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INFORMATION AND DOCUMENTATION SERVICES FOR INDUSTRY

PART II

INFORMATION AND DOCUMENTATION
SERVICES FOR INDUSTRY IN OECD MEMBER COUNTRIES
AND IN SOME LATIN AMERICAN COUNTRIES

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to medical sciences, then it extended to include biology and psychology, and since 1960 also physics, chemistry, electronics, and some other sciences. Data on from 1,000 to 2,000 research projects are added to the store every week.

The information service of industrial and business organizations, learning establishments and professional societies may be broadly defined as non-governmental information bodies. They vary greatly in their scope of activities, tasks and financial backing. Information bodies of professional societies receive from the federal government direct financial support towards the printing of publications, research work in the field of information and the accomplishment of certain programmes which are of great importance for the national system of scientific information.

Non-governmental information bodies can be conveniently divided into several groups, although information bodies within a group may vary widely. Depending on the sphere of operation, the following groups can be identified: industrial and business information bodies; information bodies of professional societies; information bodies of academic institutions; commercial and independent organization for scientific and technical information.

Industrial and business information bodies constitute the largest group of information bodies which vary widely in structure and scope. They include technical information departments and technical libraries at companies and enterprises. Some large firms have libraries and technical information centres or departments, with the technical library sometimes embedded in the information division structure or, vice versa, serving as a parental body for the technical information division.

The main function of the information bodies in this group is to collect and process scientific and technical information in a certain subject field to meet the requirements of the organisations served. Libraries and information departments select and systematize proprietary technical documentation and build necessary collections of books, periodicals and patents to a size determined by the financial resources of the firm. Most of the literature comes by library loan or as photocopies and microfilms from government and university libraries. Large companies publish their own technical journals. Thus, the International Business Machines Corporation issues "IBM Journal of Research and Development".

The majority of journals published by industrial firms and business groups are sponsored by commercial publishing houses.

Scientific and technical information bodies, as a rule, are directly responsible before the firm's vice-president in charge of research.

During the recent decades there has been a marked trend in the United States towards a closer co-operation of companies within a branch of industry. Companies agree to collaborate and set up information centres which collect and process published materials in their subject area. Companies make abstracts of materials in their profile and send them down to the centre. In some centres information is fed into mechanized information retrieval systems. Information is provided to the personnel of the participating companies. Such co-operation of companies within one branch of industry is in evidence in the oil, pharmaceutical and aircraft industries in the United States, to name but a few. Sometimes co-operation in collecting and processing of information assumes international character, as in the aluminium, cast iron and steel industries, etc.

Information centres of learned and technical societies play an exceptionally important role in the United States system of scientific and technical information. According to the National Academy of Sciences data there are 1,600 such societies in the United States. Learned and technical societies traditionally serve as clearinghouses for scientific and technical information. Information is communicated by means of primary and secondary publications, conferences, seminars and symposia, information retrieval on demand, etc.

A major aspect of professional societies work is publication of one or more primary and abstract publications in science and technology. There are more than 6,200 journal titles published in the United States, of which 45 per cent are organs of learned and technical societies.

Most of the abstract journals in the United States are published by professional societies; the total number of abstract journals is 300. Whereas government and commercial groups issue abstract journals on specific problems, most abstract journals of professional societies are branch oriented. Because abstract journals set forth to achieve exhaustive coverage of scientific and technical literature of interest to their readers, the same publications may appear in several abstract journals, i.e. they may be duplicated.

Nowadays many abstracting services of professional societies employ machine methods for production of bibliographic indexes to journals, offer new kinds of current awareness services, develop computer-based information retrieval systems and introduce novel types of information services (selective dissemination of information). A case in point is the American Chemical Society.

To co-ordinate their efforts professional societies in the United States join in various federations and associations. Such "societies of societies" as the National Federation of Science Abstracting and Indexing Services and Bibliographic Services and Engineers' Joint Council promote unification of primary and secondary publications and development of more efficient information services.

Information centres of academic institutions do not confine their tasks of information services to the faculty and the student body but also conduct research work in the field of scientific and technical information. They sign contracts with the federal government and private organizations for research programmes in the field of applied linguistics, mechanization of information processes, etc.

University libraries have large collections of scientific and technical literature. They are an important source of information for those scientists and engineers who have no access to government information agencies. In recent years the university libraries are increasingly becoming regional centres of information, serving scientists and engineers within their region.

Some companies provide grants to universities and subsequently receive wanted literature free of charge.

Universities in the United States play an important part in the professional training of information workers.

Recently, many organisations outside any of the above-mentioned groups have moved into the information scene. They are private companies specialising in any one area of information service, or research institutions like the Battelle Memorial Institute, or again non-profit organisations independent of any professional society.

To illustrate, the "Biological Abstracts" service was founded in 1926 by the American Association for the Advancement of Science, National Academy of Sciences of the United States, and the Union of American Biological Societies. BAS is a non-profit organisation which has the aim of abstracting the world biological literature.

Due to considerable expansion of information services the Biological Abstracts Service as renamed, in 1964, to become Bio Sciences Information Service of Biological Abstracts. The abstract journal prints approximately 120,000 abstracts and 60,000 bibliographic references.

The information service indexes and abstracts 6,700 periodical titles from 91 countries. Each abstract journal issue is supplied with an author and subject indexes.

GREAT BRITAIN

The Ministry of Education and Science and Ministry of Technology which were established in 1964 play a special role in co-ordinating research activities and organization of information work.

To improve co-ordination of information work the Office for Scientific and Technical Information (OSTI) was formed under the Ministry of Education and Science in 1965. It has the following tasks:

- To advise the minister of education and science on questions of information work for the natural and social sciences and technology;
- To promote the development and improvement of information activities in the country;
- To co-ordinate and expand scientific research in scientific and technical information;
- To foster the development of a flexible and efficient system of scientific and technical libraries;
- To encourage the creation of new government and non-government information bodies and the improvement of the existing services;
- To provide consultative services to those organizations which plan improvement of their information divisions;
- To promote better professional training facilities for information workers;

- To popularize scientific information services with a view to their wide utilizations;
- To ensure effective participation of the country in international information organizations;
- To co-ordinate the work of other government and non-government information bodies;
- To give financial support to the National Lending Library for Science and Technology and to finance the Association of Special Libraries and Information Bureaux (Aslib).

The Ministry of Technology promotes the development of information services for the country's industry in a variety of ways. It directs and controls and activities of different government and government sponsored groups which are engaged in scientific research for the industry and provide consultative services and information to industrial enterprises.

The Ministry of Technology guides the activities of ten government research institutes and laboratories which have come under its authority from the former Department of Scientific and Industrial Research; it provides financial backing to 48 co-operative scientific research associations.

The Ministry of Technology has special responsibility for keeping the industry abreast of the current research and development carried out by the Ministry and other organizations.

The Ministry's publications department brings out a series of paid and free publications which highlight aspects of mechanization and automation of production, communicate the findings of research studies aimed at modernisation of production techniques. The Ministry issues a monthly bulletin, *New Technology*, for the managerial and administrative staff in industry. The bulletin has a circulation of 60,000 copies and makes for the introduction of inventions and innovations in production.

A centre for Research and Development Reports was established at the Ministry, charged with collecting and abstracting of research reports within the country and abroad. It issues "Research and Development Abstracts", a bi-monthly journal.

A selective dissemination of information service, called "Techlink", has been developed with the aim of speeding up introduction into the industry of new ideas and innovative technologies, as well as disseminating important data contained in research reports.

The Ministry of Technology jointly with the Ministry of Education and Science has built some 70 industrial communication centres at technical colleges and institutes. Their main task is to enhance the ties between science and industry and to promote more efficient utilization of scientific advances by industrial companies.

Specialists of these centres pay visits primarily to small enterprises in their region and explain how to use information sources and reference collections of local and national information centres and libraries. They establish personal contacts with manufacturers and examine the companies' needs on the spot.

The activities of industrial communication centres are co-ordinated by the regional branches of the Ministry of Technology. Such regional branches are set up in order to maintain closer contacts between the Ministry and industrial enterprises and to strengthen technical assistance provided to them.

In 1967, the Ministry instituted the Engineering Technical Consultative Service for Productivity planned for a four-year operation, for which one million pounds were allotted. This service provides technical consultations to industrial enterprises. It gives assistance in the training of staff and in mastering new work methods. Particular attention is paid to small-sized and medium enterprises.

Mobile groups pay visits to enterprises and teach new work methods to designers, foremen and workmen. An initial visit is free. The group arranges a short talk illustrated by a film or filmstrip showing, or, where necessary, by operating a machine tool. The visit programme is arranged in advance with the company's management and is intended for an audience with a certain background. The visit is normally one or two days long. Supplementary visits are made by special groups which give advice and provide assistance in the mastering of innovative technologies and work methods in the manufacture of specific products. These visits are made on the request of enterprises, which meet part of the expenses.

Scientific research and information work are pursued not only by ministries but also by numerous associations of different kinds, research and technical societies, large industrial firms, etc.

It was on the initiative of the Consultative Board for Research and Industrial Studies that co-operative research associations began to appear. These autonomous associations conduct research in the interest of their members, with one-third of the costs being met by the State and the rest being covered by membership dues.

Co-operative research associations have proved their worth, and now their membership has grown to 40. They work in close collaboration with government research laboratories and institutes.

Apart from these two kinds of research organizations development associations for industry in Britain have been formed.

These associations are composed of groups of firms in one branch, e.g. British Electrical Association, Aluminium Development Association, etc.

Association information services and libraries serve the member companies, issue reports on completed studies, bulletins, primary and secondary journals, bibliographic indexes, translate foreign technical literature, and arrange consultations, exhibitions, film showings, and visits to laboratories, etc.

The British Shipbuilding Research Association, formed in 1945, has a library which receives 300 periodical titles, which form the base for the monthly abstract publication "Journal of the British Shipbuilding Research Association". The information service makes translations, supplies photocopies of articles and answer requests.

The British Iron and Steel Association, formed in 1944, has no library or information service of its own and uses the library shared by the Iron and Steel Institute and the Institute of Metals. The library collections include more than 30,000 books and 800 periodical titles. The information department of the Iron and Steel Institute answers numerous requests, compiles bibliographies and edits abstracts prepared by supernumerary abstractors. Abstracts are printed in the "Journal of the Iron and Steel Institute". Since 1960, the department issues abstracts on cards.

The British Non-Ferrous Metals Research Association unites 630 British and Commonwealth companies. The library receives in excess of 300 journal titles. The information department issues a monthly abstract journal, Bulletin of the British Non-Ferrous Metals Research Association, in which about 3,500 abstracts are published every year, as well as the monthly BNFMR Review, where technical reports of the Central Board scientific and technical department are reviewed.

National industries in Britain have their own research and information agencies. Thus, the National Coal Board which was formed in 1946 has under its authority the mining research institute, the coal research institute and some others. A Central Library was established in London in 1947 to provide information services to the specialists in the branch. In 1954, the Atomic Energy Administration was instituted which consists of five independent laboratory groups conducting nuclear studies. Each group has its own library and information services.

In the Central Electrical Board, information work is carried out by the Central Library and the Technical Information Service. The latter issues a bi-weekly Digest which prints abstracts of journal articles as well as lists of translations made by the Service.

Research and technical libraries play an important role in the scientific and technical information system of Great Britain. The National Lending Library for Science and Technology occupies a position of prominence among them.

The National Lending Library was established in 1961 in Boston Spa. The Library is financed by the government through the Office for Scientific and Technical Information. Its function is to acquire as fully as possible scientific and technical literature and to provide information to specialists in industry, agriculture, and science. The library stock was enriched by 200,000 volumes transferred from London, and by 100,000 volumes provided by the Science Museum Library. The Library purchases and receives from other libraries and information centres old sets of periodicals.

At present it acquires almost all the world periodicals in science and technology, excluding medicine. The National Lending Library has the largest Russian literature collection in Europe. It also collects unpublished material,

such as research reports and translations of scientific and technical literature from Russian into English, etc. The Library in a way complements the internal information collections of industrial firms and research organizations to which it lends its literature. An order is normally fulfilled within 24 hours. When a particular item is absent in the library stock the order is forwarded to the Science Museum Library. The Library provides, jointly with the US National Science Foundation, for translation of Russian-language scientific and technical periodicals.

The Science Museum Library, founded in 1883, is Britain's national library. It has large collections of books and periodicals - more than 5 million items. Its holdings furnish the basis for the weekly British National Bibliography.

The Patent Office Library was established in 1952. It stores rich collections of patents and other literature in science and technology, including agriculture. The Patent Office Library receives annually some 8,000 titles of current periodicals, more than 20,000 British and 300,000 foreign patents. The Patent Office issues, since 1854, the weekly Official Journal (Patents) with specifications of selected patents.

