INFORMATION BROKERS

B.M. GUPTA
R. KUNDRA
S.P. GUPTA
NISTADS, Hillside Road, New Delhi-110012

Introduces the concept of an information broker. Describes the factors responsible for emergence of information brokers namely nature of clients served, mode of getting requests, resources, and marketing techniques used. Provides an overview of services offered by information brokers. Finally, discusses the nature of information brokers industry with special reference to India.

1 INTRODUCTION

The concept of information as a salable commodity is increasingly being recognized and accepted in our present society which is entering in the new information age. As a result, we find that producers of information especially those who can deliver it in machine readable form, those who can facilitate the distribution of information by providing telecommunication facilities and software, and finally those who are able to repackage information economically and quickly in a form wanted by the user can expect increase in demand and growth in their activities. The present paper is an attempt to provide a bird’s eye view of the last category of services generally involved in the repackaging of information. This sector of information industry has experienced a considerable growth over the last five to seven years.

These services or their agents are called by different names [1] as listed in Table 1.

Table 1

<table>
<thead>
<tr>
<th>Information Broker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Consultant</td>
</tr>
<tr>
<td>Information Specialist</td>
</tr>
<tr>
<td>Information Retailor</td>
</tr>
<tr>
<td>Information Service</td>
</tr>
<tr>
<td>Library Consultant</td>
</tr>
<tr>
<td>Library Research Service</td>
</tr>
<tr>
<td>Management Consultant</td>
</tr>
<tr>
<td>Consulting Information Specialist</td>
</tr>
<tr>
<td>Information Consultancies</td>
</tr>
</tbody>
</table>

The most popular name being the information broker. An information broker is normally an individual who on demand seeks to answer questions using all sources available or one can say a friendly expert who prepares a package of information for a fee in response to needs and demand of information clients. He acts as a clearing house linking sources with those who need it. Based on the above understanding, we can call this type of service as fee-based information services.

Over the last few years a large number of fee-based information services have emerged in a number of countries, the United States taking a lead. They are providing services to researchers, policy-makers and planners who are acutely aware of the need of information and complexity of obtaining it. Their clients range in size from multimillion dollar conglomerate to one man outfits. They are located in business, industry, government and social service and come from various professional shades namely engineers, accountants, lawyers, artists, system analysts, biologists, architects, authors, etc.
The main area of specialization in providing these services is basically in the skill of getting information in all fields of knowledge; a few broker's specialize in particular subject fields. These services answer question of any size, ranging from a 5 minute request for some specific statistics to a request for a major market study involving many days of work. The information broker offers a combination of following services namely data base searching, document delivery, information research and analysis, information management, etc. Most of these services are emerging in the private sector, but some large academic and public libraries have also set up separate fee-based service departments for requests that cannot be met due to the time and budget constraints.

2. WHY FEE-BASED INFORMATION SERVICES?

The fee-based information services have emerged in different countries because of a number of factors. The first major factor has been the complexities introduced as a result of literature growth and explosion [2]. This has led to an increase in specialization and consequent fragmentation and dispersion of literature. As a consequence, many relevant papers in a field are often found to be dispersed in a large number of journals making it difficult for the users to locate them. With the growth of literature, a number of secondary services have come up for the bibliographical control of literature in various subjects. For an effective utilization of these services, it is necessary to know about structural developments taking place in them from time to time, knowledge of indexing systems, collective use of indexes, and availability of cumulative indexes [3], etc. The users, very often, are not able to keep track of the above developments. Also, search on a particular topic is very time consuming and require lot of patience. With the fast technological developments taking place in the area of microelectronics, computers, and telecommunication industry vast amount of printed information available in secondary services have started becoming available in machine-readable from (magnetic tapes and discs) popularly known as data bases. In 1975, as many as 301 such data bases were available and the number has increased to 528 in 1978. These data bases are increasingly becoming available on-line. In 1978 alone there were 2.67 million on-line searches [4]. Despite all the optimism regarding their use, there is considerable amount of variation that one finds in these data bases. Data bases vary with respect to context, subject covered, format, chronological coverage, relationship that may exist between them, and the way they are loaded in the system. They also vary with respect to features and functions, vocabularies, systems used for searching them, access protocols, command languages, systems responses and messages, system features and even data element labels or tags. There are also problems regarding retrieval steps, multiplicity of names and problems of subject access in data bases. As a result of the variety of data bases and complexities involved and time and skill required in searching them the need for intermediaries (fee-based information services) has become inevitable [5].

