parallel
   Monitor : Monochrome, CGA, EGA etc.
2. Printer Hardware
   Printer ❷
   Printer cable ❷
3. Communications hardware
   Modem (300/1200 Baud, Asynchronous) ❷
   or
   Modem (2400 or 4800 Baud Synchronous depending upon local PTT) with Synchronous Data Link Control (SDLC) Adapter Card
   Modem cable ❷
4. Operating System
   PC DOS Version 3.20 or higher ❷
5. Application Software
   Personal Services / PC version 1.3 or higher (Personal)

3270 Emulation Version 3 (only in the case of sychronous communication)

6. Optional Text Processing Software
   Displaywrite
   Wordstar
   Wordperfect etc.

9 Minimum basic requirement

INTIB offers a Screenmail service to its NFPs. Brief about the system is at Annexe 6.

Marketing

All information services have little impact unless they are backed by a strong marketing effort. Infact, today information is like any other marketable good and if strong marketing efforts are not made, its effectiveness is likely to be poor. The value of information is in its being properly utilized, no matter how detailed, accurate and timely it is. The users should, therefore, know its existence, may infact be induced to seek it and when de ded, it must satisfy their needs.

In this field its activities should cover :

- **Dessiminating the services provided by NFP and its usefulness**
- **Publications, public relations (Seminars, Training, Workshops etc.)**
- **Direction in which NFP and INTIB may develop, based on users needs**
- **Regular contacts with proffesional bodies like industry associations, information centres, consultants and others.**

4 SET UP OF THE NATIONAL FOCAL POINTS

Basic Organisational Structure

While designing an organisation structure for the NFPs, the following points need to be kept in view:

- each country would have organisation/organisations for collection, processing and dessimination of industrial and technological information in one form or the other suiting its needs and its industrial, information and managerial levels of development
- approaches and methods of information gathering, processing and dessimination would vary
- there would be variations in the quantity and quality of hardware, software, communication facilities and manpower capabilities
- users needs should be kept uppermost in mind particularly the needs of entrepeneurs and small and medium enterprises who are likely to be most important actual or potential users
- close linkage to be maintained with the users
- provision of information in a structured form suitable for the needs of the users
- proper documentation of the publications received from the UNIDO/INTIB and other sources

Taking inter-alia the above aspects into consideration, the following organisation setup for the NFPs is suggested. However, suitable modifications may become necessary to suit local situations.

- In priciple, there should only be one NFP in

each country

- The NFP should be designated by the Government
- In any country there would be Organisations which would be involved in collecting, processing, generating and dessiminating industrial and technological information. One such organisation considered most appropriate (taking into consideration its capability, capacity and other factors) by the Government, may be designated to undertake the functions of NFP also. Creation of altogether a new organisation right from the begining may not be very viable on account of financial considerations, lack of availibility of trained manpower, equipment and other facilities. Once the set-up is operational and has gained enough strength to stand on its own feet, it could be considered to be converted into a seperate entity. Such an approach is likely to accelerate the process of establishment of new Focal Points and strengthening the existing ones. Should, however, conditions so prevail in any country that establishment of a seperate organisation for NFP would be conducive to its faster growth, such an approach need be adopted and persued.
- Ultimately the NFP should run as an autonomous Centre (e.g. Registered Society etc. as may be appropriate in a country) with its independent identity. It should have its own management, budget etc.
- The autonomous body should be managed by a Governing Board who should have members from the concerned Departments of the Government, Industry Associations and other bodies representing major users and sources of information

- Operarationally, the organisation should be headed by an excutive who has experience in industrial and technical development, information needs of the industry and in general management.
- The organisation should have the following three Divisions besides a small administrative unit
  a) Information collection and storage
  b) Information analysis and dissemination
  c) Marketing, user relation and training

  The Information collection and storage Division will be responsible for acquisition of information, networking and storage including Library. It will also be responsible for hardware and software development and maintenance. The Information analysis and dissemination Division will be responsible for analysing, evaluating and repacking of information. The Marketing, user relation and training Division will be responsible for market strategy, user interaction, public relations, publication, training, organising seminars etc.

  There need to be close coordination between the three Divisions. A suggested organisation chart is depicted at Figure 2.
- The manning pattern would depend upon the work load.
- There is an ethical dimension in charging the information provided by the NPPs to its users, which has been obtained free from Vienna and Regional Centres. On the other hand, it is pansion in NPP's activities which is expected to grow at an accelerated rate, that it becomes self-supporting as early as possible. There is also another