Large libraries are found in ministries and departments. They service the ministry personnel and subordinate organizations and loan proprietary and other materials to them. The main library of the Department of Agriculture was established in 1889. Its collections comprise more than 120,000 books and 2,000 periodical titles. The library has 12 regional branches; it collects all the internal publications and documents of the Department, research organizations, experimental stations and universities. The main library of the Admiralty, founded as far back as 1809, has 140,000 books, 75,000 booklets and numerous maps and charts in its stock. The collections of the central library of the Department of Commerce consist of 300,000 books, and a large number of journals. Along with the library the Department has a special information service which provides consultations and references to specialists through its branches.

The library network of Britain is characterized by regional co-ordination. For instance, the North-Western regional system has joined together 30 university and 100 public libraries. Such a system facilitates inter-library loan services, and provides for more rational acquisition of library collections. The Central Library in Manchester is the centre of the system, in which each participating library has a copy of the union catalogue. The libraries and information centres are connected by teletype links.

Another important group, besides the Office for Scientific and Technical Information, in co-ordinating information work in Great Britain is the Association of Special Libraries and Information Bureaux. It was formed in 1924 for the purpose of co-ordinating the activities of special libraries and information centres. Aslib represents Great Britain in the International Federation for Documentation. Members of Aslib are libraries and information agencies of government offices, universities, learned societies, firms and research institutions and public libraries and individuals.

An important role in the dissemination of information is played by learned societies of which there are more than 200 according to official statistics. Learned societies publish many quality primary journals and transactions. They issue Science Abstracts, Physical Abstracts and many other abstract journals. The information bodies of professional societies provide information services not only to society members but to the general public as well.

FRANCE

The scientific and technical information system in France is basically branch-oriented, although there are large multi-disciplinary information centres as well.

Among the major information agencies in France the following should be mentioned in the first place: the Documentation Centre of the National Centre Scientific Research, the Central Documentation Service at the Commissariat for Atomic Energy, the documentation department of the National Institute of Industrial Property, the documentation services at the Pasteur Institute, the Péciney information service and the documentation department of the Renault works, etc. The National Library as well as special libraries plays an important role in the dissemination of scientific and technical knowledge in France. The main functions of the Documentation Centre, National Centre for Research Studies, (Centre de documentation du Centre National de la Recherche Scientifique) are as follows:

- Review and processing of all periodical publications in science and technology and publication of a regular issue of corresponding abstract journals;

We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.

- Organization and co-ordination of translation work in France; collection, processing and dissemination of information on translations into French made within the country;
- Provision of photocopies to all institutes and laboratories of the National Centre for Research Studies of France;
- Maintaining of collections of periodicals and building a collection of non-periodical publications (research reports, conference and symposia proceedings, etc.);
- Research and experimentation towards the development and refinement of mechanized information retrieval systems, experimental work on the development of a system and means for automatic indexing of abstracts; research and methodological studies in the field of automatic translation.

The Centre has the following structural subdivisions: the editorial board of the abstract journal *Bulletin Signalétique*; the translations department; the department of bibliographic research; the photocopying department; the library; the secretariat.

The main publication of the Documentation Centre is the "*Bulletin Signalétique*" which was initiated in 1940 in order to provide a vehicle for speedy communication of pure and applied research results to scientists and engineers in France. In 1969, all the series of the Bulletin covered about half a million publications from 13,000 titles of periodical and serial titles.

The National Institute of Industrial Property (*Institute national de la propriété industrielle*) is France's central patent office. The documentation department at the Institute performs all reference and information services on patents and inventions. The reference collection contains in excess of 9 million patent specifications arranged by country (the Institute receives patents from 25 countries by exchange). In addition, in more than 20 French towns there are reference information collections which are branches of the Central Reference Information Collection. These collections include specifications of all French patents and inventions.

The main publication of the Documentation Department is the "*Bulletin officielle de la propriété industrielle*".

Along with the cumulative volume of the Bulletin eight separate fascicles are published on main divisions: chemistry, physics, metallurgy, electrical engineering, etc. The material is arranged according to a subject authority list built on the basis of the International European Classification of Patents for Invention. The Bulletin and its separate fascicles are distributed on a subscription basis.

In addition to publication of the Bulletin, the Department is engaged in operative reference information services to organisations and individuals. For this it issues a weekly information catalogue of current patents.

The Central Documentation Service of the Commissariat for Atomic Energy in Saclé collects, processes and disseminates scientific and technical information among the Commissariat staff members.

The Service has the following divisions: the director and technical secretary's office; the library; the scientific documentation group; the group for automation of information work; the publications group; the translations group.

The Documentation Service conducts work in keeping with the topical plans of nuclear research centres and providing them with the necessary materials. In addition, the Service publishes and distributes scientific and technical documentation of the Commissariat and its research centres, builds the reference information collections of the Centre, bureaux and documentation groups and their libraries and places subscriptions for necessary publications. The Service also conducts experimental and research studies in the field of automation of information operations.

The organisation of a branch oriented information service is exemplified by the information activities in the ceramics industry.

This branch of industry has two information bodies: the Documentation Service of the French Ceramic Society and the Documentation Service of the French Institute of Ceramics. Together they provide a comprehensive service on information materials in this industry.

Both these services are engaged in the gathering and processing of all current literature and dissemination of information among the users.

The Institute of Ceramics and the French Ceramic Society receive by subscription and exchange 150 titles of French and foreign journals. They prepare abstract cards for articles appearing in them which contain a complete bibliographic description or a short abstract.

In addition, the French Ceramic Society collects advertising booklets and prepares catalogues of various domestic and foreign equipment for the ceramics industry. The card files specify the names of items and of foreign suppliers.

The Society's documentation service collects, indexes and stores also French patents (from 300 to 400 patents are received by the service every year).

In addition the service keeps a file of fulfilled requests, a card file of visitors, and a list of consultations provided by the Society on different aspects.

The French Ceramic Society translations department makes translations of articles. Lists of translations are sent to the translations department of the Documentation Centre and the National Centre for Research Studies (which co-ordinates all translation work in the country), as well as to other organizations making translations in related subjects, e.g. the Documentation Centre for the Ferrous Metal Industry, the Mining Research Bureau and the Glass Institute. These organizations in turn supply data on translations made by them to the translations department.

The Pechiney information service (the company includes electrical metallurgical works as well as aluminium and other non-ferrous metal working plants) is engaged in the collection, processing and dissemination of information to 15 research centres and laboratories and 30 factories.

The Information Service has the following functions: to publish an abstract bulletin ("Bulletin de resumes"), to conduct bibliographic research, to collect and produce documents on demand.

The main sources of scientific and technical information are official French and foreign publications (the Service receives 700 periodical titles). An important source of information is patents and books (more than 200 books are purchased every year). Use is made in collecting information of catalogues, brochures, and other documentation brought out by industrial groups and private and public research institutions.

NETHERLANDS

In the Netherlands the gathering and processing of information and information services are carried out by various kinds of organisations: information agencies of State bodies, learned societies, universities, private companies, and all sorts of commercial organisations. This hampers the development of a centralised information system. A form of co-ordinated decentralisation has been worked out recently in the Netherlands which is expected to be most rational and suitable to the local conditions. The essence of the system lies in the shared acquisition, processing of information materials, and production of secondary information in any one area of knowledge.

Practical experience indicates that this approach has certain limitations. When the economic information bodies which joined together to form an Economic Information Centre attempted to expand their ranks, it turned out that this measure had adversely affected the speed and quality of document processing, and therefore the idea of expansion was abandoned.

The co-ordinating and methodological guidance functions in the field of information work are the duty of the Netherlands Institute of Documentation and Archives (NIDER). It was founded in 1921 as a non-profit organization, and on its board information services of the government and the largest companies are represented.

The tasks and activities of the Institute grow as the Netherlands industry expands and new information centres are set up. At first NIDER limited its services to domestic industrial information. With the growing demand for information on new developments in foreign science and technology the Institute had to realign its operations in order to better meet the requests of its users. NIDER gives assistance in the establishment of information services at industrial enterprises, in the elaboration of classification schemes for organisation of archives and catalogues. With the emergence of the trend towards co-operation of information centres in the processing of information materials on particular problems of science and engineering, NIDER began to act as a co-ordinating centre. Now, when scientific and technical information has evolved as a fully-fledged scientific discipline, an information research centre was established at the Institute with the objective of doing research in different aspects of the theory and practice of information.

WIDER comprises five basic departments: the information department, acquisition department and library, technical reports department, consultative bureau on arrangement of collections, reproduction department, Centre for Scientific and Technical Information Research, and committees.

The information department compiles bibliographies and surveys on different topics and conducts novelty and validity searches of patent specifications and literature on request of enterprises and individual users.

The technical reports department has a large collection of reports which provide data on research projects. **WIDER** receives reports from the United States, FRG, England, Japan and other countries, and also from the Organization for Economic Co-operation and Development on topics of interest to the Netherlands industry. The technical reports department produces microfilms and photocopies of reports, maintains a card file and issues monthly lists of accessions. Great importance is attached to the department as it holds materials which are not on sale.

The consultative bureau on the arrangement of collections helps enterprises in setting up information units and libraries, develops specialized classification schemes, and registration plans for the arrangement of materials in archives with due regard for the peculiarities of the enterprise. These classifications and plans are generally based on the UDC. The Bureau assists in the classification of complex and difficult concepts.

State information bodies pay main attention to information services for small and medium-size industrial enterprises of which there are about 11,000 in the Netherlands. In the majority of cases these enterprises have no information units of their own and address their requests to the **WIDER** or the National Applied Research Organisation.

In 1950, a decree was signed by which the Netherlands Organisation for Applied Research (Toegepast Natuurwetenschappelijk Onderzoek - **TNO**) was established in order to improve the efficiency of organization of research activities. **TNO** conducts research on subjects of its own choice and on orders from companies.

It is worthy of note that 60 per cent of research is by six large centres: **TNO** and five firms. The rest of the industrial enterprises in the Netherlands conduct a relatively small proportion of research studies.

The main task of TNO is carrying out research projects in the interest of industry, agriculture and commerce. Besides, TNO provides consultative and information services to its customers and does some research and testing on orders. It collaborates with industrial associations and separate firms.

At present TNO consists of more than 50 research institutes, laboratories and experimental stations which work according to a specially prepared programme.

All institutes and laboratories which are part of the Netherlands Organisation for Applied Research are active in the information field: they publish journals, indexes, abstract bulletins, bibliographies and reviews in their subject fields and report research results in Netherlands and international journals and separate publications.

Institutes answer requests received directly by TNO or through the Netherlands Institute for Documentation and Archives. Many institutes have their own departments and offices of information and libraries.

In recent years, commercial information organizations made their appearance in the Netherlands which provide all sorts of information services: compiling of bibliographies, renting of microfilm readers, manufacture of various equipment, etc. Some of these commercial societies have gained popularity in many European countries. For instance, the International Patent Service (Interpas) issues monthly patent bulletins containing all data on patents issued during the preceding month in 20 countries of the world, issues every week "Abstracts of Japanese Patents" and translates patent titles or whole specifications, etc.

Many large information agencies in the Netherlands offer products intended for international use. For example, the Excerpta Medica service publishes its abstract journal of world renown in 29 series. The same applies to building, agricultural, cartographic and some other abstracting services.

A Collection of Inaccessible Access Literature was founded in the town of Delft in 1957 with the aim of co-ordinating translations from foreign languages. The Collection accumulates bibliographies and copies of translations of scientific and technical literature from Russian and East European languages. It also stores original papers in these languages. Now the European Translations Centre has been established on the basis of this national organization. Its members include national organizations in 14 countries.

Besides information centres, information work is carried out in the Netherlands by libraries which have long ceased to be mere depositories of scientific literature. It is not always possible to draw a demarcation line between the functions of libraries and those of information centres in the Netherlands.

Some libraries, in co-operation with other organizations, act as large information centres, e.g. the Senior Agricultural College Library in Wageningen, the Economic Information Service Library, etc.

Central (union) catalogues of books and periodicals have become widespread. The Royal Library in the Hague maintains the Central Book Catalogue since 1922. This library also maintains (since 1942) the Central Periodical Catalogue which represents the collections of 210 libraries. The Senior Technical School Library in Delft runs the Central Technical Catalogue. This library has gradually grown to become the Technology-Information Centre.

All large information centres and libraries are connected with each other and with other centres in Europe by telex lines. Combination of telex with modern reproduction techniques permits orders for literature to be fulfilled very quickly.

FEDERAL REPUBLIC OF GERMANY

Prior to the 1960s, a number of contrasting trends in the development and organisation of information work were in evidence in the Federal Republic of Germany (FRG). The attempts to overcome the "information crisis" have resulted in the mushrooming of information bodies, societies and unions. Information services are being offered on an ever wider scale by small private companies as well as large State agencies. Diverse information centres steadily grew in number, and by now exceed 40.

