The Central Library for Technology of the German Democratic Republic - A Centre of Scientific Information for Supplying Information to the Industry of the German Democratic Republic

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The Central Library for Technology of The German Democratic Republic – A Centre of Scientific Information for supplying information to the Industry of The German Democratic Republic

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1. Introduction

Information supply, that is the transfer of the latest scientific findings to the various spheres of a country, has gained great social and economic importance, particularly for libraries which are orientated towards engineering sciences. The level of activities and the results of work at scientific institutions in all spheres of the economy is directly and indirectly determined by the resource “Information” and the level of information supply and utilization. Therefore, in 1980, the following objective was formulated in the GDR: Libraries responsible for information supply, including the procurement of information services, are to be classified as parts of the economically organized information systems “Science and Technology”, “Social Sciences”, “Medicine” and others.

The scientific information system is based on the fact that the objectives and the results of teaching and research activities take into account the international level of the latest scientific findings.

In the GDR, the library system is organized according to both the technical and territorial aspects. The technical aspect is expressed with regard to scientific disciplines as well as institutional assignments according to economic spheres.

At the end of the 1970s and in the 1980s the prerequisites were created for establishing a network of central technological libraries in the sphere of natural and engineering sciences. Institutions of the existing library system in the GDR were entrusted with this function. In this connection, in 1984, the function “Central Library for Technology of the GDR” (CLT) was introduced. In coordination with the ministers of the industrial sectors, the University Library of the Dresden University of Technology was entrusted with this task.
2. The Dresden University of Technology - a profile-determining basis of the Central Library for Technology of the GDR.

The Dresden University of Technology is the largest polytechnical, educational and research institution of the GDR. Because of its profile and size it contributes substantially to the development in all spheres of the economy by intensive interdisciplinary utilization of the scientific potential in the fields of engineering and social and natural sciences. Coordination contracts and work agreements for the solution of research and development tasks exist between the University and many enterprises in the field of electrical engineering, electronics, informatics and mechanical and civil engineering. Thus, the tradition of close contact between academic teaching and industrial practice, which was started in 1828 with the foundation of the University, is continued at a high level. Famous scientists such as Andreas Schubert, Gustav Zeuner, Fritz Foerster, August Toepler, Heinrich Barkhausen and many others have determined the trend of the University’s development to the present time. To preserve this heritage, the University Library systematically collects and makes accessible the publications of important scientists of the University. This is a task which has been made very complicated by the destruction of the University Library in air raids on February 13th, 1945.

At present, more than 13000 students, 260 research students and 600 postgraduates are studying at the Dresden University of Technology in 28 sections and institutes.

Each year nearly 2,500 students are matriculated in about 60 special subjects to be studied directly (Table 1). The University, with its scientific profile, meets the manifold demands of industry and other social spheres. This is demonstrated by the different courses on offer such as: a correspondence course lasting 5 to 6 years, a large number of further education courses, postgraduate studies lasting two years and problem seminars in special fields of instruction. Another important step in this direction was the formation of the Computer Science/Informatics Centre at the Technological University in October 1986, as part of the organization of higher education in the GDR. The Technological University, as a teaching and research institution, educates more than two thirds of all students matriculating in the GDR for the elementary subject, Information Processing/Informatics, as well as the four special subjects, Theoretical Informatics, System Software, Applied Informatics and Computer Systems which are closely connected with industrial combines and the Academy of Sciences of the GDR.

The development of the University Library followed the pattern of the broad scientific profile of a Universitas Litterarum Technicarum already described. The acquisitions policy for scientific literature is directly derived from the scientific structure of the University as well as from the stable fields of research. The University Library acquires and makes accessible literature from almost all fields of engineering sciences, the most important fields of mathematics and natural sciences as well as selected fields of social sciences. The extent of the acquisition fields is agreed upon with main university
Dresden University of Technology

libraries and libraries at institutions of higher education, especially with the Dresden College of Transport, the Technological Universities in Karl-Marx-Stadt and Magdeburg and the College for Advanced Technology in Ilmenau as well as with the library system of the Academy of Sciences.

As far as the literature supply in the field of social sciences is concerned, support is given in many ways by the Dresden Library “Sächsische Landesbibliothek”.