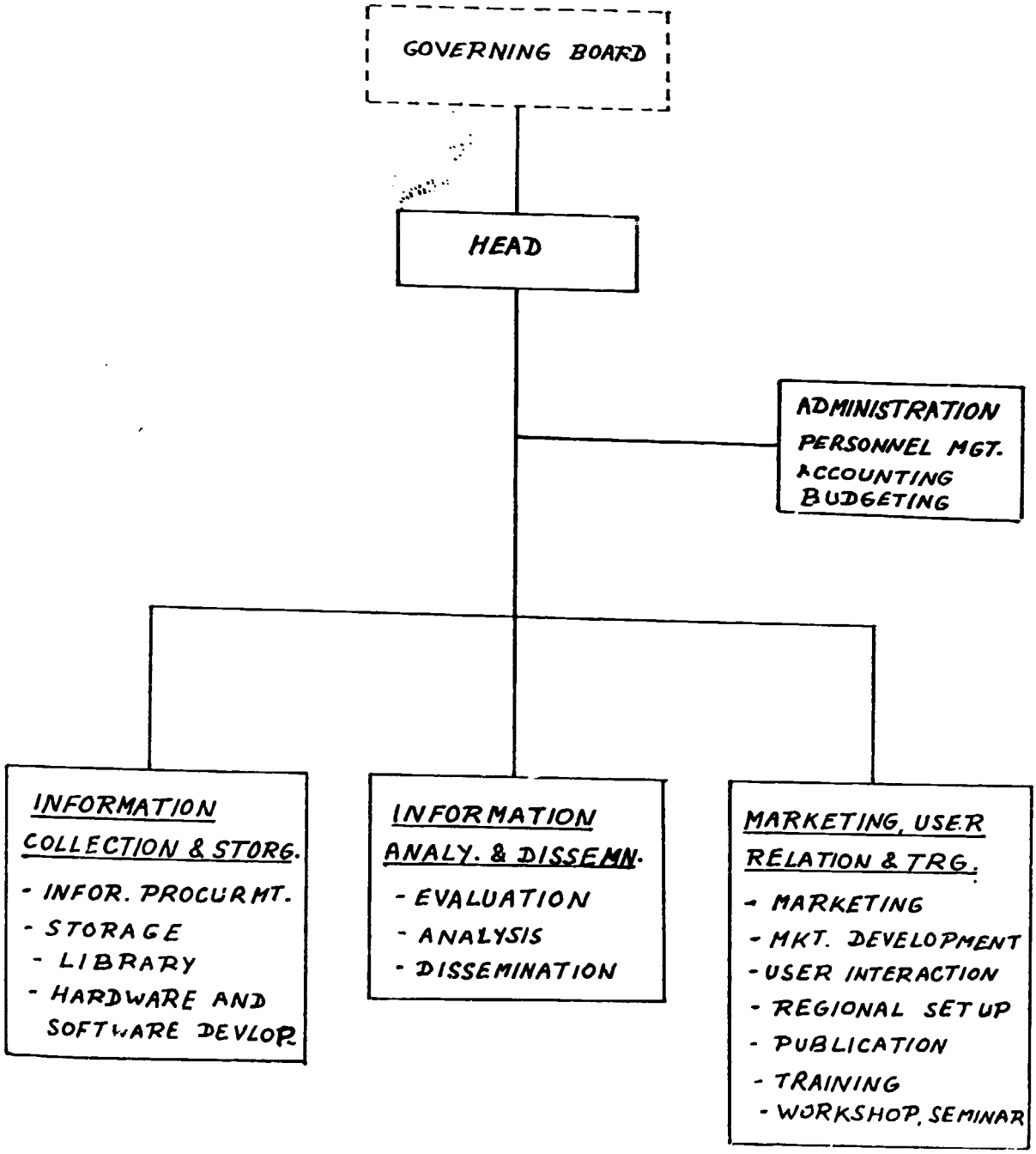

GOVERNING BOARD
HEAD
ADMINISTRATION
PERSONNEL MGT.
ACCOUNTING
BUDGETING
INFORMATION COLLECTION & STORG.
- INFOR. PROCURMT.
- STORAGE
- LIBRARY
- HARDWARE AND SOFTWARE DEVLOP
INFORMATION ANALY. & DISSEMN.
- EVALUATION
- ANALYSIS
- DISSEMINATION
MARKETING, USER RELATION & TRG.
- MARKETING
- MKT. DEVELOPMENT
- USER INTERACTION
- REGIONAL SET UP
- PUBLICATION
- TRAINING
- WORKSHOP, SEMINAR

FIGURE 2

dimension that information supplied free is, generally, not taken seriously and casual seekers of information put avoidable load on the system.

It is, therefore, suggested that while initially it may not charge its users but once it becomes fully operational, it may leavy an appropriate charge to the information it provides. The exact mechanism, the organistions to whom it may like to supply the information free etc. would be worked out by the concerened NFP depending upon the local situation. The information to INTIB, Regional Centres and NFPs in other countries may, however, be supplied free. Its quest to apply cost reduction techniques, voluntary contributions and other measures towards that end should be pursued vigorously.

It should, however, be noted that industrial and technological information service is hardly a profitable proposition even in developed countries and much less in a developing country. As such, there could be little possibility of a private organisation running such a facility in the country. To fill up the void, Government has to play an important role. The consequences of not providing the information are likely to be dangerous - keeping the country ignorant of technological advancements would retard the industrial growth of the country itself. It is like an investment in education where the nation upgrades the knowledge and vision of its citizens, information on industry and technology would upgrade its industries. Such an investment would be more than compensated by the benefits that accrue

due to a modern and healthy industry of a nation.

Government should, therefore, be prepared to subsidise the running of such a Centre. Industry Associations, Chambers of Commerce and other users also cannot absolve themselves of their responsibilities in this regard. They must also contribute in the running of such a Centre.

Therefore, in addition to the grant by the Government and its own sales revenue, contributions should be made by Industry Associations, Chambers of Commerce and other major users.

- Its rights and duties should be clearly defined. (A suggested sample is at Annexe 7)
- Considering factors such as geographical location of the NFP, its work load, specialised nature of requirements, it could consider operating its Sub-Centres with a view to provide a better service to the user and be near it.

Review Mechanism

Every NFP should have a mechnism for reviwing its past performance with a view to guage how effective the systems have been, identifying any corrective action that may be required to be taken and develop future plans of action. It should be a self generating built in mechanism providing end-user and internal operation oriented information. This, however, does not substitute financial statements and reports etc. that are normally required to be presented and audited by the competent authority.

The review results may be forwarded to I N T I B also who

could guide the NFP on growth oriented development or any corrective action that may be required to be taken. While the system need to be designed to suit local coditions of NFP, a system is suggested at Annexe 8.

What does NFP offer ?

Based on the role defined for NFP, it would inter-alia offer the following to the users :

- Sources of technology in respect of selected sectors of industry.
- Abstracts/Full text of technical and other reports feasibility reports, working papers provided at UNIDO meetings etc.
- Information on terms and conditions for better acquisition of technology.
- Data on equipment and prices.
- Information on 'How to start small manufacturing industries'
- Information on training needs and opportunities.
- Data on research and development activities.
- Advisory services on information policy and design.
- How to contact industrial information experts.
- Access to UNIDO Publications.

These are only a few examples.

Other related issues.

- NFPs should organise programmes and activities such as Workshops, Seminars etc. aimed at achieving closer interaction between the NFP and the users particularly the entrepeneurs or small and medium enterprises. Such activities should be supported by material in printed and other audio

visual forms.

- NFPs should undertake surveys to identify the user needs particularly those of the entrepeneurs or small and medium enterprises and use this information to improve the service and credibility. (Industrial and technological information should be demand oriented)
- Surveys to identify user needs should not be a one time exercise but should be taken at regular intervals so as to upgrade the system to suit the stages of development of national industry and its changing capabilities and needs.
- NFPs should provide training and managerial assistance to other data bases in the country in the area of information management, software development and other related fields in which it would have developed capabilities.
- Keeping in view particularly the needs of small and medium enterprises, the language of information dissemination should be simple. National languages could also be used.
- INTIB is currently supplying information to the users directly. The existing system may continue till the NFP is well established. In the interim period, however, a copy of the reply could be endorsed to NFP by the INTIB.
- NFPs may develop a system so that for repeat querries it may not have to refer again to INTIB or the information sources but are able to respond based on the earlier information. Assistance of INTIB may be taken in this regard, which is stated to have developed such a system and is currently in operation. A copy of the 'QUERIES WORKSHEET' used by them is at Annexe 8.

- Packaging of information must be given considerable importance. It does not merely involve composing a para or a page but involves a more copmlex process of delivering the right information in the right form at the right time and to the right user.
- Support of the Government would be a major factor of successful functioning or otherwise of the NFP.
- The scope of the NFP should be limited to the activities defined. It should not spread itself thinly and widely and not be able to do a decent job. It could then end up with a grand record of being 100% in everything but only 20% in something.