The second contributing factor has been the deficiencies that exist in the present organizational set-up of library and information centres. Most of them decline to undertake time-consuming literature searches, bibliographical compilations, report writing, translation services and other tasks for which they are not adequately staffed or facilities not provided. Also, most of them remain within their four walls to answer their client's questions, which is a big handicap for them [4].

The third factor, which is most important, is the special characteristics of the fee-based information service which distinguish them from the available library and information services. Their general approach is on information needs of users rather than books-and-journal orientation. The information is collected by them wherever it is available and a large number of these services are effectively using marketing and promotional techniques to achieve their objectives. They also satisfy the clients on a cost effective basis and present information in a manner that reflects the attitude of prospective clients. In these services information is taken one step further by analysing, interpreting, and presenting it in monographs, reports and other stu-
dies that are custom tailored to the client's specific needs. Most of the users also find it convenient and most-effective to turn to them for answering their needs. The majority of these services have considerable library and information science experience, and are aggressive, have business-like patience, are well informed about sources, have sense of humour, and financially able to weather a slow start [6].

3 SOME FEATURES OF FEE-BASED INFORMATION SERVICES

3.1 Resources
The fee based information services use all possible resources that are relevant and accessible to answer their clients' requests. They include: building up of an in-house collection, rental a computer terminal, make arrangement with data-bases through vendors' use, investment in training of staff for undertaking specialized searches, use of nearby libraries and a panel of experts, purchase of back-up facilities like photocopying machines and extensive communication facilities [7,8]. Very few services can afford to maintain extensive internal collections. The collection of these services normally includes reference works, company files, and information supplied to the clients in the past. Normally the emphasis is on that type of literature which, in their opinion, is irreplaceable or cannot be obtained easily from the standard sources. Most of the fee-based information services have installed computer terminals and maintain links with several data-bases through their vendors by paying subscriptions or minimum fees required by them. Several of these services also frequently use libraries in the nearby towns or cities. In order to avail of such facilities, majority of services find it appropriate to locate themselves in those areas where extensive network of specialized libraries exists. Also many of these have extensive communication facilities like telephone, telex, etc. The larger services can also afford special services like the "Wide Area Telecommunication Service (WATS)" for low cost, high volume, long distance services from American Telephone (AT&T). Many of these fee-based information services maintain a panel of consultants. Normally the larger and medium-size services utilize these facilities. Experts mainly enable the information services to gain current data where there might be on-going research or unpublished material. A few services specialize only in document procurement and maintain extensive photocopying facilities to serve their clients faster and in time.

3.2 Marketing Techniques
Marketing techniques are effectively being used by most of the present fee-based information services. There are several marketing techniques and tools which are normally used. The most important ones are: promotional techniques such as direct mail, yellow pages and telephone listing, advertisements and promotional brochures. These are being supplemented by techniques which determine market needs and requirements of clients [9]. It is not just enough to have a properly designed information product or service; it must be presented in such a manner so that it should reflect the attitude of prospective clients. At present, only a few libraries undertake market research, in the form of public opinion sample and that too, on a broad state or community basis. That is why the use of marketing techniques is an important area of advantage of fee-based information services over traditional library and information services.