The Federal Republic of Germany now leans towards the so-called co-ordinated decentralization, which means co-ordination of specialized information bodies by a single specialized information centre. Information workers in FRG are working towards this goal.

There are two institutions in West Germany which are responsible for co-ordination of information work and elaboration of a general methodology on a country-wide level. These are the Institute for Documentation and the German Documentation Society.

The Institute for Documentation (Institut für Dokumentationswesen) was founded in 1961 as an information centre for co-ordination of documentation work in the FRG

In its capacity of a co-ordinating and guiding centre the Institute must in the first place provide for interaction of the existing information services. In the case of some gaps in information services the Institute must take the initiative in creating new services and, according to circumstances, also in partial or full financial support. Besides, the Institute has considerable resources for financing specific ventures in the information field. Thus, it spends considerable sums on research in automation of information procedures. Appreciable outlays are involved in the training of information workers, which is carried out mainly within the framework of the German Documentation Society.

The German Documentation Society (Deutsche Gesellschaft für Dokumentation) is responsible for the working out of methodological principles of information activities. The Society's functions are:

- To develop general principles and basic procedures in all fields of documentation and information;
- To promote the development and improvement of technical auxiliary means of mechanization and automation of information work;
- To train and improve professional skills of information officers;
- To develop and standardize terminology in documentation and information;
- To keep track of the progress in documentation and information in all domains of science and technology.

The Omelin Institute is a major specialized information centre in West Germany. Its publications are well known and enjoy wide popularity in all countries of the world. The main line of activity of the Institute is the preparation and publication of a reference book in inorganic chemistry which is scheduled for completion in 1970 and is to cover a period from 1750 to 1950s. The huge reference information collection in the Institute is used as the base for a reference information service which provides answers to requests coming from research institutes and enterprises.

In 1957, a national information Centre for Atomic Energy was initiated at Gmelin Institute. The Centre collects and processes reports, conference proceedings, dissertations, patents and other literature on the peaceful uses of atomic energy, issues bibliographic indexes and provides information and reference services to specialists.

Important work in the field of technical information in FRG is carried out by various societies and unions. Thus, the Society for Chemical Apparatus and Machine Building systematizes relevant literature, prepares abstracts of technical journal articles and compiles reviews, acting as a specialized documentation centre.

In the mechanical engineering field, information services are provided by the Union of German Engineering Enterprises which issues abstracts on cards.

The Union of German Metallurgical Engineers issues indexing periodicals, compiles topical bibliographic lists and supplies microfilms and photocopies of documents.

Technical information services operate at industrial enterprises in West Germany. They are engaged in the processing and circulation of scientific and technical literature of interest to the shop, division and laboratory personnel of the enterprise, as well as in popularization of new work methods and production of information references.

Large companies and enterprises in West Germany, among them BASF, AEG, Siemens and others, have specialized information centres.

Technical and research libraries of which there are more than 600 and university libraries play an important role in the information system in the Federal Republic.

ITALY

The information system in Italy is characterized by decentralization, although there are about 1,700 information centres and special libraries in the country now.

The information and documentation services are subordinated to the interests of large companies, concerns and enterprises and are branch-oriented. In addition, there are centres set up at large academic institutes, research laboratories and

associations which pursue work in the field of bibliographic information, on development of author and classified catalogues, on mechanized information retrieval, machine translation, etc. Special and technical libraries feature prominently in the dissemination of information.

Italy's largest information centre is the National Centre for Scientific Documentation of the National Research Council (Centro nazionale di documentazione scientifica, Consiglio nazionale delle ricerche).

The National Centre for Scientific Documentation was established in 1956. Originally it was called National Centre of Technical Data.

The Centre's duties include collection of information in different areas of science and technology, preparation of references on demand, document reproduction services, compilation of bibliographic surveys, and dissemination of information. In addition, the Centre translates scientific and technical literature.

The Centre has a photographic laboratory which, besides production of microfilms and photocopies of different papers, also searches literature which is photocopied, receives literature from other libraries in Italy, and mails photocopies and microfilms to users. The laboratory is fitted out with the most up-to-date reproduction equipment.

The Centre has access to the National Research Council library which has 150,000 books and 6,000 scientific and technical periodicals in its collections. The Centre supplies bibliographic references on demand.

The Centre issues a bibliography (Note di bibliografia e di documentazione scientifica) which contains bibliographic details of scientific and technical publications since 1955. The following card files are maintained at the Centre: (1) a file of Italian and foreign periodicals in science and technology; (2) a file of specialized information bodies for scientific and technical information, and (3) a file of information specialists and translators.

There is a special service at the Centre which has the function of searching for literature in all fields of science and preparation of bibliographic information on the current state and development of research studies in Italy.

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The main technical information services in Italy are concentrated in large cities. The majority of private and State concerns have specialized information bodies which give service to specific divisions and enterprises of concerns. For instance, the concern of FIAT has the following documentation services:

1. The documentation service of the metallurgical division (Sezione ferriere Piemontese). The service was established in 1959 and is engaged in collecting metallurgical documentation. It includes the following subdivisions: the bibliographic information department, the documentation department and a library (which has 1,400 books, 120 periodicals and a processing laboratory). The service issues a monthly technical bulletin (Bollettino tecnico mensile) and a bulletin of research and development projects completed by the service (Lavori Servizio Studio ricerche).
2. The documentation service at the division of Stabilimento Grandi Motori (large-size engine plant). The service was established in 1927 and collects information in the subject field indicated. It has a processing laboratory, a library for the workers on the concern's enterprises and author and subject catalogues. The library has a book stock of 8,000 volumes and a collection of 300 periodical titles.
3. The documentation service at the nuclear energy division (Sezione Energia Nucleare). The service was established in 1957 and is engaged in the collection, processing, and dissemination of information in mechanical engineering and nuclear reactor physics. There is a library with a book stock of 1,750 volumes (for the company's workers). A catalogue of all research reports coming to the library is published.

The concern of Montecatini (Montecatini - Societa per l'industria mineraria e chimica) owns large chemical and mining complexes. Its documentation service is situated in Milan. The service collects, processes and disseminates information in chemistry and chemical machine building. The service's main divisions are: the bibliographic information department, the documentation department, the photographic laboratory and the library (4,100 books and 150 periodicals). The services issues a technical documentation bulletin (Bollettino di documentazione tecnica).

The concern incorporates also 23 research institutions which have their own information and documentation services.

A special information and documentation division exists at Olivetti and Spa which manufactures typewriters and calculating machines.

The duties of the company's information centre are discharged by the Divisione Commerciale elettronica which was formed in Milan in 1959.

BELGIUM

There are more than 250 documentation centres and libraries in Belgium which are concerned with collection, processing and dissemination of scientific and technical information.

The National Centre of Scientific and Technical Documentation develops methodology of information work and discharges certain co-ordinating functions in the information field in Belgium. The Centre of Scientific and Technical Documentation supplies information on exact and applied sciences, technology and agriculture to factory laboratories, and research centres. In conjunction with the Royal Library and other competent organizations the Centre accomplishes the following tasks:

- Systematic documentation searches (periodical articles, reports, etc.) for scientific workers and industrial enterprises;
- On-demand provision of bibliographic references and brief surveys of the current state of development of a particular branch of science or technology in one or several countries;
- Information searches in other Belgium centres or in foreign centres when the information required is not to be found locally;
- Study and application of modern technical means (punched cards, computers, etc.) to the information centre operation, and training of information specialists.

The Centre's duties also include establishment of international co-operation with similar centres in foreign countries and of direct relations with international bodies.

The Centre has a photocopying department, and an international congresses service. The Centre's director exercises administrative and scientific control of the operations. The activities of the Centre are financed by the Ministry of National Education and Culture.

The Question and Answer Service set up at the Centre provides scientific workers with a variety of information materials in the shape of brief bibliographic references, surveys, analytical reviews, etc. on a particular topic. This work is carried out by the subject specialists who are on the staff of the Centre.

The Centre does not prepare abstracts or issue any subscription publications; it produces on demand lists of journal papers and reports in which customers can quickly locate the publications of their interest.

Great attention is attached to the reference information work and document reproduction services. Orders arrive daily from universities, higher institutions of learning, industrial enterprises and some 75 research institutes. The Centre maintains permanent contact with 1,400 factories, research centres, information bodies, and libraries in Belgium and other countries.

The principal users of the information disseminated by the Centre are research libraries and documentation centres at industrial enterprises, research centres and laboratories. The Centre emphasises information services to the country's industry.

By way of illustration of the activities of information agencies in the field of dissemination of technical knowledge among industrial personnel, the operations of the research centre of Fabrimetal (Fabrications metalliques) enterprises can be described.

In order to provide industrial personnel with information on technical innovations, Fabrimetal organizes jointly with its research centre the so-called "collective information" which consists in lectures, seminars and colloquia on specific problems of production (e.g. modern trends in the machine tool industry in the United States; recent advances in the foundry industry, welding, etc.).

For many years now Fabrimetal and its research centre have provided customized technical assistance to industrial personnel in the field of foundry, welding, metal structures, etc.

With a view to facilitating the circulation of standards Fabrimetal issues, with the help of its research centre, hundreds of sheets called Normalien which provide basic data on Belgian standards. These sheets are intended for engineering personnel in shops and design bureaux, which receive, free of charge, brief information on research results which sometimes take years to obtain.

One effective way of communication between a research centre and industry is provided by the semi-monthly information bulletin which contains short abstracts (5-10 lines) of articles from 400 journals. The bulletin is circulated to 500 enterprises. In addition to the bulletin, bibliographic cards are produced and photocopies of articles are supplied on demand.

Personal contacts play an important role in the information communication in industry, and for this reason some Belgian information experts believe that introduction of the post of the so-called "technical communication agent", particularly at small- and medium-sized enterprises, should become a standard practice in Belgium.

In order to ensure effective connexion between industry and the research centre, Fabrimetal performs what amounts to selective dissemination of information on research results and uses the feedback principle which ensures that documents sent to a specialist always conform to the information he needs.

A joint Belgian-Luxemburg Steel Information Centre has been instituted in order to set up an information service for the steel industry. All steel and iron enterprises in Belgium and Luxemburg give their assistance to the Centre. The Centre publishes a journal - Steel - in French, English, German and Portuguese. It makes wide use of such information dissemination facilities as film showings, conferences and exhibitions. Many of the information materials coming to the Centre are from the ferrous metal industry documentation centre in Paris. The Centre reprints abstracts from the Chemical Abstracts and the French Documentation Centre bulletin onto cards which are disseminated by subscription.

Belgium has an elaborate network of special research libraries which service personnel at industrial enterprises, research institutions, laboratories and universities. The first library to be mentioned among the largest Belgian libraries is the Royal Library which, being the only centralized book depository in the country, acts as the central scientific and technical library. The Royal Library fulfills orders for photographs, microfilms, microcards, colour photographs, etc.

At the moment the Library has a book collection of more than 2 million volumes plus 18,000 periodicals, microforms, maps, etc. There is a rare book division.

One of the self-sufficient divisions of the Royal Library is the Belgian Centre of Translations which was constituted as a separate unit in March 1965.

The Centre has the following tasks:

- Centralized searching, collection and dissemination of translations which are made in Belgium and are not for sale;
- Taking care of translation and acquisition of existing translations from Slavonic and Asiatic languages in the field of agriculture;
- Selection of translators from rare languages;
- Keeping research centres and industrial personnel in Belgium aware of current research activities in countries which present the "language barrier" (USSR, Japan, Sweden, Norway, etc.).

The functions of the Centre also include answering the requests of the Royal Library readers (students, teachers, etc.), document searches, provision of references by telephone, translation of letters, and transliteration of texts for the Royal Library and other State institutions.

An appreciable role in the dissemination of scientific information among laboratories and research centres in Belgium is played by libraries of the Brussels, Ghent, Liège and Louvain universities and a number of higher institutions of learning.

NEWLINE

The Danish Technical Information Service (Danish Technical Oplysningstjeneste) was established in 1956 with a view to providing an information service for the Danish industry and research organizations and to establishing regular exchange of information between research institutions, laboratories (there are more than 400 such bodies), and industrial firms (more than 1,000 firms with a staff of over 500 persons).

The Danish Technical Information Service (DTIS) working under the direction of the Danish Scientific and Industrial Research Council, serves as a direct link between the country's research institutions and industrial firms, or, more generally, between science and industry. DTIS is an independent organization and is administered by a committee on which are elected representatives and chairmen of leading Danish institutions and organizations: Scientific and Industrial Research Council, the Technical University, the Royal Veterinary and Agricultural College, the Academy of Technical Sciences, the Federation of Danish Industry and the Technological Institutes of Copenhagen and Jutland.

