

# Improving opportunities for research

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## IMPROVING OPPORTUNITIES FOR RESEARCH

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### **The academic library environment in Finland**

The academic libraries have traditionally formed the backbone of the national information provision in Finland. There are 20 university libraries and some 30 polytechnics with rapidly developing library and information services. The academic libraries have ensured that the scientific literature acquired to the country have been accessible to all. Until recently this meant that the academic libraries were open to the public, the collections could be used by anybody and the ILL services supplied the documents not found in own collections. Today the site licence policies of the publishers of electronic resources do not necessarily acknowledge this liberal user policy and hence the information provision towards the industry and other research institutions is of concern. Providing the users with timely scientific information is not, however, only a question of licensing but it is also a matter of applying the agreements in practice, product marketing and technical troubleshooting.

### **Research funding**

Research funding as a whole in Finland has increased consistently in recent years compared with the modest level in the early 1980s. There was, of course, a slight decrease during the recession in the beginning of the 1990's. Currently the research funding forms some 3 % of GDP which is among the highest figures within the OECD. The increased public funding, generated mainly from the privatization of publicly owned business such as the Finnish Telecom, has been directed selectively to promote the work of the national innovation system for the benefit of the economy, employment and the business sector. The funding has been channelled primarily into technological research through Tekes (Technological Development Centre) and basic research through the universities and the Academy of Finland [1]. At the Helsinki University of Technology all this has meant that the amount of research funding has risen by 150 % in the past ten years and forms today some 50 % of the total funding of the university.

### **Support to libraries through research funding**

The growth in research funding has not been directly evident in the library budgets. A recent study in fact concluded that the Finnish university libraries never really recovered from the budget cuts made during the recession [2]. But the government decision to raise the level of research funding has fostered benefits to libraries in the form of the national electronic library for science and research. The initiative was first outlined in 1997 and it was to become no physical entity but an integrated networked

resource and service arrangement [3]. Today the National Electronic Library, the FinELib, is a programme launched by the Ministry of Education with an annual budget of about 18 million FIM (some 3 million USD) and employing a staff of 2,5 FTE persons. The FinELib is a consortia consisting of the Finnish universities and the recently established polytechnics together with a growing number of other research institute libraries. The main partners of the consortia are the university libraries and the funding support to the programme is aimed to cover the universities share of the licence fees. Other participants of the consortia together with the public libraries (which may also join the consortia) are expected to get funding from their respective government departments' sources.

### **The FinELib programme**

The FinELib [4] is a centralised approach to joint acquisition of electronic information resources. The key issues have been agreed by all members of the consortia after which the negotiations and other operations can be carried out in a very flexible manner. When formulating FinELib principles it was regarded vital to commit the universities in the joint acquisitions from the start and at the same time to allow them with a reasonable transition period to change from print collections to the electronic era. It has also been important to provide the universities and their libraries with a sense of continuity in the FinELib support. It is expected to take several years before the transition phase is over and therefore it is necessary to support the expensive period before the print subscriptions are cancelled, provided that the archiving issues of the electronic versions are solved. The FinELib consortiums are built upon each agreement and it is up to each university library to decide whether to join a specific consortium. The consortia aim to make 2-3 year long agreements with the publishers and vendors. The information resources are classified as multidisciplinary or "subject specific" resources. In table 1 there is a description of the FinELib funding principles concerning these resource categories. The multidisciplinary resources are supported with 100% contribution during the initial agreement period and the support will be substantial (80%) in the second period as well. The subject specific resources require, however, a 50% contribution from the universities from the start in order to get the 50% centralised FinELib funding. The FinELib consortium may also enter other consortiums. The Finnish Technological Universities e.g. joined the Nordic IEL Consortium as a FinELib consortium and hence were eligible for the centralised contribution by FinELib. The FinELib steering group is responsible for the consortial decision making. In the steering group there are members from university libraries and universities, the Ministry of Education, polytechnic libraries, the Academy of Finland and the Center for Scientific Computing. There are also a number of subject-oriented working groups which are responsible for the selection of resources to be included in the FinELib funded resources. Through the working groups every member of the consortia has a possibility to have their voices heard and put their proposals forward. Today at the campus of the Helsinki University of Technology more than two thousand (relevant) journal titles in fulltext (PDF or HTML) as well as some 20 reference databases are available on all workstations via the FinELib and other licences. These electronic resources require quite an input in marketing, too, but now when the critical mass has been achieved it is easier to approach the users. There are some fields, however, such as architecture where the electronic journals still lack the most important part: the images. But evidently the digitised photographs and pictures will eventually be there, too. Table 1. The funding principles of the FinELib Consortium 1998-2002