Table 1. Basic studies at the Dresden University of Technology by Faculties

<table>
<thead>
<tr>
<th>Social Sciences</th>
<th>— labour engineering</th>
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<tbody>
<tr>
<td></td>
<td>— vocational pedagogics (7 special fields)</td>
</tr>
<tr>
<td></td>
<td>— socialist industrial economics/engineering economics (5 special fields)</td>
</tr>
<tr>
<td>Natural Sciences/Mathematics</td>
<td>— mathematics</td>
</tr>
<tr>
<td></td>
<td>— physics</td>
</tr>
<tr>
<td></td>
<td>— chemistry (3 special fields)</td>
</tr>
<tr>
<td></td>
<td>— psychology</td>
</tr>
<tr>
<td>Electrical Engineering/</td>
<td>— electrical engineering</td>
</tr>
<tr>
<td>Electronics/Informatics</td>
<td>(5 special fields)</td>
</tr>
<tr>
<td></td>
<td>— information processing/informatics</td>
</tr>
<tr>
<td></td>
<td>(4 special fields)</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>— mechanical engineering (15 special fields)</td>
</tr>
<tr>
<td></td>
<td>— process engineering (15 special fields)</td>
</tr>
<tr>
<td>Civil Engineering, Water</td>
<td>— surveying and cartography</td>
</tr>
<tr>
<td>Sciences and Forestry</td>
<td>— civil engineering (5 special fields)</td>
</tr>
<tr>
<td></td>
<td>— town planning and architecture (2 special fields)</td>
</tr>
<tr>
<td></td>
<td>— forestry</td>
</tr>
</tbody>
</table>

3. The status of the University Library as the Central Library for Technology (CLT) within the library system of the GDR.

The Central Library for Technology of the GDR at the Dresden University of Technology is the most important library in the GDR in the field of engineering sciences both with respect to its volume and the profile of its stocks. It is the centre for the holdings in the GDR for electrical engineering and electronics as well as for the basic branches and interdisciplinary problems of technology. Collections which are important with respect to their numbers and contents are available in the fields of mechanical engineering, civil engineering, architecture, surveying/cartography, mathematics, physics and chemistry. The development of the profile of collections in the University Library has been closely connected with the work of the Dresden University of
Technology as the largest institution of education and research in the field of engineering sciences in the GDR.

In the GDR, profiling the important trends of scientific work for which a systematic, scheduled inventory builds up, is carried out within the organization of the library system. This is called “points of main emphasis”. As it is responsible for nearly 10% of all points of emphasis, the Central Library for Technology is the library which is responsible for the largest profile within the organization of the library system in the GDR (Table 2).

The Central Library for Technology has the following functions in the GDR:

Central Special Library for basic branches and interdisciplinary problems of technology.

Central Special Library for electrical engineering and electronics.

It is also responsible for the organization of the special library network for electrical engineering and electronics. With its collections it acts as a cooperation partner in six other special library networks, namely, mathematics, physics, chemistry, mechanical engineering, civil engineering and economics.

The CLT has, in its Polytechnical Patent Library, the largest collection of primary and secondary patent literature of the five polytechnical patent libraries. A collection of standards of important states and international organizations completes the profile and capacity. It includes also a guidance centre for factory publications and other “grey literature”. Characteristic data of the Central Library for Technology are shown in Table 3.

Having this polydisciplinary profile, the Central Library for Technology is an important institution for information procurement and supply to institutions of higher education, the Academy of Sciences and industry, in the field of engineering and natural sciences in the GDR. As with the Berlin Library, “Deutsche Bücherei Leipzig” or the Dresden Library, “Sächsische Landesbibliothek”, it has a decisive central function within the organization of the library system.

4. The partnership between the Central Library for Technology and industry

Section 3 showed the fundamentals and manifold possibilities of the relationships between the CLT and factories. Today, the CLT participates in nearly 30 coordination agreements with partners in industry and regional administrations with regard of the scientific activities of the Dresden University of Technology. These agreements control the forms of cooperation with the departments for scientific information and documentation within these institutions with regard to the scientific activities of the Dresden University of work of university sections as well as the subsequent supply of documentation by the Central Library for Technology.