In the field of scientific research information DTIS performs the following tasks:

- Collection and circulation of technical and technicoeconomic reports and other information materials (both published and unpublished) which may be of interest and of use to industry;
- Assistance to the Scientific and Technical Research Council in the development of relations and enhancing the collaboration between industrial firms and research institutes;
- Organization of lectures, conferences and various study courses in order to promote introduction of research and development findings in industry;
- Co-operation with corresponding foreign information services.

DTIS collects information about the development of industrial production, including commercial (market research) and economic information, as well as information on problems of management of industry and individual firms.

DTIS believes that no research studies are of real value to the society unless their results have been utilised in industry and their economic effect can be estimated. The Danish Technical Information Service also takes into account the degree of readiness of a concrete company to apply the research results presented by a particular research centre.

By providing information services and maintaining the link between science and industry, DTIS supplies research institutions and industrial enterprises with information on the activities of domestic and foreign research institutions and information centres and presents reference literature on technical information sources, as well as special reports, e.g. of such organisations as the European Production Agency, the Organisation for Economic Collaboration and Development, the National Research Council (Canada), etc. DTIS holds statistical and commercial reports on separate branches of industry, reports on the introduction of modern technologies, application of research findings and rationalisation proposals. It receives periodical literature in less familiar languages (some 80 titles) and sends off prints to interested groups and individuals. Some information materials are supplied by inter-library loan (for a period of 8 days).

DTIS officers pay personal visits to industrial firms and research institutes in order to examine their needs, give consultations on the establishment of information services and on the feasibility of obtaining and using their information materials.

The Technical Information Service provides assistance in the establishment of direct contacts between firms and research institutions which may help them in solving their problems. DTIS conducts study courses at which the following subjects are taught: "The manager's responsibility for the organisation of technical information", "Technical information systems and their use", "Written and oral information". DTIS members hold conferences at which information problems in the industrial branch, a separate firm or a research institution are discussed.

DTIS co-operates with regional and international organisations, such as FID, OECD, Scandec, etc.

In its activities DTIS is guided by the principle of differentiated information services for different user categories. Such a principle in the selection and preparation of information facilitates the utilisation of information received by the user.

CANADA

The Technical Information Service was established in 1945 within the structure of the National Research Council.

The main task of the Technical Information Service (TIS) is to supply technical information and to provide consultations on finding technical information sources to industrial firms. TIS supplies information on materials properties, new processes, rational organization of labour, as well as on research findings. It also supplies information on industrial material suppliers, and commercial associations which market manufactured products. TIS specialists have adequate experience of work in industry and therefore can prepare expert answers to the users' requests.

TIS is represented in two of Canada's largest industrial centres which are connected with the research councils in provinces. TIS staff members make extensive use of the services provided by the National Science Library which holds more than 700,000 items of scientific and technical literature.

To meet information requests of its users, the National Science Library produces on request of TIS representatives, tens of thousands of pages of copies from periodical publications, technical reports and books, besides fulfilling requests for literature searches and preparation of bibliographic references. TIS personnel consult specialists at the government institutions of Canada (e.g. the Department of Industry, Statistical Bureau) and apply to technical information services in Britain, the United States, European countries. When a request is received, TIS officers will try to obtain detailed information on the requestor and the problem of his concern in order to be able to provide the most specific information in response to his request.

LATIN AMERICA

In characterising technical information services in Latin American countries it should be noted that they belong to a common language area, which ought to favour the creation of regional unions and information centres. However, there are still but a few such centres. The most important among them are the Latin American Information Service for Translations into Spanish and the Inter-American School of Librarianship in Medellin.

The Latin American Translations Service established in Buenos Aires (Argentina) in 1966 makes translations of papers in science and technology, collects, stores, and disseminates translations, as well as maintains catalogues of translations made in Latin America and Spain.

In characterizing the state of information services as a whole it may be mentioned that in Central America advanced technical information services exist in Cuba and Mexico.

In South America all countries (except Peru) have centres of technical and scientific information. The most sophisticated technical information services are to be found in Brazil and Argentina. Thus, co-ordination of technical information work under the guidance of national information centres is a typical feature for most Latin American countries.

By way of illustration, technical information services in the three most advanced Latin American countries - Mexico, Brazil and Argentina - are briefly described below. There are considerable variations in the information services of these countries. Thus, in Mexico and Brazil on the one hand, scientific and technical information services are located in and co-ordinated from a common centre, while in Argentina technical and scientific information services are concentrated in specialised centres. On the other hand, whereas the scientific and technical information service in Brazil exemplifies a service catering almost exclusively to the country's internal needs, Mexico's information service acts in a way as a regional Latin American centre by meeting the information needs not only of its country but of other Latin American countries as well, which is considerably facilitated by the community having a common language in this vast geographic area.

MEXICO

The Centro de Documentación Científica y Técnica de México is one of the largest centres for scientific and technical information in Latin America. It was founded in 1950 with UNESCO support. The Centre's functions are:

- Collection, processing, storage and dissemination of scientific and technical information published in different countries of the world;

- Co-ordination of library services, co-operation with various information subscriptions, methodological guidance to libraries and information centres;
- Co-ordination of library subscriptions and recommendation on lists of periodical subscriptions in specialized libraries.

The Centre receives a large number of technical and scientific journals, in particular all periodical publications issued in Latin American countries. All the material coming to the Centre is systematized, classified, annotated and published as a monthly bibliographic bulletin, "Boletín del Centro de documentación y Técnica de México". The Bulletin publishes every year as many as 80,000 bibliographic references in different areas of science and technology, e.g. in metallurgy, chemistry, food industry, etc. It is a unique publication of this kind in Spanish-speaking countries and is therefore widely used in many countries of Latin America.

The Centre of Scientific and Technical Documentation compiles on request from companies, organisations and individuals, topical bibliographic lists of recent scientific and technical publications. It also fulfills orders for photocopying and microfilming, as well as translation into Spanish. It is worth mentioning that the bulk of requests (75 per cent) for translations comes from industrial firms and enterprises. The Centre receives requests for topical bibliographies from many Latin American countries: approximately 60 per cent of requests are from Mexico, and 40 per cent from other Latin American countries. Thus, the Centre of Scientific and Technical Documentation in Mexico to a certain extent acts as a Latin American centre of scientific and technical information.

Besides the Centre, Mexico has the Servicio de Información, Dirección general de Bibliotecas, Universidad Nacional Autónoma de México, which maintains catalogues and supplies information on the technical literature sources which are held in its collections.

Information for industry is provided also by the Regional Centre for Technical Assistance (Centre Regional de Ayuda Técnica).

Large industrial enterprises and companies have their own information services which co-operate with the Centre of Scientific and Technical Documentation and enjoy its methodological guidance.

OECD COUNTRIES

Decentralisation is the basic principle underlying scientific and technical information service: in the capitalist countries, although the degree of decentralisation may vary widely from country to country.

The scientific and technical information system in each country has evolved differently. Information bodies of different character and scope were set up at government departments, enterprises, academic institutions, etc. In spite of all their differences, these information bodies can be conveniently classed in the following categories: governmental information agencies; information bodies of professional societies; information centres of industrial and business groups; and information centres of academic institutions.

In recent years, government institutions appeared in OECD countries which should co-ordinate the activities not only of governmental but, if possible, non-governmental information bodies as well. Thus, in the United States, co-ordinating functions in the field of scientific information are the responsibility of the Committee on Scientific and Technical Information of the Federal Council on Science and Technology and the Scientific Information Office of the National Science Foundation. In Britain, the Office for Scientific and Technical Information was established under the Ministry of Education and Science in April 1965 and was charged with co-ordination of information work of government and non-government information centres in the country, training of information personnel, direction of research in the field of information, and upgrading of the STI system in Britain.

There is a trend towards closer co-operation in particular subject fields. Individual companies agree to co-operate in the publication of abstract journals and in establishment of information centres serving these companies. Thus, in the United States oil companies have built a special information institute with the purpose of centralized processing of information materials. A similar institute has been created in the pharmaceutical industry as well.

New forms of information service are gaining popularity. For example, a Scientific Information Exchange Service was created at the Smithsonian Institute in the United States, which provides data on who conducts research on particular subjects and where, and who sponsors it.

BRAZIL

The national centre for direction of reference and bibliographic activities in the country and co-ordination of publication of information materials is the Instituto Brasileiro Bibliografia e Documentação. The Institute exchanges information materials, promotes library book exchanges, maintains a union catalogue, produces copies and microfilms of information materials, etc.

The Institute issues bibliographies on different problems which are of interest to Brazil. In particular, mention should be made of the extensive bibliography on problems associated with the Amazon river basin (Amazonia-Bibliografia).

The Institute publishes a monthly Boletim Informativo which supplies bibliographic details of scientific and technical papers appearing in periodicals.

The union catalogue of the Brazilian Institute of Bibliography and Documentation comprises the major library catalogues in the country, including university libraries, institutes, Brazilian Academy of Sciences, as well as some foreign libraries. This catalogue furnishes a basis for preparation of topical bibliographies requested by industrial enterprises, companies, institutions, and individuals. A large volume of orders for copying and microfilming is also fulfilled.

In addition to the Brazilian Institute of Bibliography and Documentation, there is a ramified network of information services which come under the authority of federal institutions, state bodies, research institutes, industrial syndicates and individual companies. The majority of information bodies is concentrated in the industrially advanced States: thus, the State of Guanabara has 75 such centres, the State of São Paulo, 34. The distribution of information services by the other States is as follows: Amazonas - 1; Bahia - 2; Ceara - 2; Distrito Federal - 7; Espirito Santo - 1; Goias - 1; Minas Gerais - 4; Para - 3; Parana - 4; Pernambuco - 5; Rio Grande de Northe - 1; Rio Grande do Sul - 6; Rio de Janeiro - 3; Santa Catarina - 1. Thus, the total number of Brazilian information services of different purpose and level is 150. It should be mentioned also that information services are operated by all ministries, including the Ministry of Industry and Commerce, as well as by major institutes, such as the Institute of Coffee, and industrial companies.

Very advanced information and documentation systems exist in large industrial concerns. For example, Petrobras (Petroleo Brasileiro S.A.), a State oil producing and processing company, has information and documentation sectors in its major divisions, as well as a special Department of Documentation, Technology and Patents.

There is a regional centre which has the task of providing information services to the backward areas of the North-East of Brazil. It is called Technical and Scientific Documentation and Information Centre of North-East.

In 1968-1969 UNESCO experts provided assistance in organizing the library, documentation and archival services in Brazil.

ARGENTINA

In contrast to other Latin American countries, the scientific and technical information activities within the national information service of Argentina are delimited and are carried out by different information centres.

At present, there are four national information centres in Argentina which provide services in the fields of science, technology, education, agriculture: Centre of Scientific Documentation under the National Scientific and Technical Research Council, the Centre of Documentation Research of the National Institute of Industrial Technology, the National Educational Documentation and Information Centre, and the Agricultural Information Centre at the National Institute for Agricultural Technology.

Argentine industry obtains technical information from the Centre of Documentation Research of the National Institute of Industrial Technology. The Centre has a collection of books and periodicals (both domestic and foreign) in different areas of science and technology which are of interest to the Argentine industry. This collection backs up the information services provided by the Centre to industrial enterprises, firms, and individuals. Information may take the form of bibliographic lists, as well as various other forms, including technico-economic surveys. Wide use is made of abstract publications issued in other countries, the holdings of scientific and technical libraries, as well as collections of information centres in other countries with which the Centre maintains constant ties.

The Centre publishes an information bulletin in the shape of series in different technical areas, which cover the articles in periodicals received by the Centre. A review of Argentine technical journals is issued as a supplement to the bulletin.

