

Informationsinfrastruktur im Wandel

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The Provision of Electronic Information Services and Higher Education Information Policy

The United Kingdom Experience

A review of the present position of electronic library developments in the United Kingdom. The regulatory and financial environment is first described and the various centrally driven initiatives are then outlined. This leads to an examination of the goals of the programme and analysis of the methods of achieving them.

Die Bereitstellung elektronischer Informationsdienste und die Hochschulinformationspolitik: das Modell Großbritannien

Ein Überblick über die augenblickliche Lage der Entwicklungen elektronischer Bibliotheken in Großbritannien wird geboten. Die regulative und finanzielle Umgebung wird zuerst beschrieben, darauf folgen die vielen zentral geförderten Initiativen. Das führt zu einer Überprüfung der Ziele der Programme und einer Analyse der Methoden, diese zu erreichen.

La provision de services d'information électronique et la politique d'information de l'enseignement supérieure: l'expérience du Royaume Uni

On passe revue la position actuelle des développements de bibliothèques électroniques au Royaume Uni. On décrit d'abord l'environnement réglementaire et financier et les divers initiatives centraux. Cela mène vers un examen des buts du programme et à l'analyse des méthodes pour y arriver.

The Organisation and Funding of Higher Education

In a very short space it is difficult to do more than sketch in the background to the UK experience in acquiring content for the digital library¹. A national initiative has been launched and, in order to understand it, one must sketch in a little of the background of higher education. The organisation and funding of higher education in the United Kingdom is rather more complicated than is generally supposed. Although the majority of funding comes from England, the separate ministries for Northern Ireland, Scotland and Wales all have Funding Councils, agencies that allow government to operate at arms length from the universities. Each Funding Council has its own secretariat and a separate council with a mixture of lay members and university staff. Although less complicated than the structure of Länder in Germany, it is far from a unitary system and requires skillful management to allow joint national (UK level) activities to be agreed. The four funding agencies have created several joint committees to undertake joint activities, of which one, the Joint Information Systems Committee, is responsible for the IJK wide provision of the JANET and SUPER-JANET networks, which connect every university in the

United Kingdom, and a range of information, research and training services which run over the network².

The total expenditure on higher education from all sources is approximately ten billion pounds sterling each year. The budget available to the Joint Information Systems Committee and for related electronic library projects is about forty million pounds per annum. This budget is created by "top-slicing" the sum from the allocations of the government departments, before the funding councils distribute it to the universities. Roughly half of this is spent on the network itself, JANET, and the rest on electronic library content. Or to calculate this another way, only four one-thousandth of one per cent of higher education expenditure has been used for the development of the electronic library in the UK.

1 A fuller description can be found in Law, D.: National Library Initiatives: the UK Higher Education experience. In: Neubauer, K.: Elektronisches Publizieren und Bibliotheken. Frankfurt, Klostermann, 1996.

2 This is more fully described on the JISC website, which may be found at <http://www.jisc.ac.uk/index.html>.

What is provided?

The longest standing deals are for the discounted purchase of software these being negotiated by CHEST³ (Combined Higher Education Software Team). In addition to discounting commercial software through national deals the community has also used this route to commission software where commercial products did not exist.

The first national deal for electronic data is now six years old and was for the citation indices of the Institute for Scientific Information. This first and still flagship deal continues to see ever increasing growth in usage now running at over 10 000 hits a day. This was followed by a range of essentially bibliographic products ranging from Beilstein's Crossfire service to the International Bibliography of the Social Sciences. These deals were negotiated by CHEST and allowed the Higher Education community to use its purchasing power collectively to persuade publishers that co-operative subscription based contracts were a better model than transaction based contracts. Although all universities contribute towards the costs of each dataset to which they subscribe, this has allowed us both to reach a larger set of universities than would have installed the services individually and perhaps more importantly to attempt the provision of standard interfaces.

The data is provided from five national data centres selected competitively from amongst the universities. There are several reasons for this which collectively form a national policy. Firstly distribution of data over a limited number of centres allows some concentration of investment and some management of traffic flows on the network. Secondly this allows us to concentrate human resources and skills in areas as varied as the management of very large datasets and the design of interfaces. Thirdly we have found that publishers prefer dealing with what they see as a group of professional dataset suppliers. Fourthly we are reluctant to rely entirely on North America as a data source and wish to see a strong European information industry. We therefore see national value in having a trained cadre of workers with relevant skills.

As well as purchasing data we have recently set up a national digitisation centre at the University of Hertfordshire⁴. In part this subsidises data creation and in part it will explore the economics of digitisation and look at relevant standards issues. It is expected to concentrate on the digitisation of out of copyright material or on partnership deals with publishers rather like the JSTOR project in the United States. This emphasises part of the philosophy which wishes to see the creation of a critical mass of data in academic subjects thus ensuring that digitised collections become an unremarkable part of everyday teaching and research rather than being exceptional "toys".