<b>RESOURCE TYPE</b>	<b>Pricing is based on either the number of potential users or the cost of printed subscriptions at each library</b>	<b>Pricing is based on a basic fee and an additional fee depending the number of simultaneous users</b>
<b>MULTIDISCIPLINARY MATERIAL</b>	FinELib funding contribution: 1st agreement 100% following agreements 80% Universities: 1st agreement 0% following agreement 20%	FinELib funding contribution: The basic fee Universities: Licence fee based on the number of simultaneous users
<b>SUBJECT SPECIFIC MATERIAL</b>	FinELib funding contribution: From the start 50% Universities: From the start 50%	FinELib funding contribution: The basic fee Universities: Licence fee based on the number of simultaneous users

The FinELib will fund development projects as well. One of the key issues will be the design of a joint interface to all electronic resources in the National Electronic Library. In this respect the similar initiatives currently in progress in the Nordic countries are in the interest of FinELib. Other development projects are dealing with linguistic technology, standards, guides and guidelines concerning digital and electronic libraries and user authentication methods.

### **The future of the National Electronic Library**

The FinELib programme will be reviewed at the end of this year. The future funding prospects of the programme depend a great deal from the achieved actual usage level of the acquired products as well as from feedback collected from the researchers themselves. From the libraries point of view the FinELib programme has been a success and the positive attitude in campus towards the new resources has lifted also the library's profile. Most probably the programme will receive further funding from the Ministry of Education for the next phase, at least until 2002.

The Ministry of Education is currently reviewing and revising its strategies for education and research and the recently approved government policy will support the initiative to establish Finland's Virtual University. It is therefore expected that the trend of government support towards networked learning and research will continue even if the current level of research funding in general may only be sustained and not increased during the newly elected government [5].

### **Network and information security**

Network and information security is becoming more and more important also in the academic circles. The reasons for this are many: the increasing amount of externally funded research carried out at universities calls for tighter data protection, the increasing use of the network also increases misuse and other unwanted actions, the

electronic commerce requires more data privacy etc. The confidential co-operation between site administrators and libraries is essential when information accessibility or usability coincides with information security. In this respect the IP-filtering used for authentication is a two-edged sword: on the one hand it offers an easy-to-manage access for libraries and the campus users but on the other hand the complex firewall configurations may also unintentionally prohibit users from accessing valuable information sources. A hand-built firewall which has been configured on an ad-hoc basis may soon prove to be a pitfall [6], [7]. The Finnish universities have traditionally been quite liberal in their IT policy and have allowed their faculties and institutions to develop each their own local infrastructure. This has led to a very heterogeneous IT environment as a whole. It is therefore difficult to implement at least comparable if not unified security measures across the campus and minimise the risks of conflict between accessibility and security issues. The technical issues in consortia agreements will no doubt be in focus more in the coming years and in this respect the recently published Guidelines for Technical Issues in Request for Proposal Requirements and Contract Negotiations (Jan 1999) by International Coalition of Library Consortia (ICOLC) are a good example [8].

### **Current challenges**

The FinELib consortium model accepts also research institutions as partners provided that they are able to finance the acquisitions themselves. The centralised funding of the Ministry of Education applies to universities and polytechnics only. Until now only a handful of FinELib licences cover non-university research institutions. The various research institutes are supervised by a number of Ministries and therefore it has been difficult to establish a joint licensing policy among these institutions.

From the library user's point of view only the patrons physically on campus are rather well-off at the moment in terms of the desktop delivery of information resources to the workstations. The remote use is also made possible with the off-campus password options and the calling series provided by the computing centre. The library's reading room services, however, must be totally re-organized once the printed versions of journals no longer exist in the library. Another issue which needs to be solved is the ILL and document delivery service offered towards the Finnish industry and public administration. Some publishers, such as Academic Press and IEEE, have now allowed limited test service of ILL to the license holders for non-commercial customers.

Another challenge for the library is maintaining the balance between information accessibility and information security. In the near future the workstations reserved for the library patrons will be password protected. In order to use the electronic library resources the user must therefore first register himself. This will be a new concept to the traditionally so very open Finnish academic libraries where browsing and local use of the collections has been free for all and only borrowing required registration and a library card. It won't, however, take long before the patron's may use one single identification and authentication in all his business with the governmental institutions. A citizen identification card initiated by Finnish Council of Ministers will be implemented and brought into use by the end of 1999. The card will serve as a means of a person's electronic identification and digital signature [9]. There is yet another aspect in keeping the balance between information accessibility and security. The HUT Library is itself an information producer and as such it grants licences to other

institutions concerning the use of the TENTTU Web Service. This role of a "publisher" helps the library to understand the other side of the coin as well.

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