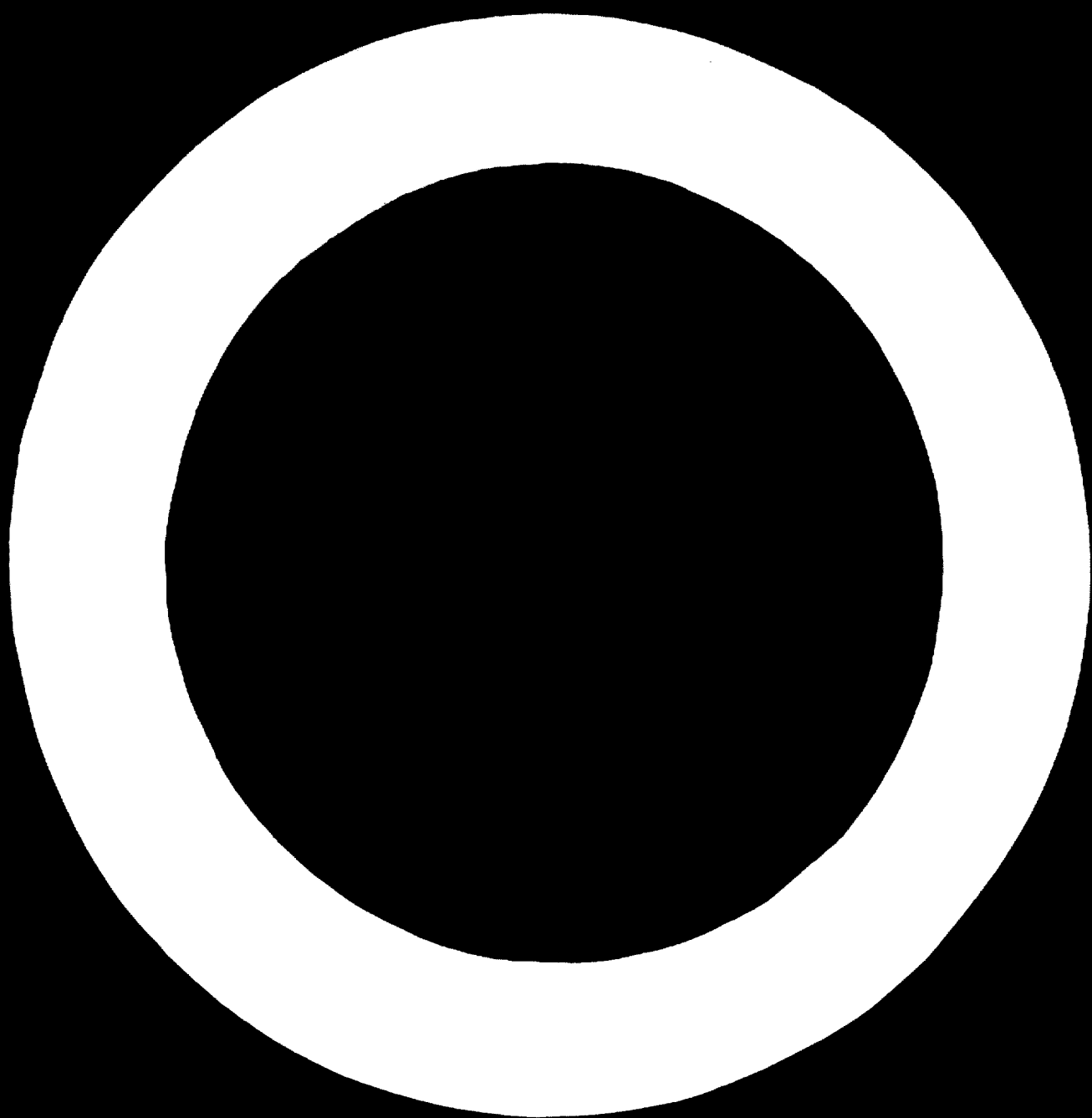
The Centre of Documentation Research fulfills orders for copying and micro-filming of different technical documents, and helps its customers in purchasing necessary documents.

It also supplies Spanish translations of technical papers made on demand.

A number of organizations, industrial firms, and individuals interested in the work of the Centre of Documentation Research and making regular use of its services, give financial support to its operation, which makes it unnecessary for them to keep their own information and documentation services. They are given favourable terms in the use of the Centre's services.

Large industrial enterprises and companies in Argentina, as in Brazil, establish their own technical and patent information services which may apply for technical and methodological assistance to the Centre of Documentation Research.

What has been said of technical information systems in different countries of the world indicates that they base themselves on different organizational principles which more or less accord with the economic and scientific level and national character of each country. Thus, it is hardly possible to give any cut and dried rules for building a technical information system in a country. However, familiarity with the information systems existing in advanced countries may help the developing countries in working out their own conception of a technical information system which would suit the conditions of these countries.



S U P P L E M E N T

**Information and documentation
services for industry in OECD member
countries and in some Latin American countries**

A N N O T A T E D B I B L I O G R A P H Y
(in English and in Russian)

**Compiled from Abstract Journal "Informatics"
Academy of Sciences of USSR (VINITI)**

The National Referral Centre for Science and Technology operates at the Library of Congress (USA) since 1963, which supplies data on information sources (organizations, departments and individuals which can and will provide information on a specific topic. The Centre acts as an intermediary between the information user and the information centre.

All this is indicative of a tendency for a broader co-operation and co-ordination of information activities in OECD member countries.

UNITED STATES OF AMERICA

Being a highly developed capitalist country the United States have a very advanced system of scientific and technical information which differs from other capitalist countries both in scope and structure.

Information agencies have appeared gradually as the need arose for such services in industry. Federal agencies and departments, in universities and professional societies.

Federal information agencies play an important part in the national system of scientific and technical information.

Among the major federal information bodies are: Defense Documentation Centre, Scientific and Technical Information Department of the National Aeronautics and Space Administration, Technical Information on Services of the US Atomic Energy Commission, Clearinghouse for Federal Scientific and Technical Information, the Patent Office, the National Bureau of Standards, the Library of Congress, the National Library of Agriculture of the Department of Agriculture, the National Library of Medicine, the Scientific Information Exchange Service and specialized information centres.

The Defense Documentation Centre provides for the exchange of information on research projects among defense and other federal bodies. In order to carry out this task the Centre collects and stores practically all reports in which scientific and technical findings are recorded of the investigations and tests performed by the Department of Defense. At the present moment the Centre fulfills annually 1.25 million orders coming from the United States Army, Air Force, Navy and other services.

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70.3.320 (3018). Роль Управления научной и техниче-
ской информации в развитии сети специализированных
информационных центров Великобритании. May D. H.
The role of the Office for Scientific and Technical In-
formation (OSTI) in the development of specialist in-
formation centres. *Aslib Proc.*, 1966, 21, № 10, 357-
360 (англ.)

... (S. 17) ...

60.5.201. [Действительность отбора по и научно-техниче-
ским данным] (The reality of selection with data
centres. *Aslib Proc.*, 1966, 21, № 10, 361 (англ.)

В 1966 г. был создан Комитет по научно-техническим
данным (CODATA), целью которого является задача по
решению проблемы разработки и реализации связей между
разными частями разрозненных информационных центров
путем организации обмена данными, а также ре-
шения проблем формирования и обработки информации
обработкой данных в области биологии, географии, терми-
нологических свойств языка и т. д. Комитет разрабаты-
вает программы руковода для обработки цифровых дан-
ных. Продолжается разработка систем сбора по
образам наиболее важных данных. Изучается воз-
можность ре-визии информации о центрах по научно-
техническим данным. Описывается совместная деятель-
ность бюро на любой стадии обработки информации Вели-
кобритании и Комитета по научно-техническим данным.

II. Времена

68.8.278. Бюро научной и технической информации в
информационной деятельности Великобритании.
Edwards A. L. The British Scientific and Technical
Information Centre, Oxford. *Aslib Proc.*, 1964, 19, № 1,
78-81 (англ.)

Бюро научной и технической информации Великобрита-
нии, созданное в 1963 г., осуществляет следующие
основные функции: сбор, хранение, распространение
и предоставление информации в различных областях
знаний. Научно-техническая информация является
важной частью деятельности бюро. Специальных
программ и методов работы бюро пропагандирует
среди ученых и инженеров, а также среди широкой
публики. Бюро является членом Европейского
сообщества информационных центров. Выходит 2 раза.

В. Гольдберг

70.3.321 (P-3013). Инженерно-технологиче-
ская информация в Великобритании. G. G. The Ministry
of Technology and Scientific Information. *Aslib Proc.*,
1966, 21, № 10, 361 (англ.)

Министерство науки и техники Великобритании является
привлекательным по своим возможностям научно-тех-
нической информации. Оно обеспечивает эффективную орга-
низацию, финансирование, координацию, через Мини-
стерство выполняются различные информационные
услуги. При этом бюро служба по сбору, ре-
ферированию и выдаче информации выполняет работу,
которая падает раз в 2 месяца РЖ «Research and Deve-
lopment Abstracts». Бюро также публикует ежегодно
около 1 000 статей в технических периодиках, выдает еже-
месячно 60 листов «New Technology», распространяе-
мой среди 60 тысяч поданных внутри страны, а так-
же 3М «TechLink» для промышленности. Службой в
домашнем виде является сообщение сведений о
новинках в технологиях, оборудовании и материалах,
представляющих интерес для непосредственного ис-
пользования в промышленности. Выпускается также
большее число других изданий, среди которых можно
считать «Technical Services for Industry», реферированное издание
120 информационных изданий.

A. Дэйвис

66.19.262. *Informations sur les chemins de fer* — Analysis of the requirements of the railway information service in Paris. *Inform. Sci.*, 1966, vol. 1, no. 49-50 (франц.).

Исследования были проведены в рамках программы, проводимой в Париже в течение 1965-66 гг. Исследования были проведены в рамках программы, проводимой в Париже в течение 1965-66 гг. Исследования были проведены в рамках программы, проводимой в Париже в течение 1965-66 гг.

66.19.263. *Statistique des demandes de renseignements relatives à l'information des chemins de fer* — Statistics of the demands for information on the railway. *Inform. Sci.*, 1966, vol. 1, no. 49-50 (франц.).

В результате проведенного в Париже в течение 1965-66 гг. исследования были проведены в рамках программы, проводимой в Париже в течение 1965-66 гг. Исследования были проведены в рамках программы, проводимой в Париже в течение 1965-66 гг.

66.19.263. *Analisis de las demandas de informacion de los ferrocarriles* — Analysis of the demands for information on the railway. *Inform. Sci.*, 1966, vol. 1, no. 49-50 (франц.).

Анализ требований к информации, предъявляемой железнодорожными центрами информации, проведенный в рамках программы, проводимой в Париже в течение 1965-66 гг. Исследования были проведены в рамках программы, проводимой в Париже в течение 1965-66 гг.

66.19.264. *Quelques résultats d'un sondage effectué au sein du Centre de documentation des chemins de fer italiens de l'état* (I.S.I.) — Colloq. international inform. scient. chemin. de fer. Paris, 1966, vol. 1, no. 49-50 (франц.).

В результате проведенного в Париже в течение 1965-66 гг. исследования были проведены в рамках программы, проводимой в Париже в течение 1965-66 гг. Исследования были проведены в рамках программы, проводимой в Париже в течение 1965-66 гг.

NETHERLANDS

66.19.265. *Informations scientifiques en Hollande* — Scientific information in Holland. *Inform. Sci.*, 1966, vol. 1, no. 49-50 (франц.).

Исследования были проведены в рамках программы, проводимой в Париже в течение 1965-66 гг. Исследования были проведены в рамках программы, проводимой в Париже в течение 1965-66 гг. Исследования были проведены в рамках программы, проводимой в Париже в течение 1965-66 гг.

68.8.21. [Иформация о деятельности в Нидерландах]. *Hattingsma, J. M. J. Informatica en wetenschappen in Nederland*. *Cart. Jansz* (Dordrecht, 1966), 166-172 (англ.).

Ученые в области информатики в Нидерландах принадлежат к различным организациям. Информационные центры в основном сосредоточены в области информатики через университеты, службы и т.д. Исследования в области информатики проводятся в основном в области информатики. Исследования в области информатики проводятся в основном в области информатики.

...information centre - G. W. M. ...
...documentary ...
...1967, 114, No. 42, 771 -

...information centre set up in 1960 ...
...Scandinavian ...
...private companies ...
...patents ...
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...at an enterpr ...
...1967, 114, No. 42, 765 - 767 (G ...

...organization of information ...
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...W. F.

...Kirstof ...
...1967, 114, No. 42, 769 -

...of the N ...
...are listed ...
...information ...
...M. T.

...1967, 114, No. 42, 768 (G ...

...1967, 114, No. 42, 768 (G ...

65.6304. [Документальный центр Scandoc]. G. W. M. ...
...1967, 114, No. 42, 771-772 ...

Документальный центр Scandoc, организованный в 1960 г. ...
...материалов конферен ...
...материалов конф ...
...объем работы до ...

65.533. Организация информационной работы на предприятиях. ...
...1967, 114, No. 42, 773-774 (G ...)

...организации ...
...предприятия Скандинавских ...
...исследованиям ...
...по улуч ...

65.6305. [Безгетонки информации в судостроительной промышленности]. ...
...1967, 114, No. 42, 775-776 (G ...)

...информационной ...
...двух ин ...
...небольшого ...
...M. T.

76.2380 (1967). Встреча информации фирмы ...
...1967, 114, No. 42, 777-778 (G ...)

...фирмы Häger ...
...библиотекарь стал ...
...По ...

Б Р А Т И

...1967, 114, No. 42, 779 -

...information in Spain ...
...National Science ...
...Madrid ...
...M. T.

65.6217. Информационная деятельность в Швеции. ...
...1967, 114, No. 42, 780-781 (G ...)