5 FUTURE DEVELOPMENT

Increasing competition in the home and foreign markets, globalisation of trade, pressing demands from the users for new and improved products will greatly enhance the information needs of the industry. The information systems of the future will be more user oriented - easy to use easy to understand and within easy financial reach. 'Information' is likely to be treated more and more as a product and information collection, processing and dissemination as a buisness.

The number of user organisations is also likely to grow. Decision makers in the Government, Reasearch and Development Organisations, Universities and Institutes would need to know more in an environment that is being shaped by new forces. No single organisation will contain all the information that it needs and has to depend more and more on information suppliers. Their number is likely to grow with tendencies of specialisation.

Another dimention to the above phenomenon is the induction of newer technologies in collection, processing and transmission of information such as electronics, computers, photonics and telecommunications. This is an important component bringing the information sources and users closer and expanding the information market substantially.

The information activity itself may enter, in some countries, into the competitive mainstream and market forces may determine even the very

existence of an information supplier.

Keeping the above factors in view, the following role is envisaged for the NFPs in the near future:

- distinguish itself as a source of information it specialises itself
- central dissemination house on the sources of information within the country
- as an agency to accelerate the process of development of industrial and technological information infrastructure
- provide specialised services such as assistance and guidance in establishing and managing data bases, training, upgradation of existing data bases and development of capabilities in packaging of information, development of software etc.
- the NFPs should be self-supporting to increasing degrees.

5. INDUSTRIAL AND TECHNOLOGICAL INFORMATION BANK'S ASSISTANCE TO NATIONAL FOCAL POINTS - A PROJECT.

Background

The Industrial and Technological Information Bank (INTIB) was first set up in 1977 as a pilot project by a decision of the UNIDO policy making body, the Industrial Development Board. It became operational in 1980. In 1985, UNIDO member States supported the further strengthening and expansion of INTIB and the introduction of new elements.

The request to establish INTIB was in accordance with the Lima Declaration and Plan of Action, adopted by the Second General Conference of UNIDO to set it up. In December 1975, the General Assembly of the United Nations, in its resolution 3507 XXX, reaffirmed the "need to enable developing countries to have access to specific information on advanced and other technologies requested by them, as well as on the new uses of existing technologies, new developments, possibilities of adapting them to local needs and ..... to select technologies which meet their requirements".

INTIB is part of the UNIDO Industrial and technological Information Section. Its over all task is to undertake co-ordinated activities relating to industrial and technological information, strenghten the information systems in developing countries and compile and disseminate information requested by these countries.

With a view to effectively pe-form its task, a number of steps have been taken by the INTIB and one of them is the establishment of NFPs in various countries. The Workshop for UNIDO/INTIB National Focal Points on Industrial Information Networking and Cooperation held in May/June 1988, inter alia, recommended increasing assistance by INTIB in establishing /strengthening the working of NFPs.

Objective.

Identification of areas of assistance to be rendered by UNIDO/INTIB to NFPs in achievement of the role assigned to them.

Project details.

NFPs have been assigned the following main role:

(a) Industrial and technological information supplier on:

(i) The full range of information as may be available from INTIB, Regional Centres and NFPs of other countries.

(ii) The sources of information as may be available within the country, if not the information itself.

(iii) The most sought-after locally available information, particularly those required by entrepreneurs or small and medium enterprises.

(b) Depositor and desseminator of UNIDO/INTIB and Regional Centres' publications.

(c) Source of locally available information and/or information itself as may be requested by the INTIB,Regional Centres and NFPs in other countries.

(d) A catalyst for development of information infrastructure in the country.

NFPs should take all possible measures towards furtherance of achievement of the above assigned role effectively and efficiently.

In fulfilling the above role, specific assistance that may be required by the NFPs would vary from country to country depending on factors such as areas of strenths and weaknesses of the NFPs(refers to only those which are in operation) availability of telecommunication facilities, trained man-power availability etc. However, in general, assistance may

be provided in the following areas:

(1) To provide full range of information as may be available with UNIDO/INTIB and its publications. In case of data bases such as Industrial Development Abstracts, only the abstracts may be provided and hard copies may be made available only if requested.

(2) Provide assistance by way of training, equipment, software, telecommunication facilities and other identified areas specific to the needs of the Focal Point. Of special significance would be the training in modern methods of accessing,processing & re-packaging of information to suit user needs at the local level. Attention may be given to man-power development in the various specialisation needed to operate the system effectively. "On the job" training may be required on INTIB Data Bases and Systems.

(3) The activities at para (2) above may be supported by providing appropriate training material in printed or other audio visual forms.

(4) Assist in development of systems software, provision of thesaurus, system of coding etc so as to facilitate system interfacing. INTIB may also consider developing suitable coding systems/ thesauri for technology as the current coding systems are primarily

product-oriented and are not very suitable for technology as in latter, finer details are required.

(5) Assist in undertaking surveys t identify the user needs particularly those of entrepre rs or small and medium enterprises.

(6) Assist in identifying cost reduction methods to reduce the cost of operation of NFPs.

(7) Organise regional level programmes in association with Regional Centres and NFPs on areas of common interest for furtherance of the activities of NFPs.

(8) Organise country programmes such as workshops, seminars etc. with a view to appraise users of the likely benefits of NFPs. Such programmes would be very useful particularly in those countries where NFPs have not yet been established or are in operation at a subdued level. This may also enthuse interest in the member-state in establishing / strengthening the NFP.

(9) Organise meetings of Heads of NFPs and/or request Regional Centres to organise such meets at the regional level with a view to exchange experience, suggest improvements in their operation, develop future plans and work out joint activities.

Benefits.

Such a course of action, apart from strengthening the NFP,is likely to have a multiplier effect and may accelerate the process of development of information infrastructure in the country. The NFPs themselves may be in a position,later, to offer specialised services to the Data bases in the country.

Assistance to other organisations in the country.

While INTIB's attention may be primarily directed towards strengthening the activities of NFPs, but it should not be restricted to it alone. INTIB may, in addition, provide its expertise, knowledge and information base to other organisations also as considered necessary.

7. CASE STUDY

(Based on NFP operation in India)

Background.

The importance of industrial and technological information is well realised by the industry and the Government. India is in the middle of its Seventh Five Year Plan. This has been set against the perspective upto the year 2000 A.D. The overall objective is to take the country to a much higher level of economic and technical development and bring it in the forefront. Emphasis has been laid on improving productivity, efficiency, modernisation and competitiveness in industry, conservation of energy, promotion of non-conventional energy sources and integration of science and technology in the main stream of development planning. The Plan envisages growth of industrial output at an average rate of 8% per annum with the objective of a much higher level, thereafter. To aid the achievements of the above objectives, growing need for " information" has been stressed, which is one of the important inputs.