A high percentage of fee-based information services has listings in telephone directories in contrast to a small percentage which takes out advertisements in yellow page listings. These services normally appear in yellow page listings under the following headings: Library Research Service; Library Research and Service; Market Research and Analysis; Information Bureaus; Information Services and Bureaus, etc. The least popular amongst the promotional channels seems to be advertisements in radio and television. Most of the advertisements in these medium appear either in commercials or radio spot programmes. Fairly large number of fee-based information services take out advertisements in professional journals, but only a few concentrate in library and information science journals. Also, a substantial number of them take out advertisements in local newspapers. Only a few can afford to place their advertise-
ments in national dailies. Some of the ways normally used in newspaper dailies are establishing columns like "What do you want to know — Activities of Individual Services", etc. Preparation of promotional literature (pamphlets, leaflets, etc.) is the most popular and widely used methods by fee-based information services. This type of literature is attractively designed, normally listing their services with their plus points, and sent to those individuals and organisations which are considered as their potential clients. The most widely and highly effective marketing technique is rated as the Word-of-Mouth. Other techniques normally used are: demonstration at exhibitions, conferences, professional meeting of their services, producing in-house newsletters, sales cells, etc.

3.3 Mode of Getting Requests

Requests are received by fee-based services from clients either in person or through telephone, telex and teletype methods. A major percentage of these requests comes through telephones and mail. In-person requests are not common except for non-profit sector based fee-based services. Similarly telex and teletype methods are rarely used.

3.4 Nature of Clients

A large variety of clients are served by fee-based information services. The nature of clients vary sharply with respect to the size of fee-based service serving them [10]. For the large fee-based information services, clients are mainly spread all over the country and abroad too. Larger corporations are their prime clients. Within the corporations, marketing departments are the clients most often served. R&D departments are second in importance, top administrators account for a small number of requests. In case of medium-sized fee-based services, clients are mainly located in larger metropolitan areas. Among their potential clients, larger corporations contribute (20-50%), small business (20-60%), government (20-50%) and non-profit (5-15%) to their business. Clients primarily come from R&D and marketing groups. Finally in the case of small fee-based information services, clients normally are restricted to the local area or region of their location. About sixty per cent of their clients is from R&D and marketing groups. The rest of their clients comes from administration, production, etc.

4. SERVICES

The fee-based information services offer a variety of library and information services ranging from simple document delivery, compilation of bibliographies, indexing, current awareness & SDI services to on-line searching, preparation of analytical reports, market studies, research, consultancy, etc. Some of the activities of these fee-based information services are described below.

4.1 Document Procurement

Document Procurement is one of the most widely practised activities of the fee-based information services. Document Procurement requests are generated in many ways by these services.

i) Many times, these firms get direct requests from users for a specific document.

ii) Often, users request for a literature search on a particular problem or a research project, etc. As a result, lists of citations are being identified. Out of such lists these services often get requests for procurement of serial articles and other documents.

iii) Some services are offering current awareness and SDI services to their clients. The users identify from time to time the relevant material which they will like to have regularly from these services.

iv) Many services from time to time prepare specialised bibliographies of their own in certain specific areas keeping their clients' interests in view. These bibliographies are sent to clients either free or against some nominal payments. The clients select material from these bibliographies and normally order for some material important to them.