Дается обзор развития и современной ...
...информационной деятельности в Швеции. ...
...M. T.

ASIA

JAPAN

687016 D. *Scientific information in Japan. Second and revised edition. Tokyo, Japan Doum. San, 1967, 197 pp. (In English).*

The following publications are considered as specialized scientific and technical information in Japan: dissertation, journal, book, article of scientific information, primary and secondary sources, articles, training, etc.

687017. *Scientific and technical information in the Japanese Republic. Second Edition. Tokyo, Japan Doum. San, 1967, 197 pp. (In English).*

This work is a part of the Scientific and Technical Information in Japan. The following is described: The scientific publications and lists.

687018. *Scientific and technical information in the Republic of Japan. Part 1. H. Hirokawa, Kazuo Akiyama. Tokyo, Japan Doum. San, 1967, 197 pp. (In English).*

This work is a part of the Scientific and Technical Information in Japan. The following is described: The scientific publications and lists.

687017. *The museum of scientific instrument in Japan. Tokyo, Japan Doum. San, 1967, 197 pp. (In English).*

This work is a part of the Scientific and Technical Information in Japan. The following is described: The scientific publications and lists.

687018. *Mutual recognition system and the pull-up of JCS. Hamauda, Shigeo. Japan Doum. San, 1967, 197 pp. (In Japanese).*

This work is a part of the Scientific and Technical Information in Japan. The following is described: The scientific publications and lists.

687019. *JCSI policy and its policy in 1969. Kikuchi, Shigeo. Japan Doum. San, 1967, 197 pp. (In Japanese).*

This work is a part of the Scientific and Technical Information in Japan. The following is described: The scientific publications and lists.

687020. *Documentation activity in Mitsui Toatsu Chemicals, Inc. — Kikuchi, Shigeo. Japan Doum. San, 1967, 197 pp. (In Japanese, English summary).*

This is a description of the policy of the documentation section of the Central Research Laboratory of Mitsui Toatsu Chemicals, Inc., which covers the following fields: collection, processing and storage of patents and other technical documents arriving at the Laboratory. — M. A.

687021 K. *Научно-техническая информация в Японии. Second and revised edition. Tokyo, Japan Doum. San, 1967, 197 pp. (In English).*

The following publications are considered as specialized scientific and technical information in Japan: dissertation, journal, book, article of scientific information, primary and secondary sources, articles, training, etc.

687022. *Scientific and technical information in the Japanese Republic. Second Edition. Tokyo, Japan Doum. San, 1967, 197 pp. (In English).*

This work is a part of the Scientific and Technical Information in Japan. The following is described: The scientific publications and lists.

687023. *Scientific and technical information in the Republic of Japan. Part 1. H. Hirokawa, Kazuo Akiyama. Tokyo, Japan Doum. San, 1967, 197 pp. (In English).*

This work is a part of the Scientific and Technical Information in Japan. The following is described: The scientific publications and lists.

687024. *The museum of scientific instrument in Japan. Tokyo, Japan Doum. San, 1967, 197 pp. (In English).*

This work is a part of the Scientific and Technical Information in Japan. The following is described: The scientific publications and lists.

687025. *Mutual recognition system and the pull-up of JCS. Hamauda, Shigeo. Japan Doum. San, 1967, 197 pp. (In Japanese).*

This work is a part of the Scientific and Technical Information in Japan. The following is described: The scientific publications and lists.

687026. *JCSI policy and its policy in 1969. Kikuchi, Shigeo. Japan Doum. San, 1967, 197 pp. (In Japanese).*

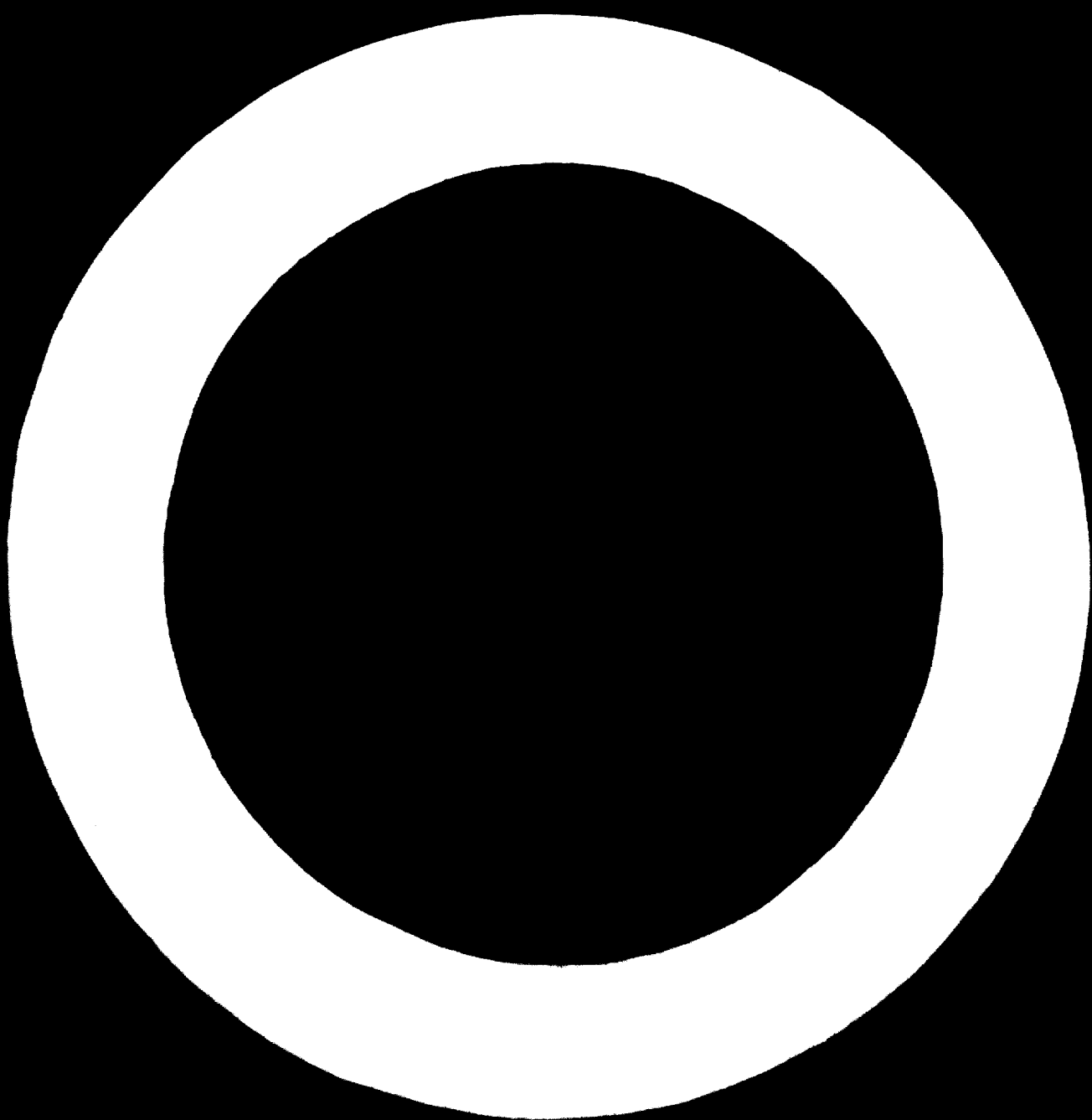
This work is a part of the Scientific and Technical Information in Japan. The following is described: The scientific publications and lists.

687027. *Documentation activity in Mitsui Toatsu Chemicals, Inc. — Kikuchi, Shigeo. Japan Doum. San, 1967, 197 pp. (In Japanese, English summary).*

This is a description of the policy of the documentation section of the Central Research Laboratory of Mitsui Toatsu Chemicals, Inc., which covers the following fields: collection, processing and storage of patents and other technical documents arriving at the Laboratory. — M. A.



74.10.18



The main publication of the Administration is the semi-monthly abstract journal "Scientific and Technical Aerospace Reports", which covers reports of research projects completed in NASA laboratories and subdivisions, as well as those performed under NASA contracts by external organizations, and other reports from different sources.

The Technical Information Service of the US Atomic Energy Commission Technical Information Service is the largest information centre in the field of atomic energy.

The tasks of the Service include provision of information to the laboratories and divisions, AEC, Defense Department, NASA and its contractors, other federal agencies, research institutions, universities and industrial enterprises and international organizations, as well as government bodies of countries collaborating with the United States.

The Technical Information Service is a complex but organized system for collecting and processing information on a wide range of subjects relevant to atomic energy: biomedicine, chemistry, physics, materials properties, meteorology, apparatus and equipment, computer technology etc.

Preparation and printing of different kinds of publications are among the main functions of the Technical Information Service. The findings of current and completed research studies are reported by the Service in technical reports, papers in journals and proceedings, abstract journals, bibliographic indexes, reference books, monographs, surveys, etc.

The technical report is the basic document for presenting information on the results of scientific research.

The US Atomic Energy Commission issues about 60,000 unclassified technical reports every year.

The Service issues five abstract journals, the main one of which is "Nuclear Science Abstracts".

The Federal Clearinghouse for Scientific and Technical Information was instituted in January 1965 to take the place of the Department of Commerce Technical Service. The task of the Clearinghouse is to provide the specialist with scientific and technical information generated by the federal government sponsored research. The Clearinghouse collects, systematically arranges and disseminates unclassified technical reports of all federal departments as well as information material which cannot be obtained from other sources.

The Clearinghouse provides two kinds of bibliographic services. Selected bibliographies on subjects of general interest to science and industry are compiled regularly and distributed free of charge. A company may request a retrospective bibliography on a specific subject covering any period of time, or a current bibliography.

The Clearinghouse gathers and systematizes translations of technical and scientific literature made within the United States. Annually some 25,000 translations are received.

The Clearinghouse publishes jointly with the Translations Centre of the Special Libraries Association, the bulletin "Technical Translations" which reports on translations accessioned by the Clearinghouse and the European Centre of Translations in Delft (the Netherlands). The bulletin is issued bi-weekly.

The Clearinghouse publishes, since 1965, a summary index of unclassified government sponsored research reports, "Government-Wide Index to Federal Research and Development Reports". Reports are indexed by author, subject heading, source and its accession number.

The Clearinghouse uses currently received reports to prepare and publish critical reviews complete with bibliographies. It also issues a current awareness bulletin on reports in certain subject fields which is circulated free of charge to companies and individuals.

The Clearinghouse maintains a catalogue of all information sources in physical sciences and mechanical engineering. This is a joint effort with the Library of Congress National Referral Centre for Science and Technology.

The US Patent Office is an information centre for patent materials. It issues approximately 50,000 patents per annum. The Patent Office uses mechanized search devices.

The United States National Bureau of Standards (NBS) was established in 1961. It is composed of three bodies: Institute of Basic Standards, Institute of Applied Technology, and Institute for Materials Research.

The National Bureau of Standards has created the National Centre of Standard Reference Data. Similar centres have also been formed in other federal bodies, research institutes, universities, etc. Standard reference data are data on materials properties which are selected from reliable sources and are critically reviewed. The data are classified and recorded on punched cards and magnetic cards, and tabulated in reference books. All these centres constitute the National System of Standard Reference Data whose activities are co-ordinated by the National Bureau of Standards.

The Library of Congress instituted in 1800 is a national library of the United States and plays an important part in the scientific and technical information system of the country. The Library of Congress is not only one of the largest book collections in the world but is also a research institution where complex theoretical problems are studied. Its holdings exceed 44 million units.

The Library maintains the National Union Catalogue of Books which represents the collections of 700 libraries in the United States.

The National Library of Agriculture of the Department of Agriculture was founded in 1862 with the purpose of collecting and storing agricultural literature.

The National Medical Library of the Department of Public Health, Education and Welfare was founded in 1836. Its holdings exceed 1.2 million volumes of literature in medicine and related sciences. The Library serves specialists with medical literature. It issues Index Medicus, a monthly bibliography of articles in medical journals, which is prepared by means of modern machine techniques. The Library has developed and is currently operating an automated information retrieval system called MEDLARS (Medical Literature Analysis and Retrieval System). New medical information (including pharmaceutical information) from current literature is recorded on magnetic tape which is used for computer searches and for computer controlled generation of the index.

The annual growth rate of the information retrieval system is up to 250,000 information documents.

The Science Information Exchange Service of the Smithsonian Institution was established in 1950. The Exchange provides information on organisations conducting or sponsoring research on specific topics. Prior to 1953 the coverage was confined

1933
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CANADA

66.1.234. Falconbridge information centre - Col. Stewart. «Mining Canada», 1967, May, 41-42. (англ.)

Информационный центр фирмы Falconbridge Nickel Mines, Канада, был создан в 1962-1963 гг. Центр содержит около 250 книг, и получает около 100 журналов и других периодических. Также имеется микрофильмная коллекция и читальный зал. Центр был первым в Канаде, кто использовал в своей работе ЭВМ, для автоматизированной селективной дистрибуции информации. По состоянию на 1967 г. центр обработал (как правило, по 5-7 ключевым словам) би-аннуальные репринты отечественных патентов (автор и патент) и включил в ближайшие планы 3 ттс.