This documentation includes, for instance, diploma papers and theses, booklets with lectures held during scientific events in the departments (e.g. problem seminars or scientific colloquia), preprints of scientific publications from members of the institutions of higher education and research bulletins.
Table 2. Points-of-Main-Emphasis of the CLT (ACC.TO)

<table>
<thead>
<tr>
<th>Social Sciences</th>
<th>Natural Sciences</th>
<th>Electrical Engineering/Electronics/Informatics</th>
<th>Mechanical Engineering</th>
<th>Civil Engineering, Water Sciences and Forestry</th>
</tr>
</thead>
<tbody>
<tr>
<td>techn. teaching and learning aids x)</td>
<td>electro-chemistry x)</td>
<td>electric power engineering x)</td>
<td>solid-state mechanics x)</td>
<td>surveying x)</td>
</tr>
<tr>
<td>industrial psychology</td>
<td></td>
<td>electronic technology x)</td>
<td>science of design x)</td>
<td>engineering-theoretical fundamentals of construction engineering x)</td>
</tr>
<tr>
<td>history of technology</td>
<td></td>
<td>microelectronics</td>
<td>thermal energy conversion x)</td>
<td>landscape architecture and planning of open spaces</td>
</tr>
<tr>
<td>factory publications x)</td>
<td></td>
<td>medical electronic device technology x)</td>
<td>technical installation of buildings and comprehensive technical development x)</td>
<td>agricultural construction x)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>information processing/informatics x)</td>
<td></td>
<td>hydraulic engineering x)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mathematical fundamentals of information processing x)</td>
<td></td>
<td>water management x)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>tropical forestry x)</td>
</tr>
</tbody>
</table>

x) Unique points-of-main-emphasis in the GDR
Table 3. Survey of Dresden University of Technology Library System/Central Library for Technology of the GDR (1986)

1. Library stock
   (incl. main library and departmental libraries)
   - books, periodicals and serials 1,089,300
   - other items (theses, mss. etc.) 124,100
   - standards 344,350
   - patents 2,040,600

2. the growth of catalogued holdings
   of the library systems 36,080

3. the borrowers of the library
   - students of the university 9,100
   - university staff 2,590
   - outside organisation 350
   - outside persons 5,600

   Total 17,640

4. library services
   - reader places 860
   - visit to the reading rooms 162,250
   - local loans 691,900
   - inter-library loans
     (from own collection) 27,960
   - inter-library loans
     (acquired from abroad) 8,175

By way of providing fast access to these documents, the CLT helps to make known in practice scientific results obtained at the University and thus their application is guaranteed within a short time.

Besides that, since 1985, a recommendation of the “Council of Deans of Dresden’s Institutions for Higher Education” has been implemented in the district of Dresden. It concerns the cooperation of all libraries within the organization of higher education with the departments for scientific information in industrial enterprises. A working group consisting of the heads of seven college libraries of the district of Dresden and of the Dresden Library, “Sächsische Landesbibliothek”, as well as of the heads of the scientific information departments of large industrial combines, representatives of the regional administrations of the town and the district of Dresden and the heads of libraries of institutes of the Academy of Sciences located in the Dresden district, meets under the auspices of the head of the CLT and discusses important tasks requiring coordination and cooperation. Representatives of the Engineers’ Organization, Kammer der Technik (KdT), and of the Association of Libraries, participate in this working group and thus a broad basis is given for cooperation. Recently this group dealt with, for instance, the use of computer technology in libraries as well as with the cooperative utilization of
equipment. The preparation of joint measures for further education of librarians and co-workers in information centres has also been discussed.

As the Central Library for Technology of the GDR, the University Library makes available all its stocks for use by its partners in the seven special library networks already mentioned. It concentrates its acquisitions of monographs and journals on the points-of-main-emphasis of the plan containing these points in agreement with the other centres with collections. The principles for the activity of the special library networks are explained by Table 2.

The CLT, with its large collection, substantially influences the work of the special library networks through network-own loan. It acts also as an efficient consultant and cooperator in the area of library problems and tasks in the field of scientific information. In the GDR, 16.4% of all points of main emphasis in natural and engineering sciences are handled by the CLT.

An especially important function for the Central Library for Technology is that of Central Special Library for Electrical Engineering and Electronics including the field of information processing/informatics. More than 100 partners are cooperating in this network: (university libraries and libraries of institutions for higher education −14%, libraries of the Academy of Sciences −5% and industry −81%).

The Central Library for Technology is responsible for extensive tasks of information procurement for the management of a union catalogue of journals, (library, bibliographical reference and holdings data) and for the building up of a union catalogue of monographs for the partners within the network. Both the union catalogue of journals of the special library network and the acquisition list are worked out with the help of computers. The Central Library for Technology organizes network loans and thus ensures fast literature supply within the network.

