Arja-Riitta Haarala

Director of Libraries
Tampere Univsersity of Technology Library
P.O. Box 537
FIN 33101 Tampere
Finland
Telephone:358-31-316-1148
FAX:358-31-316-2907
Internet:haarala@butler.cc.tut.fi

Information Sources in Science and Technology in Finland

Finland phases some problems to be overcome in the field scientific and technical information: a small user community for scientific and technological information which makes domestic systems costly; great distances within the country between users and suppliers of information; great distances to international data systems and large libraries abroad; and inadequate collections of scientific and technical information.

Training in technology has a long tradition in Finland. The first technical college was opened in 1849 in Helsinki. Today science and technology is taught in ten universities, and the number of students is nearly 40,000 (more than 30% of all students).

Primary information in science and technology

The national bibliography Fennica includes all books and journal titles published in Finland. The number of published books is about 150,000. However, only a small portion, about 14% is from the field of science and technology.

However, only books and journals fulfilling certain criteria are accepted in national bibliograpies: the number of all published works is altogether about 330,000 titles. Finnish scientific and technical literature has similar characterics to that of other countries. There is a grey literature of reports and conference papers with only about 20-25% being published as journal articles and monographs with the former being dominant, of course.

Databases production and services

Database production started in 1970's. The number of databases was in the beginning of this year 221. Database services available in Finland can be divided as follows: reference databases, in science and technology mainly include Finnish language literature, often popular by nature; directories; databanks for decision making, such as Finnish statistical time series or legal proceedings; national bibliografies; and library catalogues. Finnish databases can either be used on Internet or on Datapak. Some can be also purchased as CD-ROMs.

The Geological Survey of Finland started to create its databases in the early 1970's. The Survey maintains some 50 databases that include a variety geological data and information. The Environment Data Centre of the Board of Waters and Environment has developed an

Environmental Data System that includes over 30 different databases. The Surveyor-General's office has LIS (Location Information System) that is used over a thousand graphics work stations around the country. Other institutions and offices which produce databases are the Boards of Forestry and Waterways, and Central Statistical Office.

Science and technology library milieu

There are three universities of technology in Finland: Helsinki, Lappeenranta and Tampere. Helsinki serves as the National Resource Library for Technology, with Lappeenranta and Tampere serving as the central library for science and technology of their region. Science collections can be found also in seven other universities that have science departments.

About three quarters of all collections can be found in university libraries. The remainder are in research institutes and companies. Some companies still maintain libraries and major collections on specialised subjects; these can usually be visited by persons needing specialised information.

Libraries supported by government funds are all open to the public in Finland. So everybody needing technological information, not only members of the university, can use services offered by libraries. Technical libraries are access-oriented rather than collection oriented. Every possible effort has been made to improve services. Finnish libraries have developed, especially, interlibrary services and information services, and all have OPACs.

The national resource library network in Finland

A resource library network was established by government decision in Finland in 1972. There are ten resource libraries, one of which in the field of technology and related sciences. The duties of these libraries are as follows: to develop collections; to make holdings accessible; to carry out interlending; to render information service; and to promote cooperation and development work.

In addition to these libraries there is a National Repository Library where less-used material can be stored.

Linnea - Library Information Network for Academic Libraries

All university libraries make use of an intergrated library system based on VTLS (Virginia Tech Library System) called Linnea network. Linnea was developed to improve access to library collections and to allow shared cataloging within university libraries. It is, however, also available for external users. Linnea has grown fast: it has over two million records, with older information frequently being added into it.

A vision of the future

Self-service is becoming more important than before, and the remote use of the library is increasing. Libraries are supposed to offer services beyond working hours, requiring increased opening hours or highly developed network solutions. Customers know how to use a variety of systems, partly as a result of the development of new intelligent tools.

Libraries are changing from book-centred institutes to multioperational services where, in addition to ordinary book loans, a spectrum of new services is offered. Even equipment is for loan. Paper will still have its role, but new media are becoming more and more important in the field of science and technology. Full-text databases will be more common than at present, and IT tools will help in the use of systems. In addition to the reference databases, several databanks are available for users via libraries.

Library and information services form the basis of the service package of the future, although value-added services are going to grow significantly. At first, development will be based on equipment and systems, but later reference services and specialised consulting services will have a bigger role. Libraries and librarians are becoming more active, and even more pro-active in offering their services, as well as marketing them.

The inevitable result will be that in many cases, one copy of a book or journal will be purchased in Finland. It is then but a short step to the unpublished (but refereed) electronic journal or monograph, produced in many cases without a publisher acting as a intermediary. By means of networking, the virtual library will come into existence by the end of the millenium, with one system, at least in Finland, substantially operated by self-service.

References

Guide to Research Libraries and Information Services in Finland. Ed. Matti Liinamaa & Eija Niemelä. Finnish Research Library Association. Helsinki 1993. 206 p.
Nordguide 1994. Nordic databases. NORDINFO-publikation 29. Esbo1994. 236 p.
Statistial Yearbook of Finland 1993. Statistics Finland. Helsinki 1993. 620 p.
Törnudd, Elin. Library Cooperation for National Information Provision. Information Development vol. 10, no. 1, March 1994, pp. 29-34.

ONLINE PUBLIC ACCESS CATALOGUES IN FINLAND

Library	System	Internet
Helsinki School of economics		chico.hkkk.fi
Helsinki University	FENNICA	hyk.helsinki.fi (clas01)
Helsinki University	HELKA	hyk.helsinki.fi (clas02)
Joensuu University	JOECAT	joyk.joensuu.fi
Jyväskylä University	JYKDOK	jyk.jyu.fi
Kuopio University	KUOPUS	kirjasto.uku.fi
University of Lapland	HILLA	saana.urova.fi
Lappeenranta University of Technology	WILMA	libra.lut.fi
Oulu University	OULA	kirjasto.oulu.fi
Tampere University of Technology	TUTCAT	tutcat.info.tut.fi
Tampereen yliopiston kirjasto	TAMCAT	hilla.uta.fi
Helsinki University of Technology	TEEMU	otakir.hut.fi
Turku School of Economics	VALPURI	tuuli.utu.fi (clas02)
Turku University	VOLTER	tuuli.utu.fi (clas01)
Vaasa Univeristy	KUSTAA	kustaa.uwasa.fi
Repository Library	VAARI	varasto.uku.fi
Åbo Akademis bibliotek	ALMA	bo.abo.fi

About the Speaker

Arrja-Riitta Haarala did her MSc in Chemical Engineering at Helsinki University of Technology and MSc in Information Science at University College London. She has worked as a assistant teacher at Helsinki University of Technology at the Department of Chemistry. She started her library career at Helsinki University of Technology Library working as an information specialist and being the head of Information Services. Currently she helds a position of director of libraries at Tampere University of Technology.

She has served as an expert in several government and nordic committees and working groups, currently she is a member of Finnish Unesco Commission and a member of the Board of the National Library of Finland. She has headed several projects in scientific and technical information and in information systems. Her latest consultancy was at Biblioteca Alexanrina in Alexandria, Egypt.

Among her special interests are information systems, science and technology information, user training and management.