Recruitment of field staff and inter-library methods are normally used by these services to gather photocopy of requested material. These services also maintain reciprocal arrangements with special libraries which allow a faster and reliable processing of requests. User charges
are sometimes levied by libraries on them. These information services also pay annual fees to some academic and corporate libraries. In many cases several of the information services or their employees become members of library associations. As a result reciprocal arrangements are granted to these services through such memberships. These services also extensively maintain publishers' files and good contacts with government agencies and book dealers which save their time and efforts in obtaining unusual, out-of-print and unpublished items. Many information services specialise in document delivery and they count their volume of requests in hundreds per month; others provides service as a convenience to their customers. Many services are also participating in the newly introduced on-line electronic systems namely: Lockheed “DIALORDER” service, SDC’s “Electronic Maildrop” and Telecommunication Corporation of America’s “The Source” service, which enable the user to communicate directly with the document suppliers. Requests are handled faster through these electronic mail systems than through regular mail. The increasing popularity and rapidly lowering costs of this technology is expected to revolutionize document delivery services within next few years. One of the leaders in providing document delivery service is “Information-on-Demand” (IOD) located in Berkeley which processes about 8000 requests per month. Other important services which specialise in this area are: Information Specialists, Cleveland, Ohio; Info-Search (Mich.), FIND/SVP (N.Y.), Data Quest International, Inc (Chicago.), etc. [11,12].

Photocopying prices for these services range normally between $0.5 to $0.40 per page. Another $1.0 might be added for mailing. Document delivery prices may range from $5.25 to $7.50 per article or higher plus photocopying and royalty charges. Rush service might add $2.50 to $10 more. There will continue to be great short-term demand for document delivery service, especially directed to small firms. A large number of requests to these services have come from clients that have the ability to locate the information but find it most cost-effective to turn to an organisation or an individual who can perform the work at a lower cost. It is expected that this type of service will not have a bright future both in terms of the volume of demand and in terms of profitability.

4.2 On-Line Searching

Several fee-based information services are offering on-line services through a variety of machine readable data-bases. On-line searching seems to be a prominent area of activity of more than fifty percent of such services in United States. Compared with United States, on-line searching has a secondary role in other countries because of high telecommunication costs. Using a computer terminal, relevant citations to current as well as retrospective literature on topics of interest in fields covered by machine readable data-bases can be supplied to customers through on-line searching. As of today, the three major on-line data vendors, namely Bibliographical Retrieval Service (BRS), Lockheed and SDC provides access to over 130 data-bases containing information in all fields of science, technology, law, medicine, humanities, etc. While there is a significant overlap between vendors, analysis shows that a significant number of files are unique to each as shown in Table 2.

| Table 2 |
| Number of Data-Bases available with the Three Leading Vendors |
|------------|----------|----------|
| Total Numbers of Files Offered by Vendors | 93 | 59 | 27 |
| Files Uniquely Available from Vendors | 51 | 37 | 7 |

Fee-based information services usually maintain access to more than one of the three large vendors as well as other suppliers of specialised data-bases. They frequently make arrangements with vendors by paying regular subscriptions or minimal fees as the case may be. Searches at the
fee-based information services have been carried out by staff who have extensive on-line experience and keep abreast of constantly changing software capabilities developed by major vendors. In addition, they undergo from time to time special training necessary for access and for interaction with these data-bases.

The on-line searching has many advantages. For quick results citations can be displayed in various formats right at the terminal. If one prefers, search results can be printed on a 8½" x 12" paper suitable for filling. Each citation contains a full reference to the printed document (author, title, publication, source, data, etc.). At present creating a suitable infrastructure for undertaking on-line search on a particular data-base is not very costly in the United States. A terminal suitable for searching for a Lockheed System, for example, costs approximately $2200. This is the largest capital cost that most of the smaller fee-based information services have. A typical on-line search cost a user in terms of:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) Data base Access Charge (Including Payment of Royalties)</td>
<td>$25-$150 Per hour</td>
</tr>
<tr>
<td>ii) Prices for Access and Printing Off-line Citations</td>
<td>$0.5-$0.50 Per citation</td>
</tr>
<tr>
<td>iii) Cost of communication</td>
<td>$5-$10 Per hour for a Tymshar &amp; Talent Network</td>
</tr>
<tr>
<td>iv) Cost of Providing Services by the Firms</td>
<td></td>
</tr>
</tbody>
</table>

On the basis of above estimate, a typical ten-minute search of most frequently used data bases costs approximately $7 to $8 in United States.