The information infrastructure that India has, comprises mainly Information and Documentation Centres in specific fields, Centres of information in industrial establishments, National Information System in Science

and Technology, Information Centres in Research Institutions and in Financial Institutions and others. These have been established at various stages of the country's development and have grown over a period of time. Classical approaches to storage and retrieval of information have been outmoded. Advantages of emerging information technologies like computers, informatics and telematics are now being increasingly taken to keep abreast with global trends.

With the thrust that is being laid on future growth and technological upgradation, the development of effective information system in industrial technology has become very important. A need has been felt by the industrial units particularly by small and medium enterprises, Government agencies, Developmental Financial Institutions, and others of alternative sources of technology and future development trends in selected industrial sectors. The Government, therefore, has decided to establish an Industrial Technology Information Centre in the Directorate General of Technical Development, Ministry of Industry. The Centre is in the process of being established.

The INTIB made a request to the Government for designating an organisation as its National Focal Point. Keeping in view the objectives of National Focal Point, and that an Industial Technology Information Centre was being established in the D.G.T.D. and other relevant factors, the Government designated the D.G.T.D. as INTIB's National Focal Point. The activities of the NFP would be carried out under the ambit of Industrial Technology Information Centre.

The Directorate General of Technical Developmet (DGTD) , under the Ministry of Industry, renders technical advice, promotes industrial development and is the principal advisory organisation of the Government of India on matters relating to industrial technologies. It is in close touch with the industrial units, adivses them on all matters relating to industrial development etc.The Organisation is manned by a large number of specialists in various disciplines.

Objectives.

The immediate objectives of the NFP are:

(1) To supply industrial and technological information to the users as may be available from INTIB.

(2) To supply industrial and technological information/sources of such information as may be available in the D.G.T.D. or after obtaining the same from other local sources, to the extent possible. Such restrictions and arrangements will apply as are considered necessary to preserve the confidential nature of any information or publication.

(3) To advise entrepreneurs or industrial units on matters of technology, future development trends, availability of raw materils, plant and machinery, instruments, components and other related areas.

(4) Depository and desseminator of UNIDO/INTIB publications on selective basis.

(5) Supply to INTIB, to the extent possible, sources of information and/or information itself as requested by them which may be available locally.

Organisation

The Centre is proposed to have three major divisions (1) Industrial / Technological Information Management Sciences Division (2) Information Sciences Division and (3) Information Processing and Communication Sciences Division. Major functions of each would be:

(1) Industrial/Technological Information Management Sciences Division

(a) Identification of information needs.

(b) Procurement and marketing of information.

(c) Analysis of information.

(2) Information Sciences Division.

(a) Information Sceinces.

(b) Library.

(3) Information Processing and Communication Sciences Division.

(a) Operation of the hardware.

(b) Development of systems and software.

(c) Codification.

The Centre would be headed by an officer with experience in industrial and technological development and information needs of the industry. Initially, it would be under the D.G.T.D., Ministry of Industry but once it becomes operational, it may be converted into a Registered Society and managed by a Governing Board, which would have representatives from the Government, Industry Associations, users and experts in the field. Initially, the Centre would get financial support from the Government, but would be less and less dependent on such support and may, when fully operational, run on a no loss no profit basis. However, Government support, contribution from Industry Associations and Chambers of Commerce and other may become necessary at times.

It is proposed that initially, the information may be supplied free to the users but subsequently when the Centre is fully operational, the users may be required to pay, for the information and services received. The amount to be paid would, however, be so fixed that it is not large and onerous on the users,particularly the small and medium enterprises.

Sources of Information.

India has a vast information infrastructure. For example Scientific organisations and industrial establishments both in the public and private sectors have information and databases in their respective fields. Industry Associations have also their own Data Banks/Bases to serve the needs of their members. Under the National Information System in Science and Technology (NISSAT) programme sectoral informaton centres for drugs, leather, food, mechine tools etc. are functioning. Such organisations would be the sources from where information as may be required, would be obtained. If necessary, industrial units would also be approached. This would be in addition to the information which would be available from the INIIS.

Recently, for the INTIB's technology supply data base, information in respect of offers of technology and joint ventures have been compiled and forwarded to INTIB. A sample of the Form in which the information has been forwarded to INTIB on "offers of technology" and" joint venture opportunities" is at Annexe 10.

Information processing and communication.

To serve the information needs of Government Departments/Ministries, an organisation - National Informatic Centre (NIC) was established in 1977. In the first phase of its operation,a large main frame computer CDC Cyber 170/730 was installed at its Head quarters at Delhi. Besides, a large number of local terminals and about 20 mini computer terminals were provided to the main users. These were all connected to the Cyber System to form the NIC Network (NICNET). As a part of its expansion programme, 4 Super Computer NEC S-1000 have been installed at Delhi and 3 other important places in India. All the State capitals will have ND 550 or equivalent super minicomputer systems for providing information services to the State Governments and linkage with the central system. The nation-wide information network will use Satellite communication.

While the above serves the need of various Government Departments & Inter-departmental information flow, one of the major organisations which serves the need of industrial sector & other large segment of users is the CMC Ltd. (a Government of India Enterprise) which operates a network - INDONET. It became operational since March, 1986 and consists of Computer Centres at Bombay, Calcutta, Delhi,Madras and Hyderabad with access points in three other cities. Three IBM 4361 computers constitute the heart of the system while an Integra 1001 and a DEC PDP 11/44 provide additional computing power. The computer centres and access points are connected by dedicated data lines from the Department of Telecommunication (DOT) at 2400 or 4800 bits per second (bps). Access to INDONET computers is possible not only from the CMC's computer centres but also by means of terminals at customer premises via dialled or dedicated links. The configuration is given in Fig. 3.

In phase II, (expected to be completed shortly) INDONET's inter city communications will be via satellite. It will operate as a STAR-Network with the control point at New Delhi. Other INDONET Centres (planned to be by 1990) and remote customer locations

will use roof-top mounted three meter earth stations. A packet-switch at the central station will switch data addressed to other INDONET centres. Transmission from both Centre and remote stations will now be at 64,000 bps.

INDONET will shortly have an "International Gateway" and it will then be possible to have access to international Data banks/bases.

The Informationr Centre located at New Delhi will use its own computer system for processing the information. Considering factors such as (a) vastness of the country (b) widely dispersed users as also the likely sources of information (c) work load at the central location, it is planned to open Regional Centres at appropriate places. The existing communication channels such as the INDONET,are proposed to be used as a Network of its own, may not be economically viable due to low utilisation.