66.1.234. Информационный центр фирмы Falconbridge Nickel Ltd. Collett Stewart. «Mining Canada», 1967, May, 41-42, 44 (англ.)

Информационный центр фирмы Falconbridge Nickel Ltd (Канада) был создан в 1962-1963 гг. ЦИФ его насчитывает примерно 2500 книг, ежегодно выписывается около 100 журналов и других периодических изданий, имеется фонд микрофильмов и соответствующая аппаратура для копирования - и чтения и небольшой читальный зал. Центр перити в Канаде организовал при помощи специалистов фирмы IBM ежемесячное издание указателя KWIC и фабричное распространение информации внутри фирмы. В настоящее время обрабатано около 6 тыс. документов (каждому соответствует примерно 3 дескриптора). Два раза в год выходят сводные тома указателя, а также организовано издание авторского и патентного указателей. Илл. 2.

USA

66.2.313. The organization of information - how it is done. Addison W. M. «Advancement Sci.», 1967, 23, No 118, 619-621. (In English)

Описывается структура информационной сети США. Называются организации и учреждения, вовлеченные в процесс обмена научной информацией. Характеризуется каждая из трех основных компонентов этой сети: 1) профессиональные общества, 2) научно-исследовательские организации и 3) издательства университетов и торговых фирм. Определяются виды информационного обслуживания, предоставляемые этими организациями, наметаются перспективы развития информационной службы США.

66.2.313. Организация информационной службы в США. Addison W. M. The organization of information - how it is done in the U. S. A. «Advancement Sci.», 1967, 23, No 118, 619-621 (англ.)

Описывается структура информационной сети США. Называются организации и учреждения, вовлеченные в процесс обмена научной информацией. Характеризуется каждая из трех основных компонентов этой сети: 1) профессиональные общества, 2) научно-исследовательские организации и 3) издательства университетов и торговых фирм. Определяются виды информационного обслуживания, предоставляемые этими организациями, наметаются перспективы развития информационной службы США.

66.2.331. Planning for national information networks. Knox W. H. «2nd Nat. Sympos. Engng Inform. Coordinat. Engng Inform. Syst. New York, N. Y., 1965, New York, N. Y., Engng Joint Council, 1966, 3-8, 48-54. (In English)

Описывается структура Федерального Комитета по Научной и Технической Информации (США), его цели и основные направления деятельности. Рассматривается грантоспособность программы создания национальной системы научной и технической информации. Отмечаются усилия Комитета в области координации деятельности федеральных и частных информационных служб, а также возможность широкого использования систем передачи данных по проводным линиям связи. Указывается на необходимость организации специализированных национальных библиотек, комплектованных литературой в строго определенной области знания. Отмечается, что наряду с центрами документации такого типа следует создать сеть информационных центров, ориентированных на глубокую информационную обработку документации, (реферирование, анализ и оценка информации, разработка методов индексирования и систем поиска). Подчеркивается, что создание эффективной национальной системы информации, основанной на применении ЭВМ, во многом сдерживается отсутствием достаточных финансовых средств и хорошо подготовленных кадров. Табл. 1.

66.2.331. Планирование национальной системы информации. Knox W. H. «2nd Nat. Sympos. Engng Inform. Coordinat. Engng Inform. Syst. New York, N. Y., 1965». New York, N. Y., Engng Joint Council, 1966, 3-8, 48-54 (англ.)

Приводятся структура Федерального Комитета по научной и технической информации (США), его цели и основные направления деятельности. Рассматривается грантоспособность программы создания национальной системы научной и технической информации. Отмечаются усилия Комитета в области координации деятельности федеральных и частных информационных служб, а также возможность широкого использования систем передачи данных по проводным линиям связи. Указывается на необходимость организации специализированных национальных библиотек, комплектованных литературой в строго определенной области знания. Отмечается, что наряду с центрами документации такого типа следует создать сеть информационных центров, ориентированных на глубокую информационную обработку документации, (реферирование, анализ и оценка информации, разработка методов индексирования и систем поиска). Подчеркивается, что создание эффективной национальной системы информации, основанной на применении ЭВМ, во многом сдерживается отсутствием достаточных финансовых средств и хорошо подготовленных кадров. Табл. 1.

66.2.333. The situation and prospects of the information industry in the U. S. A. - Hirayama, Ryozauro. «Zyoho kanri, Inform. and Docum.», 1968, 11, No. 9, 503-507. (In Japanese)

Это отчет о поездке в США группой японских специалистов с целью ознакомления с ситуацией и состоянием «информационной промышленности» страны.

66.2.333. Современное состояние «информационной промышленности» США. Хираяма Рёзэбуро. The situation and prospect of information industry in U.S.A. «Zyoho kanri, Zyoho kanri, Inform. and Docum.», 1968, 11, No. 9, 503-507 (японск.)

Приводится отчет группы японских специалистов о поездке в США с целью ознакомления с ситуацией и состоянием «информационной промышленности» страны.

69.4.205. *The evolving U. S. National Scientific and Technical Information System.* - Simpson, Gustavus S. Jr. «Batelle Techn. Revs», 1968, 17, No. 5-6, 21-28. (In English).

The most probable shapes of the U. S. information system in the next decade are discussed. The influence of the Federal Government on the progress of this system is analysed. The author contends that both the Federal and private-owned information systems will eventually reach a uniform standard. Summary

68.5.302. *National information issues and trends.* - Hammer, Donald P. «Annual Rev Inform. Sci. and Technol. Vol. 2». New York - London - Sydney, Interscience, 1967, 385-417. (In English).

Publications on various aspects of information activities which appeared in the USA in 1966, are reviewed. The review falls into the following major sections: definition of the fundamentals of information activity; 'information explosion'; nation-wide information systems, their relations and tasks; use of artificial satellites for information purposes; official information activity; intrastate communication and information exchange systems; copyright legislation and problems associated with use of literary sources. 10 refs. L. Poniлова

68.10.351. *Information analysis centers as a source for information and data.* - Darby, Ralph L. «Spec. Libr.» 1968, 59, No. 2, 91-97. (In English).

The main functions of specialized information analysis centers (USA) are, in addition to information dissemination and retrieval, the producing of qualitatively new information from available data. The distinctive features of the Information Analysis Center, as compared with libraries and traditional information centres, are mentioned. The activities of specialized information analysis centres are exemplified by the Defense Metals Information Center and some others. Guides to some other information analysis centres are listed. 2 ill., 1 tab., 30 refs. A. Yurko

UDC 601.002.5(73)

68.2.313. *Technical Information Exchange provides ADP support.* «Nat. Bur. Standards Techn. News Bull.», 1967, 51, No. 8, 166-167. (In English).

Consideration is given to the tasks and functions of the Technical Information Exchange set up in 1966 under the National Bureau of Standards Center for Computer Sciences and Technology (USA). A detailed description is given of the following activities: information processing reference service; reporting the state-of-the-art in information processing; machine preparation of indices; programme and documentation reference service. G. S.

69.11.242. *History of the American Documentation Institute. A sketch.* - Schultz, Claire K.; Garwig, Paul L. «Amer. Docum.», 1969, 20, No. 2, 152-160. (In English).

Highlights of the history (1937-1967) of the American Documentation Institute are sketched. In 1968, its name changed to American Society for Information Science. 18 refs. R. S.

69.7.171. *The National Translations Center.* - Kip, Charles E. «Spec. Libr.», 1969, 60, No. 2, 104. (In English).

Since 1953, the National Translations Center (U. S. A.) has supplied more than 100,000 translations to requesters. All of them are indexed. A semi-monthly bulletin, «Translations Register-Index», announces new translations. D. S.

69.4.205. *Возникновение в США национальной системы научной и технической информации.* Simpson Gustavus S. Jr. *The evolving U. S. National Scientific and Technical Information System.* «Batelle Techn. Revs», 1968, 17, No. 5-6, 21-28 (англ.)

Рассматриваются наиболее вероятные формы, которые примет в будущем информационная система США и течение государственной деятельности. Анализируется влияние федерального правительства на процесс развития этой системы и выдвигается предположение о том, что в конце концов и федеральные и частные информационные системы придут к единому стандарту. Резюме

68.5.302. *Тенденции развития и состояние информационной деятельности в США.* Hammer Donald P. *National information issues and trends.* «Annual Rev. Inform. Sci. and Technol. Vol. 2». New York - London - Sydney, Interscience, 1967, 385-417 (англ.)

Дается обзор публикаций по различным вопросам организации информационной деятельности, вышедших в США в 1966 г. Основные разделы обзора: характеристика аспектов информационной деятельности; проблемы информационного взрыва в литературе; информационные системы национального масштаба, их взаимосвязь и задачи; использование искусственных спутников земли для информационных целей; правительственная деятельность в области информации; системы связи и обмена информацией между штатами; закон об авторском праве и проблемы, связанные с информационным использованием литературных источников. Библ. 90 назв.

68.10.351. *Центры информационного анализа как источники информации.* Darby Ralph L. *Information analysis centers as a source for information and data.* «Spec. Libr.», 1968, 59, No. 2, 91-97 (англ.)

Исследуются и формулируются основные функции специализированных центров информационного анализа США, которые должны не только распространять информацию или осуществлять ее поиск, но и на основе существующей информации создавать качественно новую. Указывается отличие Центра информационного анализа от библиотек и обычных информационных центров. Детально деятельность специализированных центров информационного анализа рассматривается на примере деятельности Центра информации по защитным покрытиям металлов и некоторых других. Приводится перечень справочных изданий о ряде центров информационного анализа. Илл. 2, Табл. 1. Библ. 30 назв. А. Юрко

68.2.314. *Бюро обмена технической информацией поддерживает систему автоматической обработки данных.* «Nat. Bur. Standards Techn. News Bull.», 1967, 51, No. 8, 166-167 (англ.)

Рассматриваются задачи и функции Бюро обмена технической информацией, созданного в 1966 г. при Центре высшейшей техники Национального бюро стандартов (США). Подробно освещаются следующие виды его деятельности: справочная служба по обработке информации; издание обзоров и отчетов по вопросам обработки информации; издание обзоров и отчетов по вопросам обработки информации; составление указателей машинным способом; справочная служба по разработке программ, их назначению и возмож. остиям. Г. С.

69.11.242. *Американский институт документации (Исторический очерк).* Schultz Claire K., Garwig Paul L. *History of the American Documentation Institute. A sketch.* «Amer. Docum.», 1969, 20, No. 2, 152-160 (англ.)

Описывается история создания и деятельность Американского института документации до 1968 г. (в течение 30 лет), когда он был переименован в Американское общество по информации. Библ. 18. (Поздний реферат см. ЭИ «Теория и практика научной информации», 1969, No 16, 32). Р. С.

69.7.171. *Национальный центр переводов.* Kip Charles E. *The National Translations Center.* «Spec. Libr.», 1969, 60, No. 2, 104 (англ.)

С 1953 г. Национальный центр переводов (США) выдал заказчикам свыше 100 тыс. переводов. Все переводы зарегистрированы. В бюллетене «Translations Register Index», издаваемом центром один раз в две недели, сообщается о новых переводах. А. С.

Development and operation of a specialized information and data center (the Cryogenic Data Center) — Johnson, Victor J. «J. Chem. Docum.», 1968, 8, № 4, 219-224 (In English).

... explosive progress in physics and cryogenic sciences. Data Center was set up in 1958 at the National Bureau of Standards of the USA to disseminate world literature in the field and to provide reliable information. The development of the Centre over the 10-year period of its existence is discussed. Included is the description of the computer program used to an automated bibliographic service, the development of cataloguing and indexing procedures, the procedures of announcement of the new services, procedures for selecting and compiling abstracts in terms of services to the users. The discussion analyzes the problems that are typical in facilities of this type and the need to consider standard or accepted solutions. 7 figs, 8 refs. Summary.

The state technical services program — an interface with industry — Levesque, Robert. «Spec. Libr.», 1968, 59, № 3, 195-200 (In English).

The Technical Resources Center at Syracuse University, New York, U.S.A. is aimed at studying and disseminating technical information and industrialists and businessmen and industrialists. Co-operation with the Center and professional societies and business includes an efficient reference service. The center's task is to promote exchange of scientific information with a view of adding to the technical progress in Upstate New York area. Some peculiarities which distinguish the Center from special libraries are outlined. A. Yurko

Defense Documentation Center — Rickman, Robert. «Navy Civil Engng.», 1967, 8, No. 2, 30-31.