The future of on-line searching does not look very bright and is increasingly being dependent and affected by the developments in new technologies. With the rapid innovations taking place in the area of micro-electronics, computer and communication technologies, one finds that low cost terminals and printers have become widely available in the market, search strategies have been simplified, and cost of communication has been reduced considerably. As a result, the cost of providing on-line search has become considerably low. There is an increasing possibility that a large number of users will start installing their own on-line searching terminals in future. Many firms specialize in this area. Some of the important ones are: Cibbarelli Associates Computerized Literature Searching Service, Univ. of California, Documentation Associates, Info-Mart, Richard L. King, etc.

4.3 Information Research and Analysis

The purview of information research can range from simple reference question to a preparation of a full report on a specific topic. In order to make full use of data retrieved through on-line searching, many clients ask their information brokers to also sift, analyse the search yield and eliminate duplicate entries out of citations retrieved as a result of interaction with different data-bases, and arrange the material in a logical subject clusters and provide indexes. The differences between a full report and a raw computer-output are a worth of great deal to busy clients[14]. Other searches may be supplemented by further library research and statistical analyses of retrieved data. Surveys, state-of-art reports and analytical based on specific custom information needs are also prepared frequently by information brokers. Some of the brokers which specialize in the area are: Diversified Finders; Information-on-Demand; Information Resources; Arthur D. Little, Inc., etc.

4.4 Information Consultancy

Many organizations are beset with information problems and need consultancy services to arrange and organize their files and data. Many brokers provide services in this area, which range from design of library and information systems to the design of library and information networks. Service under the category of design of library and information system includes advice on space planning, furniture design and type; manpower planning and assessment; information services; assessment of information needs, etc. Some of the important firms in this area are: Taylor and Associates, Information Professionals, Information Consultants, Information &
INFORMATION BROKERS

Research International, etc.

The Second important area of consultancy work in the library and information network is designing. Among the larger brokers firms well known are: Boeing (Seattle); Peat, Marwick and Mitchell (New York); Nelson Associates Inc. (Cambridge, M.A.). Boeing has mainly been associated with "Washington Library Network" and Network Design for North Bay Co-operative (a group of California libraries). Peat, Marwick and Mitchell (New York) did a significant study for and associated also with California State Library Network. Nelson Associates, Inc. (Washington, D.C.) have been actively associated with the New York State Inter-Library Loan (NYSILL) Program. Arthur D. Little, Inc. (Cambridge, Ma) have performed major studies for OCLC and California State University and College System.

4.5 Computer-Based Library and Information Services

Considerable efforts have been made by few firms for the development of computer software oriented to library systems. Among the most established firms of United States in this area are: CL Systems (Newtonville); International Business Machines (IBM); Systems Control, Inc. (Palo Alto); 3M Company (St.Paul); Data Phase Systems (Kansas City).

CL System, Inc. (CLSI), a firm devoted entirely to library automation, started first with mini-computer based acquisition system and subsequently shifted to other areas of library operations. Its circulation system is quite popular in the United States and more than 200 libraries have already installed it. The system runs on a Digital Equipment Corporation PDB II Mini-Computer and uses bar-coded labels for identification of books and users. This system is further enhanced in its utility by two firms, namely Innovative Interfaces Ltd. and TPS Electronics, which have developed microcomputer packages allowing the transmission of data from OCLC terminals to CLSI system. IBM has also developed a library package operating with a system known as "Library Access System" being actively marketed in USA, West Germany, Canada under the name DOBIS. This system is used mainly for data collection, storage of files, and data transmission. System Control, Inc. is another aspirant in this field which have developed a mini-computer based software programmes for circulation system programmed in BASIC on PDB II. It also developed software for other functions of libraries. Compared to the above commercial firms, Data Phase Systems, Inc is comparatively a newcomer in the software industry and has successfully developed a circulation and a technical processing systems based on Data General Mini Computer and a operating system called MUMPS [15].