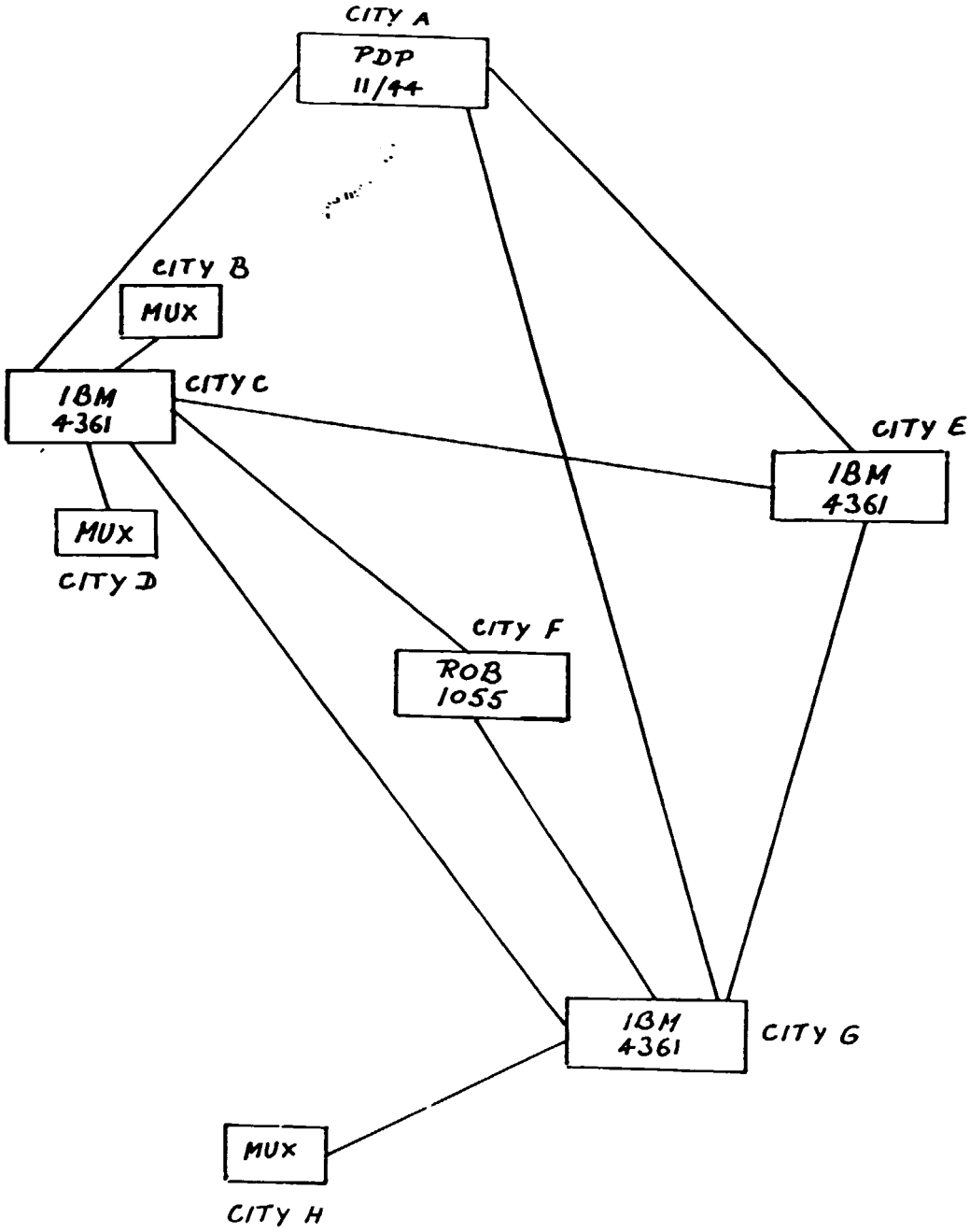

CITY A
PDP
11/44
CITY B
MUX
IBM
4361
CITY C
CITY E
IBM
4361
MUX
CITY D
CITY F
ROB
1055
IBM
4361
CITY G
MUX
CITY H

FIGURE 3

Users.

The likely users of the facility are:

- Industrial units in the large, medium and small scale sector.
- Industry Associations.
- Government Departments.
- Research and Development Organistions.
- Universities and Institutes.
- Private consultants/consultancy organisations.
- Development Financial Institutes.

9. MEMORANDUM OF UNDERSTANDING

Memorandums of Understanding between (a) The Industrial and Technological Information Bank of UNDIO and the National Focal Point, (b) Industrial and Technological Information Bank of UNDIO and the Regional Centres and (c) National Focal Points and the Regional Centres are suggested in the following pages. These may, however, need variation depending upon the local conditions and situations.

MEMORANDUM OF UNDERSTANDING BETWEEN THE INTIB OF UNIDO AND THE NATIONAL FOCAL POINT

The two parties agree:

1. INTIB will supply to the NFP & vice-versa, as requested, industrial and technological information and its publications as may be available and or could be reasonably obtained, subject, however, to such restrictions and arrangements as may be considered necessary by either party to preserve the confidential nature of certain information and publication.

2. INTIB will, if requested, assist the NFP in achievement of the role assigned to the latter, to the extent possible. Such assistance could illustratively be in the form of

a) Training of manpower

b) Development of systems, codification, software.

c) Provision of telecommunication facilities.

d) Provision of hardware.

e) Organising programmes such as Workshops, Seminars etc. to identify user needs, exchange of experience and other identified areas.

f) Provision of support material in printed or other audio visual form, for training, etc.

3. Exchange experience in development and application of information technology.

4. Prepare and publish joint publications on specific issues in the field of industrial and technological information using the expertise and data that may be available with the two organisations.

5. Expenditure on facilities and services to be provided for the implementation of the Agreement shall normally be borne by the suppllier of such facilities and services. However, where the expenditure is beyond, minor or ordinary expenditure (including any publication that is to be charged) which the supplier or receiver is not willing to bear, and/or in joint programmes where expenditure is to be shared, this must be agreed to between the two prties, in advance.

MEMORANDUM OF UNDERSTANDING BETWEEN THE INTIB OF UNIDO AND THE REGIONAL CENTERS

The two parties agree:

1. To exchange industrial and technological information and publications of interest to both the parties subject to such restrictions and arrangements as may be considered necessary by either party to preserve the confidential nature of certain information and publication.
2. Organise and implement jointly training workshops, seminars, expert group meetings in industrial and technological information.
3. Exchange experience in development and application of information technologies.
4. Prepare and publish joint publications on specific issues in the field of industrial and technological information usin the expertise and data that may be available with the two organisations.
5. In general, the publications shall be exchanged free of cost.

6. Any minor or ordinary expenditure relating to the implementation of the Agreement shall be borne by the supplier of information.

7. If the cooperation proposed by one of the parties to the other in accordance with this Agreement entails expenditure beyond minor or ordinary expenditure, and any publication is to be charged,consultations shall be held between the two to designate the availability of the resources required, the most equitable way of meeting such expenditure and if resources were not readily available, the most appropriate ways to obtain the necessary resources.