At present, the CLT is establishing a continuous information service. A catalogue of all information sources, bulletin of references, information sources from centres of industry and access possibilities to information services available in the Central Library for Technology, will be issued by this Library as part of its publicity work, and the regular issue of the “TZB-Mitteilungen”, Bulletin of the Central Library for Technology, is being prepared. This information bulletin will be sent to the various partners three to four times a year. It will give information on the work of special departments and sections of the CLT, and the current capacity in respect of information procurement and supply. It will also include information and instruction for further education possibilities and events being organized in the Section of Technological Libraries of the Association of Libraries of the GDR.

Since 1980, a computer database of all theses/diploma papers preserved at the Dresden University of Technology, as well as publications of members of the institutions for higher education, has been maintained in the Central Library for Technology. This database is of special interest to industrial spheres in connection with the information bases being established there. Successful experiments on the exchange of computer-operated data media
have been carried out in 1986 together with the Central Institute for Information and Documentation of the GDR in Berlin.

On the basis of these experiments, the CLT has offered to the combines selected partial databases for computer operation in accordance with the corresponding special profile. Thus, these industrial enterprises are in a position to have in their databases references to papers of institutions for higher education or to include also parts of the CLT catalogue of monographs. It can be assumed that this form of cooperation will develop during the next few years to a new kind of service offered by the Central Library for Technology.

Another service of the CLT, especially used by industry in the region, is the work of the Polytechnical Patent Library.

This section of the Department of Special Literature for Technology had at its disposal 2,041,000 patents in 1986.

At present, the Polytechnical Patent Library is the section of the Central Library for Technology which is growing most rapidly. The annual increase amounts to almost 200,000 patent documents. This makes high demands on the staff working in this section. With more than 5,800 users, of which 75% come from regional industrial enterprises, the Central Library for Technology of the GDR has the highest utilization rate of all polytechnical patent libraries. Experience during the last few years shows that stocks prior to 1945 are of special interest to the users.

Another service of the Department of Special Literature for Technology, especially for industry, is the increased profiling in the field of standards since 1986. Not only GDR standards (TGL), but also standards of the Council for Mutual Economic Aid (RGW), of the international organizations ISO and IEC as well as standards of leading industrial states have been included in the acquisition profile. A real demand from regional industry has been met in this way.

The Department of Special Literature for Technology participates in the user education of the Central Library for Technology. Students are instructed on the organization of patent information retrieval at the beginning or during their special studies, usually during the third year of their studies. Courses for the training of users from industry are being organized as they are required. Before long, on-line retrieval of the central stock of the Patent and Invention Office of the GDR will be possible.

The Central Library for Technology supports with its services in the field of patent literature, as do the other four polytechnical patent libraries in Karl-Marx-Stadt, Ilmenau, Magdeburg and Rostock, the activities of the patent engineers in the industry, in many ways.

5. Concluding summary

The Central Library for Technology is part of the governmental information system in the GDR in which institutions for higher education and of the Academy of Sciences, as well as scientific information departments of industry
and other spheres of the economy, are cooperating. Important services for information supply, especially for industry, are offered on the basis of its polytechnical profile and holdings. These services are based not only on cooperation contracts between the Dresden University of Technology and partners in industry but also mainly on state regulations concerning the cooperation within library networks organized according to special fields as well as on the status of the Central Library for Technology within the library system of the GDR. The management of the Central Library for Technology is constantly confronted with the task of updating cooperation with industry and services to meet developing demands.

The author

Arndt Pflug read Engineering Economy at the Dresden University of Technology. Until 1972, he worked in executive functions in scientific spheres of the industry, finally as Director for Information and Computer Technology at an industrial combine. In 1962, he received his Doctor’s degree as Dr. rer. oec. at the Mining Academy of Freiberg. During his activities in industry he lectured on Information Processing. He worked as Head of the Department for Applied Computer Science/Informatics and as Deputy Director of the Institute of Information Processing. He lectured and researched in Information Processing and Applied Computer Science (Computer-aided Engineering). In 1986, Professor Pflug was appointed Director of the University Library/Central Library for Technology of the GDR. He is a member of the Executive Committee of the Library Association of the GDR and Chairman of the Technological Libraries Section.

References