4.6 Market Studies

Market studies form an important area of activity of fee-based information services. A variety of custom-tailored marketing reports are prepared by these services. Some idea about the activities of these services can be had from the following examples:

a) A company is looking forward to develop a new product. Information brokers can help them by carrying out a marketing study which will include information on present market size, growth factors, competitive situation, leading brands, new product trends, advertising promotional opportunities and consumer usage, etc.

b) A company has a product and an established market. The Company is interested in acquiring a special or new market. Information brokers can help him by providing the appropriate information.

c) A company might be interested to know the projected market for mini computers in Europe over next five years. Here also the information brokers can help him providing the detailed assessment of the whole situation.

Custom-tailored market studies are the major source of income for the fee-based information services.Charges for such custom-tailored reports are quite high compared to other services and may go even up to $ 8000 for a-200-page report that may take one to two months of researching and writing. The names of some of the firms which specialize in the area are: Information Store; World Trade Business Information Centre, Golden State University; Washington
Researchers; Information Specialists (Cleveland); World Wide Information Service, Inc (New York); McGraw-Hill Publishing Co / Marketing Information Centre (New York); FIND/SVP (New York).

4.7 Supporting Services to Libraries

Quite a few firms are providing services to libraries for their routine operations such as circulation, cataloguing, indexing and abstracting, organization and maintenance, etc. In the field of cataloguing, 50 broker companies have chosen to subscribe to the MARC Distribution Service in order to provide catalogue cards, book catalogues and other products to the clients. Similarly Blackwell/North America (Portland) has taken over the marketing of automated bibliographic system developed by Richard Abel Company. The Company's data-base consists of MARC data, the University of California Catalogue Supplements, MARC records from other nations, company owned cataloguing staff and clients. Clients may order set of cards (for each document) with or without documents. It is also possible to get photocomposed book catalogues or Computer-Output-Microfilm (COM) Catalogues. Although input from the customers has been either in hard copy or magnetic tape, the Blackwell is also in the process of establishing an on-line system, where requests can be received directly from the libraries by the company. Another company in the same line is the Inferonics, Inc. which have developed an on-line catalogue support system using MARC data. Other major broking firms in this line are: The Broadart Company (William Sport) and Baker & Taylor (New York). The Broadart provides custom services for catalogue conversion. COM Catalogue production drawing not only on MARC data but also several other large bibliographical data bases. This company has also introduced an on-line system for some acquisition tasks, dubbed as "Instant Response Order System" (IROS).

4.8 Organizing Conferences/Seminars/Workshops

This is an area which is recently emerging. Very few services specialize in this area. It seems to be a profitable venture to take up contracts for such conferences/seminars. Arrangements for organising one day programme for 100 persons normally cost at least $5000 to the clients in any major city of the United States. Besides taking contracts for organising seminars, conferences and workshops, some fee-based services also offer some professional seminars. For example, Washington Researcher, an important fee-based service offers six seminars annually (bimonthly) on various topics of interest to business personnel, researchers, information specialists, etc.

4.9 Publications

Publications are another profitable area of the fee-based information services. A majority of larger information services have also become publishers of literature of all kinds: primary (journal, books, reports), secondary (abstracting/indexing service), tertiary (directories, etc.). Publications are compiled by different methods. Some publications even are created by their in-house files generated in the course of quick-information questions, performing searches, or conducting market studies or they may obtain from other information services that lack the capacity to market their own publications. The price range of these publications are very wide. The lowest price offered by an information service is produced by the Washington Researchers. The company’s directories of various information sources, particularly the government ones, are priced as low as $5. Its most expensive directory is priced $95.

5. NATURE OF INDUSTRY IN INDIA

Information broker industry is still in its early stages of development in most of the countries. United States is the only exception where over 300 such fee-based services are operating. There are many similar services in other countries also. Some idea of this can be had from the list of information brokers and consultants in the Directory of Information Market Place, 1978-82 which contains details of more than 25 such brokering firms from Australia, Belgium, England, France, Germany, The Netherlands, etc. The journal of fee-based information service regularly updates such a list from time to time.