MEMORANDUM OF UNDERSTANDING BETWEEN THE NATIONAL FOCAL POINT AND THE REGIONAL CENTER

The two parties agree:

1. To exchange industrial and technological information and publications of interest to both the parties subject to such restrictions and arrangements as may be considered necessary by either party to preserve the confidential nature of certain information and publication.
2. Organise and implement jointly training workshops, Seminars, expert group meetings in industrial and technological information.
3. Exchange experience in development and application of information technologies.
4. Prepare and publish joint publications on specific issues in the field of industrial and technologibcal information using the expertise and data that may be available with the two organisa tions.
5. In general, the publications shall be exchanged free of cost.

6. Any minor or ordinary expenditure relating to the implementation of the Agreement shall be borne by the supplier of information.

7. If the cooperation proposed by one of the parties to the other in accordance with this Agreement entails expenditure beyond minor or ordinary expenditure, and any publication is to be charged consultations shall be held between the two to designate the availability of the resources required, the most equitable way of meeting such expenditure and if resources were not readily available, the most appropriate ways to obtain the necessary resources.

INTIB's answers rely on its own and other UNIDO database,and on its extensive access to database and information systems around the world.

ANNEX - 2

Technological Information Exchange System (TIES)

TIES participants are those institutions which exchange information on technology transfer agreements on a confidential, reciprocal, equal and mutually beneficial basis every six months at a predetermined level of participation. The following levels are possible:

TIES I

The periodic exchange of a summary of terms and conditions of contracts by industrial sectors. This level is known as TIES 1 and enjoys the participation of most of the participants. The period covered is six months (January-June and July-December) and data is submitted every six months to the TIES secretariat. A summary table and the country tables are then sent to all TIES I participants. This data is provided on a manual basis via eight standard tables indicating the following information by the industrial sector (ISIC four digit).

- Products contracted for recipient company, home/supplier company name and

(b) Number of contracts by collaboration type (license, know-how, trademark, etc.);

(c) Number of contracts by supplier county;

(d) Number of contracts by level of foreign holdings;

(e) Number of contracts by duration:

(f) Number of contracts by payment type (lumpsum, royalty, etc.);

(g) Number of contracts by royalty rate (net sales);

(h) Total contractual payments.

TIES II A

A periodical exchange of non-financial data on a contract which involves a technology transfer through the license of a patent, trademark, transfer of know-how, models, drawings either associated with a service or not associated is knows as TIES II A. The same data submission and report distribution procedures as for TIES I are in force.

The countries may choose to receive a printed, microfiched or computer tape update of the data base sorted according to industrial

sector, product and country. This will ensure that the participants are in possession of a complete set of TIES II A data of all participating countries in their information units.

TIES II A information exchange is principally geared towards the exchange of basic information on contracts which will enable a participant to identify a contractual arrangement in another country. More detailed information on the contract may then be obtained on a bilateral basis.

The data provided by contract at the TIES II A level includes the following information fields:

- Recipient country (code).
- ISIC industry (code) (4 digits).
- Level of foreign holdings (code).
- Recipient (private company, staff owned, etc.) type (code).
- Supplier company (code).
- Supplier country (code).
- Currency of contract payment (code).
- Contract date.

- Contract duration.
- Collaboration type(s) (codes).
- SITC product (codes).
- Production volume, annual sales, annual production capacity.
- Name and address of the recipient company.
- Name and address of supplier company.
- Comments (e.g. process, product, industry, etc.).

TIES II B

The exchange of non-financial data (same as for TIES II A) and detailed information on the financial terms of the contracts which involve a technology transfer through the license of a patent , trademark, transfer of know-how, models, drawings either associated with the service or not is known as TIES II B. The same data submission and report distribution procedures as for TIES II A is in force. The additional information on financial aspects of the contract will enable the participant to have an indication

contractual arrangements in a specific sector as a guide to the establishment of fair and equitable techniology transfer payments.

The data on the financial terms of the contract involves :

- royalty type
- royalty level
- minimum royalty
- lumpsum

TIES Service

The TIES System has been expanded to include additional information to be exchanged on contracts which involve the transfer of a service and which does not include the transfer of intellectual property such as studies, engineering services, one-shot technical assistance, routine technical assistance, assistance to equipment maintenance, training, etc.

Again the same data submission and report distribution procedures as for TIES II A & II B

are in force. The additional data on the service agreement involves :

- Contract fee
- personnel fees
- personnel expenses
- performance guarantees
- performance penalties
- price adjustment formulae

TIES Rules

It is important to note that participants receive data at the level of detail at which they provide it. Those providing TIES I are industry-level data receive similar data from other participating countries. THOSE providing TIES II A (non-financial) data, receive TIES II A information from other countries. Those participating at the TIES II B, or, at the most detailed level, receive all information available from all participating countries (II A, II B). All participants are expected to treat the information received as confidential and will not use the information for publication without prior authorization by the source of the information.

ANNEXE-3

Latin-American Association of Development Financing Institution

Background.

The Latin-American Association of Development Financing Institutions-(ALIDE),a representation body of development banking in Latin America and the Caribbean, has carried out several activities in order to promote and coordinate financial cooperation between the development financing institutions of the region and between these institutions and other specialized bodies and institutions within the region and beyond it.

Regarding the information related to these activities, ALIDE's efforts have been oriented to gather information on potential investment projects in the regional development bank portfolios which could receive some type of external co-operation; and, on the other hand, to the identification of the investment and financing international institutions in participating in projects located in the region.

This information was classified regularly in the form of substantial documents which were sent to development banks(international financing conditions) and to the institutions interested in financing and/or making investments in the region (development bank's

projects). Later, ALIDE would organize meetings to promote investments and assist the parties in mking the necessary arrangements for projects of common interest.

Besides gathering the aforementioned information, ALIDE has completed several studies which have made possible the identification of a significant number of development banks and international financing institutions which are in position to undertake co-investment and co-financing operations permitting the implementation of joint development projects between two or more countries. Furthermore, ALIDE's Information Network RISLIFR also has information available on: Technologies which may be used in projects promoted by development banks; legal information on the provision in effect for foreign investments; socioeconomic diagnosis of regions and specific countries; specific studies on the different productive sectors; specific sectorial policies on investment promotion, etc.

This information is ecessary for any activity oriented to promoting cooperation between the countries of the region and between different regions.

Objectives

The general objective of the project is to provide

duly classified information to development banks, international banks, businessmen, investors and other parties interested in co-operating in medium and small investment projects contributing to the economic development of Latin-American and Caribbean countries.

The specific objectives of the project are:

- Establish a service which provides information on the terms and conditions for participation regarding the banks interested in co-participating in investment projects located in the region
- Establish an information service on the characteristics of the Technological processes used in the investment projects financed or promoted by develoment banks in the region sharing the experiences accumulated on the matter.
- Design and launch four data centers: documentary (bibliographical),statistical,project registry,and banks & international investors registry,operating through a computerized system and functioning as an information and consultation center providing the aforementioned services.
- Establish an operational structure on a regional level (using common standards and already existing infrastructure of BIDLINE) in order to make

possible a continuous flow of information from the national cores to the data centers. Thenational cores would also have access to the data centers and would provide services to the national users of the countries in the region (small and medium investors).