The Defense Documentation Center for Scientific and Technical Information (USA) serves 300 armed services and other Federal agencies and more than 1000 contractors. Its collection amounts to 800 million documents reaching 50 thou. The center receives 7 thou per working day. Twice a month «Technical Abstract Bulletin» appears which covers 1000 reports. The users are also provided with 1000 copies of bills. G. S.

Defense Documentation Center development program — Powers Joseph M. «Reviews», 1969, 48, No. 5, 43-45, 121-125 (In English).

A description of the activity of the Documentation Centre for the Defence Department, as well as of its agencies, their contractors, subcontractors and grantors. R. S.

The state technical services program: at the state level — Heintz, H. F. «Spec. Libr.», 1968, 59, No. 3, 192-194 (In English).

The Connecticut (USA) technical services programme involves a referral system to evaluate the strength of scientific and technical staff in the state and establishing of a center to study the use of state and private-owned libraries. Preliminary research testified to the necessity and possibility of establishing such a centre. Its major functions include: complete and prompt information on the local information sources, access to them, bibliographic services, centralized control, coordination and dissemination of catalogues. V. L.

69.4.236. Создание и деятельность специализированного центра технической информации и данных. Johnson Victor J. Development and operation of a specialized technical information and data center (the Cryogenic Data Center) «J. Chem. Docum.», 1968, 8, № 4, 219-224 (англ.)

В связи с быстрым развитием физики и техники высоких температур при Национальном бюро стандартов США в 1958 г. был создан специализированный центр данных в этой области, в задачи которого входит обработка соответствующей мировой литературы и обеспечение промышленности надежной информацией. Обсуждается развитие центра за 10 лет и описывается переход от ручной к автоматической системе библиографического поиска, разработка методов каталогизации и индексирования, система информирования о новых поступлениях, процессы отбора и накопления данных и формы обслуживания потребителей. Обсуждаются типичные для подобных центров проблемы, и отмечается необходимость найти стандартные или общеприемлемые решения. Илл. 7. Лит. 8 назв. Резюме

68.1.350. Государственные технические службы и промышленность. Levesque Robert. The state technical services program—an interface with industry. «Spec. Libr.», 1968, 59, № 3, 195-200 (англ.)

Описывается деятельность Центра технических ресурсов при Сиракузском университете (шт. Нью-Йорк, США), направленной на выявление и удовлетворение потребностей местных деловых и промышленных кругов в научной и технической информации. Рассматривается система сотрудничества центра с профессиональными, научно-техническими обществами и специальными библиотеками, способствующими организации эффективной справочно-информационной службы. Основное назначение центра — способствовать обмену научной и технической информацией с целью содействия экономическому развитию северной части шт. Нью-Йорк. Излагаются особенности обслуживания потребителей и указывается отличие деятельности центра от деятельности специальных библиотек. Юрко

68.1.237. Документационный центр научной и технической информации Министерства обороны США. Rickman R. «Navy Civil Engng.», 1967, 8, № 2, 30-31 (англ.)

Документационный центр научно-технической информации Министерства обороны США обслуживает 3 тыс. военных организаций, 500 федеральных агентств и более 2200 гражданских учреждений. Фонд его насчитывает 800 тыс. названий, причем ежегодное поступление составляет 50 тыс. ед., штат — 500 чел. Количество запросов — около 7 тыс. в год. Дважды в месяц издается бюллетень «Technical Abstract Bulletin», включающий около 2 тыс. сообщений. По интересующим вопросам потребители получают библиографические отчеты. Илл. 2.

70.3.328(P-3455). Документационный центр министерства обороны США. Powers Joseph M. Defense Documentation Center development program. «Reviews», 1969, 48, № 5, 43, 45, 121, 125 (англ.)

Описывается деятельность Документационного центра по обслуживанию информацией министерства обороны, а также федеральных органов и фирм, связанных с ними контрактами или субсидированных ими. (Подробный реферат см. в ЭИ «Теория и практика научной информации», 1970, № 2, 6).

68.10.352. Программа технического обслуживания в шт. Коннектикут. Heintz H. F. The state technical services program at the state level. «Spec. Libr.», 1968, 59, № 3, 192-194 (англ.)

Программа технического обслуживания в шт. Коннектикут (США) включает создание справочной службы по определению численности научных и технических кадров штата и центра по использованию государственных и частных библиотек. Предварительные исследования показали необходимость и возможность создания центра. Основные его функции: получение полных и оперативных данных о расположении местных информационных источников, обеспечение доступа к ним, осуществление библиографического поиска, централизованного контроля, а также координация и распространение каталогов. Илл.

69.9.235. *The Bell Telephone Laboratories technical information service.*— Lowry, W. Kenneth; Kennedy, Robert A. *Służby informacji technicznej w Laboratoriach Bell Telephone.* «Aktual. probl. inform. dokum.», 1969, 14, No. 1, 1-5. (in Polish).

The network of technical libraries acting as information centres in the Bell Telephone Laboratories (U.S.A.) consists of 20 industrial and technical information groups. This network is highly centralized and mechanized. Though the company's laboratories are dispersed over the U.S.A., the information flow circulates primarily due to modern communication facilities. The information staff, techniques, etc. are described. Prospects of computer application are outlined. W. Sokolowska (P22)

69.8.237. *The technical information facility of Koppers' research center.*— Moczka, Evgene P. «J. Chem. Docum.», 1968, 8, No. 2, 65-69. (in Russian).

The sequence of events that led to the creation of Koppers' information facility is described. It is designed for information processing at the Koppers Co. Research Center (U.S.A.). Its present activities are based on IRS and microfiche. 5 refs. 2 refs. Summary

69.11.243 *Report of a business visit to the USA.*— Canyn, M. V. de. *Compte rendu de mission aux Etats-Unis.* «Colloq. internat. inform. docum. scient. int. Paris, 1968», Bruxelles, s. n., 119-124. (in French).

Reported are the results of a visit to the United States (June 24-July 3, 1968) of delegates from the International Bureau of Railway Transport Documentation of the International Railways Union, to see latest progress in information services. A brief description is provided of the largest libraries and library information centres under the U. S. Committee for Scientific and Technical Information (COSATI) engaged in collecting, storing and disseminating information related to scientific and technological researches, both current and planned for the future. Data are cited on development, technical reports and other documents, and of IRS in use, etc.

69.6.222. *Coordination of information services.*— Baker, Dale B., O'Dette, Ralph E., Tate, Fred A. «Proc. Amer. Soc. Inform. Sci. Annual Meet. Vol. 5». New York, Greenwood Publ. Corp., 1968, 15-19. (in English).

The continuous growth of chemical information and its increasing complexity call for the elaboration of the existing information services. In this context the coordination of the efforts of chemical information centres in processing, indexing, abstracting and selective dissemination of information may be a solution. Examples are cited of such a cooperation. L. P.

69.9.235. Служба технической информации в лабораториях фирмы Bell Telephone. Lowry W. Kenneth, Kennedy Robert A. *Służby informacji technicznej w Laboratoriach Bell Telephone.* «Aktual. probl. inform. dokum.», 1969, 14, No. 1, 1-5. (польск.)

Сеть технических библиотек, выполняющих роль информационных центров в лабораториях фирмы Bell Telephone (США), состоит из 20 групп промышленно-технической информации. Эта сеть в значительной степени централизована и механизирована. Библиотеки фирмы наложены в различных городах США, однако благодаря современным средствам связи поток информации циркулирует очень быстро. Дана характеристика информации, методов ее сбора, хранения и распространения. Описаны методы организации вычислительной техники. W. Sokolowska (П22)

69.8.237. Оборудование для обработки технической информации в научно-исследовательском центре. Moczka Evgene P. *The technical information facility of Koppers' research center.* «J. Chem. Docum.», 1968, 8, No. 2, 65-69. (рус.)

Описывается последовательность создания комплекса документов и оборудования для обработки информации в научно-исследовательском центре фирмы Koppers Co. (США) и его деятельности в настоящее время. В основу работы положены ИИС и оборудование для МФ. Цит. 5. Библиогр. 2. Резюме

69.11.243. *Compte rendu de mission aux Etats-Unis.* Canyn M. V. de. *Report of a business visit to the USA.* «Colloq. internat. inform. docum. scient. int. Paris, 1968», Bruxelles, s. n., 119-124. (франц.)

Содержится отчет о результатах поездки представителей Международного бюро железнодорожной документации Международного Союза железных дорог в США (24 июня-3 июля 1968 г.) с целью ознакомления с последними достижениями информационных служб. Кратко описываются крупнейшие библиотеки и отраслевые информационные центры, подчиненные Комитету по наукам и технической информации США (COSATI), которые занимаются проблемами сбора, хранения и распространения информации о проводившихся и планируемых научных и технологических разработках. Приведены сведения о зарегистрированных разработках, технических отчетах и другой документации, а также об использовании ИИС и др. E. Паршина

69.6.222. [Координация деятельности информационных служб США в области химии]. Baker Dale B., O'Dette Ralph E., Tate Fred A. *Coordination of information services.* «Proc. Amer. Soc. Inform. Sci. Annual Meet. Vol. 5». New York, Greenwood Publ. Corp., 1968, 15-19. (англ.)

Нерывающий рост объема информации по химии и увеличение тематики заставляют искать новые пути организации и совершенствования информационно-обслуживания. Одним из таких путей является координация работы информационных центров в области химии по обработке, индексированию, аннотированию и избирательному распространению информации. Приводятся примеры сотрудничества различных служб в этих вопросах. J. H.

L A T I N A M E R I C A

A R G E N T I N A

69.227. National Council for scientific and technical investigations.-- Memoria. Consejo nacional de Investigaciones Cientificas y Tecnicas 1° de febrero 1965-31 de enero de 1966. Buenos Aires, Argentina, 1967, 169 p., 1 (in type 1965).

The activities of an information centre of the National Council for Scientific and Technical Investigations (Argentina) are reported for the period between February 1, 1965 and January 31, 1966. Founded in 1964, the Centre has a mail-order service, translations department, general catalogue comprising 32,000 cards. The system of the Centre's internal and external links is described. Its publications during 1965 are listed. E. P.

69.230. Technical information for industry.-- Memoria. Bachofen, E. B. 433rd Conf. FID Internat. Congr. Docum. Tokyo, 1967. Abstracts. S. I. s. a. 6. (in type 1967).

The types of work and services of the Research Centre for Information (Argentina) are described.

69.227. Национальный совет по научно-техническим исследованиям. Memoria. Consejo nacional de Investigaciones Cientificas y Tecnicas. 1° de febrero. 1965-31 de enero de 1966. Buenos Aires, Argentina, 1967, 169 p., 1. (в печати 1965).

Приводятся отчет о деятельности информационного центра Национального совета по научно-техническим исследованиям (Аргентина) за период с 1 февраля 1965 г. по 31 января 1966 г. Информационный центр, действующий с 1964 г., имеет службу репродуцирования, отдел переводов, общий каталог на 32 тыс. карточек. Описывается система внутренних и внешних связей центра. Перечислены его издания, вышедшие в течение 1965 г.

69.230. Техническая информация для промышленности. Memoria. Bachofen E. B. Technical Information for industry. 433rd Conf. FID Internat. Congr. Docum. Tokyo, 1967. Abstracts. S. I. s. a. 6. (англ.)

Описываются виды работ и службы Центра исследований в области документации (Аргентина).

C H I L E

68.10.35. The national centre of information and documentation.-- Johnson de Vodanović, Betty. El centro nacional de información y documentación (CENID) programa del consejo de rectores. «Rev. cons. rectores Univ. chilenas», 1967, 2, No. 3, 25-29. (In Spanish).

The National Centre of Information and Documentation (CENID) was set up in August 1954 by a decision of the Chilean University Rectors Council. Its major tasks include: information to specialists; coordination for national libraries and technical assistance to such; preparation and publication of catalogues, bibliographies, collections of dissertation theses, translation, microfilming and photo-copying, studies on bibliographic technique etc. The Centre also studies problems of library organization and classification of information materials. K. Weiss

68.10.35. Национальный центр информации и документации. Johnson de Vodanović Betty. El centro nacional de información y documentación (CENID) programa del consejo de rectores. «Rev. cons. Univ. chilenas», 1967, 2, No. 3, 25-29. (исп.)

Национальный центр информации и документации создан в августе 1954 г. по решению Совета ректоров университетов Чили. Основные его задачи: обеспечение специалистов информацией, координация работы национальных библиотек и оказание им технической помощи; подготовка и издание каталогов, библиографических сборников, сборников диссертаций; перевод, МФ и фотокопирование необходимых материалов; проведение консультаций по библиографической работе и др. Центр занимается также изучением вопроса организации библиотек и классификации информационных материалов. К. Вейс