While the Indian industry is at an embryonic stage of development, yet quite a small
number of firms have taken steps to enter in this novel area. The activities of the Indian firms can be categorised as follows:

In the first category of firms in India are included those broking firms which are full time working, engaged in diverse library and information activities and are capable of searching and providing to clients documentary information in the form of books, journal reports, patents, conference and seminar papers, theses and dissertations, trade literature, standards on any subject and in any form from any part of the World. There are two firms of this kind known by the name of Constellate Consultants (P) Ltd., New Delhi and Informatics (India) Ltd., Bangalore. Both the firms were established just three to four years ago and within this short period of time, they have become profitable and are now on road to acquiring considerable business. As a result, their staff strength has also increased considerably. Constellate Consultants has at present a staff of about 40 people consisting of engineers, subject specialists and professionally trained library personnel. This firm is headed by a person who is an engineer by training and has a large experience of information handling in an industrial environment. He claims to have widely travelled and his firm has been one of the active users of the foreign brokering services. It has clients from all over India. Informatics (India) Ltd., Bangalore, has a comparatively small team of 18 people, comprising 5 professionally trained and the rest as supporting staff. A major portion of the activities of this firm is confined to South India. These firms have established themselves mostly at those places where a large number of users with high degree of information consciousness, a considerable amount of library and information facilities and professional activity, and a large industrial base exist. The broad range of services offered by these two vending firms are: document procurement and distribution, information searching (manual and computerised), consultancy, translation, information analysis and management, etc.

Document procurement and distribution is one of the major activities of these two firms. Requests are received by them for all sorts of documents namely reprints of serial articles, reports, monographs, standards, etc. Most of the requests are received from R&D institutions, industry, universities and government departments. In addition to this type of document procurement, Informatics (India) Ltd. also specializes in journal procurement and vending of books.

Its journal subscription service claims three big advantages, viz. saving paperwork, minimising risk and economy in spending. Among its various services, procurement services seems to be quite popular in Bangalore. As for report literature is concerned, Constellate Consultants, in particular, specialises in procurement of NTIS reports. It is also managing dealer of NTIS reports in India. The National Technical Information Service (NTIS), an agency of the U.S. Department of Commerce, is a centre source for the public sale of U.S. and other foreign government sponsored research, development, and engineering reports and analyses prepared by various government agencies. The requests of NTIS reports are generated by Constellate Consultants (P) Ltd. by preparing a COPS, an acronym of constellation prepared search is a list (bibliography) of NTIS reports, in a specified subject, by its staff members by searching the NTIS data base. Such bibliographies are prepared both on request and in anticipation of user's demand. Informatics (India) Ltd. is also in fact the sub-agents of Constellate Consultants for the promotion of NTIS reports in South India. Besides, Constellate Consultants (P) Ltd. are also the only distributors of Engineering Index in India.

Information searching is yet another important area of activity of these two firms. So far the major impact of this service has been only in the industrial sector; other users are slowly appreciating the potentiality of these vendors for this service. Major part of the requests in this area is handled manually because of the heavy cost of searching information through computer. A very small number of requests are handled on computerised data bases available in the West. For computerised searching of data bases, both these firms had made some arrangements with international brokers. Constellate Consultants had made arrangements with another broker firm “SIL Information”, Ottawa in Canada, which does all the on-line
searching jobs for them. On the other side, Informatics (India) Ltd. is a member of Dialogue System in USA, a vending firm. The firm normally mails the request to Dialogue System and gets a complete literature on any subject and on any particular data-base within 4 to 5 weeks. This firm is also successful in sending their requests through telex, which saves another two weeks of time. On an average, Informatics (India) claims to making 20-25 computerised searches per year. The average charge per search normally comes to Rs. 1500/-. Constellate Consultants also claims of using regularly data-bases for its clients.