Results

With this project different information services will be available to facilitate the realization of development projects contributing to social and economic development of the countries in Latin-America and the Caribbean. Actually, through the permanent flow of up-dated information from the national cores to the regional core, it hoped to establish a data center enabling us to provide the following services:

- A specialized documentary (bibliographical) service providing bibliographical information (on different subjects) to the users, be they development banks, businessment and investors within the region and from countries from other regions.

- A statistics service on volumes of production, foreign trade, and markets, as well as on the [illegible] of the products, amounts and [illegible], etc.

- A service on business and investment opportunities which would be provided through the registry of development projects in a position to receive some type of foreign coparticipation.
- A service on offers for financing and furnishing capital for the implementation of development projects, provided through the registry on international investment and financing sources.
- A service on selective data diffusion through broadcast media with the adequate information according to the need of the users, mainly for information on technologies, regulations and requisites in effect for foreign investment, etc.

ANNEXE - 4

The African Regional Centre for Technology.

The ARCT is an intergovernmental organisation under the auspices of the United Nations Economic Commission for Africa (UNECA) and the Organisation of African Unity(OAU). It has 30 member states. Specifically, the Centre is mandated to carry out the following functions:

--- Strengthen technological capabilities and the application of technology;

--- Stimulate the awareness of technological development;

--- Promote the use of such technology as is suitable for national development onjectives;

--- Assist in the formulation of technology policies, as an integral part of planned scientific, technological and socio-economic development;

--- Encourage research and training in methodologies of technology planning;

--- Improve, for the benefit of its member states, the terms and conditions under which technology is imported and, through technology acquisition agreements;

--- Promote the diffusion and dissemination of technology and the collection and encouragement of the use of technological information; and

--- Assess the social implications of the development, importation, and adaptation of technology, and promote the understanding of such implications.

The following priority areas have been identified for the Centre's Work Programme based on the foregoing mandates/objectives:

--- Promotion of the development and application of indigenous and other technologies in the food sector, particularly for food production & the reduction of post-harvest food losses.

--- Promotion of the development and application of indigenous and other technologies for the generation of new and renewable energy.

--- Promotion of the development and application of indigenous & other capital goods production technologies for the food and energy sectors; and

Development of national capabilities in technology policy and planning.

Activities

The following are the major areas in which the Centre's objectives are being implemented through concrete project activities:

Food Science and Technology.

Production and post-harvest technologies of processing, preservation, storage and marketing; research and development; demonstration of viable technologies; technical appraisal of technologies; up-grading and application of traditional technologies; adaptation and/or application of modern and frontier technologies particularly biotechnology. Demonstration Units have been established in Benin, Cote d'Ivoire, Ghana, Kenya, Malawi, Nigeria, Senegal, Togo and Zambia. Examples include demonstration of viable technologies for the processing of cereals e.g. maize in Kenya and Zambia, and roots and tubers e.g. cassava in Ghana.

Energy Technology

Development and demonstration of viable new and renewable energy technologies for the rural areas, particularly biomass energy technologies. Demonstration units have been established to promote the

diffusion of biogas technology have been established in Morocco, Mauriania, Liberia, Guinea Bissau, Burkina Faso, Ithiopia, Senegal, Sierra-Leone, Tanzania, Togo, Zimbabwe, Ghana and Nigeria, and over 50 technicians trained in the construction and maintenance of biogas digesters.

Technological Consulting and Advisory Services

Advisory servicers on national technology policy, planning and strategies; technology needs assessment and formulation of appropriate technology development pgogrammes; establishment and strengthening of demonstration in the food and energy sectors, and capability building in technology search and identification of alternative technologies, in Equatorial Guinea, Senegal, Nigeria, Ghana, Kenya, Zambia, Morocco, Burundi, Ethiopia and Sierra-Leone.

Training

Evaluation of technological training needs and formulation of appropriate programmes; national, sub-regional group training through [illegible] workshops, seminars, regional demonstrations, short term attachment, and

secondment, study tours and fellowships. Nearly all African countries have benefited from training programmes organised by the Centre.

Information and Documentation

Technological information systems, industrial and technological information collection processing, repackaging, and dissemination of food, energy and capital goods sectors; publication of periodicals: African Technodevelopment, (a bulletin of current information and research results published bi-annually), Alert Africa, (a newsletter to sensitize policy-makers on new technologies, published quarterly), directories, bibliographies and indexes, as well as periodic surveys of scientific and technological resources in Africa, data base development and management and enquiry handling.

ANNEXE -5

International Centre for Scientific and Technological Information Centre

The main tasks of ICSTI are as follows:

- drafting proposals concerning methods and hardware for Scientific and Technical Informatioin(STI) services in the ICSTI member countries, providing for the establishment and expansion of MSNTI:
- offering information services, based on the extensive use of advanced technology, to various organisations in the ICSTI member countries, primarily in the problem areas crucial for the national economy and for promoting scientific and technological progress;
- publishing the necessary information, and the use of other forms of pupularising scientific and technological achievements;
- carrying out reserach projects in the field of STI theory and practice;
- providing, on demand from interested parties, organizational, methodological, scientific and technical assistance in the STI field;

- rendering assistance in education and advanced training of information specialists from the ICSTI member countries, as well as in the exchange of experience in the field of education and advanced training of information personnel.

ICSTI fulfils its objectives jointly with interested information services of national systems and also jwith individual scientists and practitioners from countries cooperating with ICSTI on the basis of cooperation agreements and contracts.

The highest governing body of ICSTI is the Committee of Plenipotentiary Representatives (KPP) consisting of permanent representatives appointed by the ICSTI member countries. The KPP meetings are convened in compliance with the approved work schedule (at least once a year) to deal with important problems of the ICSTI activities.

Control over the ICSTI's financial activities exercised by the Auditing Commission appointed by the KPP.

The current activities of ICSTI are supervised by its director with the help jof deputy directors. The ICSTI director and deputy directors are appointed by the KPP.

The ICSTI director and deputy-directors are guided in their work by the Agreement and IICSTI Regulations and also by the KPP decisions. The director reports to the KPP and is responsible for the ICSTI activities.

Scientific activities of ICSTI are considered and discussed at meetings of the Learned Council set upat the Director's office. The Council is an advisory body whose members are appointed by the KPP out of the most qualified specialists and scientists from the ICSTI member countries.

At present, almost 250 specialists from all the member countries work at ICSTI.

ICSTI fulfils its tasks focusing on three main directions:

- scientific and methodological support for MSNTI;
- reference information service to users;
- reserach and design projects.