The third important service provided by these firms is in the area of patents. In this area service includes searching, supply, technology transfer and registration of patents. Patent search service retrieves patent information on any subject from any part of the world and in any language. Patent supply service ensures exact location and supply of both Indian and foreign patents. In addition, these vendors claim to assist in technology negotiations with the inventors and also legal support to them which ensures help in registration in India and other parts of the world. In this area, major customers happen to be again Industry and R&D institutions. This is an area where the traditional library and information services are not very strong. So the chances for bagging business in this area are exceedingly bright in future.

In the area of other services namely, information consultancy, information analysis and management and marketing, not much headway has been made by these two firms. Although the Constellate Consultants (P) Ltd. have a group of about 10 people in the computerised information department, most of them are devoted themselves to development of softwares related to the systems development of fixed deposits share accounting, etc. Not any significant work has been done towards development of software for library operations. Constellate Consultants (P) Ltd. claim that they are in the process of developing software based on mini-based computer systems for library routines like purchase ordering, library stock taking and journal management. On the other hand, Informatics (India) has identified this area as one of their important future activities. India's large number of libraries and information centres are planning to use computer as an important tool. There is likely to be lot of activity in this area in future. However, at present both the firms seem to be getting a small number of contracts in this area of consultancy and that too from industrial sector only. Informatics (India) at present is able to secure one or two consultancy contracts per year mainly for design of library systems.

b) The second category of firms refers to those which are mainly concerned with commercial information & processing of data [16]. The names of firms working in this area are Commerce Research Bureau (Bombay), Centre for Monitoring Indian Economy (Bombay), Operational Research Group (Baroda) and Tata Economic Consultancy Service. Recently Mafatlal Group of Industries has also started a service of this kind, located at Bombay. Of these, the first two are the prominent sources of general industrial economic information. These organisations basically collect the statistics made available by the government (both basic and secondary) sources, other published sources of industry, etc. The information is then transformed into or classified into distinct categories and published regularly. They supply information both in processed and semiprocessed form. They also carry out analysis and even furnish simple estimates of some select indicators. The annual charges of the entire package of published service is around Rs.15,000. Specific enquiries from the members are also entertained. The total membership of these two information agencies, however, stands around 200-2500, with considerable overlapping [8]. Amongst those services the major firm which is involved in the analysis and forecasting of commercial data is Operational Research Group (Baroda). As far as Tata and Mafatlal Group of industries are concerned, they have come up initially to meet their own internal needs. They have slowly been extended for commercial purpose.

c) The third category of firms are mainly involved in the development of software and use of existing software packages in various library operations. Among the various computer firms orienting themselves in this area, are Hindustan Computer Ltd., Tata Consultancy
INFORMATION BROKERS

LTD., Computronics India, Centre for Development of Instructional Technology (CENDIT), etc. Most of these firms are in the process of development of software based on mini-computer and large-frame computers. In this area, most of the work has mainly been at the experimental stage. It is expected that more computer firms are likely to participate in this type of work in future and provide variety of services as soon as some initial success is achieved in this type of work.

d) The fourth category of firms are involved in providing industrial information. These consulting firms meet variety of information needs of industries, which ranges from collection of information on a product or process to the preparation of trend reports and feasibility reports. Some of the consultants even specialise in procurement of literature like reports, patents, standards, etc.

e) The last category of firms are mainly involved in the collection, processing and dissemination in highly specialised technical area. Some of the firms in this area are Zinc and Lead Information Centre, Delhi; Copper Information Centre, Calcutta; Indian Chemical Industries (ICI) Information Centre, Calcutta; Indian Aluminium Research Institute, Bangalore. Most of these centres operate on a membership basis and the information needs of their clients are met just by paying the required membership fees.

REFERENCES