ANNEXE - 6

SCREENMAIL

Screenmain is an electronic mail service that is easy touse and faster and more efficient than traditional methods of communication. It involves the use of modern equipment that can be assembled quickly and adapted for future growth.

Screenmail users can exchange information with others participating in the service. For example, if a user urgently needs to communicate with someone in another country who is away at a meeting, all the user has to do is send a message via Screenmail. Theperson receiving the message then sends back the reply. A two-page message (approximately 4,000 characters) takes no longer than a two-minute telelphone call. In addition, Screenmail eliminates delays inherent in the telephone system, such as when the lineis busy or the person being called is not available. But most important of all, Screenmailing is economical than traditional methods of communication.

Users may communicate with UNIDO in Vienna to get information from INIIB or with government authorities, companies, organizations or individuals participating in the screenmail service in other countries.

The Screenmaail Service is designed to help those participating in it:

(a) Meet their deadlines more easily;

(b) Become part of the global community of information exchange.

(c) Achieve success and credibility.

Screenmail transports not only messages but also files or even images.

ANNEXE - 7

RIGHTS AND DUTIES OF NFP

(SAMPLE)

1. National Focal Point (NFP) will be, in principle, only one in each country.
2. The NFP will be designated by the Government.
3. It should provide to the users,when requested, who may be Industrial units R&D organisations, Government Departments, Consultants and others,
   (a) technological and industrial information as may be available from INTIB,Regional Centres & NFPs in other countries,
   (b) sources of information as may be available within the country, if not the information itself,
   (c) most sought after locally available information (which may be identified in advance)particularly those required by small and medium enterprises.
4. It should be depositor UNIDO/INTIB and Regional Centres publications.It should also be a desseminator of information contained therein & or the publication itself, on a selective basis.

5. It should supply the information or the sources of information that may be available locally,which may be requested by INTIB, Regional Centres & NFPs of other countries.

6. It should act as a catalyst for development of information infrastructure in the country.

7. It should supply its publications to UNIDO/INTIB, Regional Centres & the NFPs of other courntires.

8. It should ensure efficent operation of its network and strive to achieve financial self-sufficiency at the earliest.

9. It is obliged to receive information as may be requested by it from INTIB, Regional Centres and NFPs of other countries.

10. It should receive publication from UNIDO/INTIB, Regional Centres and the NFPs of other countries.

11. It should receive support and assistance from INTIB,Government and others concerned by way of hardware & software requirements, manpower needs, telecommunication facilities & others,in fulfilment of the role assigned to it.

The success of NFP network will, to a very large extent, depend upon the cooperation amongst its constituents.

ANNEXE - 8

Review Mechanism of NFPs

Report for the period.....

1. Types of users

	Numbers	%
- Small and medium industrial enterprises, Large scale industrial enterprises, Entrereneurs, Industry Associations, R & D Organisations, Universities and Institutes, Government Departments.		
- I N T I B		
- Regional Centres.		
- Other N F Ps.		
- Consultants.		
- Others.		
TOTAL		

2. Types of Industries.

	Number	%
- Capital Goods/fabricated metal products.		
- Chemicals and Petrochemicals/Pharmaceuticals.		
- Agro-Industries/Food processing.		
- Textile and leather goods.		
- Paper and pulp.		

- Non-metallic minerals.
- Ferrous and non-ferrous metals.
- Others.

TOTAL

3. Types of inquiries.	Number	%
- Equipment/Machinery suppliers		
- Technology supplier		
- Industrial abstracts.		
- R & D related		
- Energy related		
- Consultants/experts.		
- Others.		
TOTAL		

Response Time.	Number	%
Inquiries which could be replied.		
- Within 15 days.		
- Between 15 & 30 days.		
- Between 1 & 2 months.		
- Between 2 & 3 months.		
- Beyond 3 months.		

Response level	Number	%
- Total number of inquiries received		
Number of inquiries which could not be answered		

Sources of information	Number	%
Inquiries that were required to be referred to		
- INTIB		
- Regional Centres.		
- Other NFPs.		
- INTIB and other publications.		
- NFP's own data bases.		
- Specialised organisations within the country.		
TOTAL		

Note: A more comprehensive system covering the cost and quality aspects of replies need to be developed once the NFP is in full operation.

ANNEXE - 9.

QUERIES WORKSHEET

Record type (06)		Record number	
Record date (01)		Country code (02)	

Name (10)		Researched by
Designation (25)		
Corporate name (11)		
Address (26)		
Organization type (44)		
Query type (61)	__ INTIB __ General __ Technical __ Cost __ Design	__Equipment __Identified __Industry profile __Machinery supplier __Other supplier	__Mfg process __Market __Patents __Raw material Others_____
Title (20)		
Sector (42)		
Subject (40)		
Referred to (62)		
Action (64)		

ANNEXE -10

OFFERS OF TECHNOLOGY

1. Name of the Items' Technology.

   Code No.
   Ind.Sector
   Ind. Sub-Sec.
   (for DGTD/INTIB use).

2. Name & and address of the Technology supplier.

   Telephone.

   Telex.

   Cable.

3. Brief description of technology/product.

4. Main usages of technology.

5. Salient features of product/ technology such as output norms, norms of consumption of raw materials, utilities and energy, overall conversion ratio.

6. Details of specific advantages, if any, of the technology over other similar technologies.

7. Status of technology developments.

Laboratory	Yes/No
Pilot plant	Yes/No
Commercialised	Yes/No

8. Has production on commercial scale based on this technology established?

9. i) Minimum economically viable capacity.

   ii) Investment required.

   iii) Requirement of specialised skills etc.

10. What is the current level of production in the plants of the technology supplier?

11. Is the technology supplier willing to offer:-

   a) Technical know-how — Yes/No

   b) Training — Yes/No

   c) Techno-economic Data — Yes/No.

   (Delete not applicable).

12. List of patented countries with expiry dates.

13. List of licences already offered to other customers and their broad results (country and company name).

14. Other remarks.

Signauture.....

Designation.....

Date.

(To be submitted in three copies)

JOINT VENTURE OPPORTUNITIES

Industrial Sector: Industrial sub- Sector:

Entrepreneur invites joint venture partner: Yes No

Entrepreneur offers joint venture projects:

Entreprenur's name and address:

Telephone:

Telex:

Cable:

List of anticipated new products through joint venture:

Desired production capacity per year or per day.

Co-operation sought; Entrepreneur's contribution

Equity participation ----------

Technical Know-how and expertise ----------

Equipment Supply----------

Raw Material Supply ----------

Training local staff----------

Capital loan----------

Buy-back arrangement

Compensation or trade

Anticipated market share:----------

Domestic:----------per cent

Export:----------per cent

Pre-feasibility study and/or techno-economic data available

List of countries of preference, if any, for the joint venture:

Other remarks:

SIGNATURE:_____

DESIGNATION:_____