We have been concerned that all disciplines should benefit from electronic libraries and so a significant programme has been created to support special library collections in the humanities⁵. Although much of this has gone for the cataloguing of older and archive material a significant amount has gone to digital preservation of everything from mediaeval manuscripts to documentary film. It is an express condition of grants that the resources must be made publicly available.

The converse of this is that substantial quantities of raw satellite data are purchased and stored at one of the data centres while very large government datasets such as the Census are held at another. This both provides a rich resource for the community at large and again concentrates expertise in specialised centres⁶.

There is a common and justified perception that there is too much useless irrelevant and misleading information on the Internet. Several resource discovery projects have been set up covering faculty level areas such as engineering and medicine. These will identify and catalogue relevant internet resources as well as ensuring their quality and availability. Although individual universities can (and no doubt will) develop their own resource discovery services, these are sufficiently ill understood that it has been felt that a national initiative will best explore and develop standards and allow the UK to take part in international developments. It has been felt that a central push will provide larger benefits than fragmented individual efforts⁷.

Perhaps the most important element of the programme lies in training for cultural change. Large sums have been allocated for the development of training programmes which will develop the professional skills of library and information workers⁸.

The most recent material provided is a large range of electronic journals from three publishers – Academic Press Blackwell Scientific and the Institute of Physics Press. Although each deal is a little different not least to allow different models to be tested they are intended to provide the complete list of each publisher in electronic form. Discussions were difficult and protracted and the publishers much less able than they had thought to provide the journals electronically. Individual universities have also learned valuable lessons about the cost of supporting electronic journals as a mass service. These range from training needs to the provision of the correct browsers and software on every computer in the university. The general lesson learned is that purchase costs is the least important issue and support the most important⁹.

This large explanation is intended to convey several points of which the major one is the coherence and extent of the programme of content provision. Much effort is expended in looking at how to deal with and make deals with large scientific publishers. We have felt this to be important but misguided. Companies such as Elsevier or Springer are the exception. Small learned societies are the norm for scholarly communication while much non-commercial and out of copyright material is of

3 The CHEST website is at <http://www.chest.ac.uk/index.html>.

4 The HEDS website is at <http://hedc.herts.ac.uk/>.

5 The programme's website may be found at <http://www.kcl.ac.uk/projects/srch/>.

6 A good example of this is the MIDAS service at Manchester University. <http://midas.ac.uk/>.

7 The earliest such service is SOSIG, the Social Sciences Gateway. It may be found at <http://sosig.ac.uk/>.

8 One such example is the Netskills Project at the University of Newcastle. Its homepage is at <http://www.netskills.ac.uk/>.

9 The evaluation report of the pilot phase has now been published as UK Pilot Site Licence Initiative: Report on Phase I of the Evaluation of the UK Pilot Site Licence Initiative (Report Ref M3/97), Bristol, HEFCE, 1997.

value in research. It has seemed important to ensure a rich and varied set of content rather than simply strike a set of commercial deals. In addition this has allowed sensible exploration of infrastructure issues from interface design to network traffic management.

Goals

A cardinal goal of policy is that information should be free at the point of use. While institutions have been asked to contribute to the running costs we believe strongly that individual staff and students should not have to meet a personal charge for information. That said we are also clear that there is a real need to create a sustainable economic model for the digital library.

We have also been clear that information should be available in all disciplines and at all levels. We are committed to creating information literate graduates and they require access to the resources they will use when they move into employment. A skilled workforce is crucial to the future of the country. Likewise we believe that the digital library is important in all disciplines and we must guard against allowing the STM publishing model to drive all debate. Theologians are as important to the universities as chemists.

We have been eager to create a critical mass of content, discipline by discipline. Much digital library experimentation has been to prove concepts. There is general agreement that the real test then comes in scaling up experiments to operational services and in making those services essential scholarly tools rather than experimental toys.

Finally we have felt it important to demonstrate value for money. A large evaluation programme has been commissioned. Ultimately we are expending taxpayers money and we wish this not only to be done, but to be seen to be done, effectively, economically and efficiently. A mixture of service provision, research¹⁰, standards work and training has both delivered real outcomes, while allowing experiment and understanding to flourish.

Methods and lessons

Although there was a general consensus that higher education should embark on a digital library initiative, there was also a clear understanding of the old proverb that a camel is a horse designed by a committee. It was felt that a small group of committed professionals should be given the budget and the authority to act as they saw fit, even if this appeared autocratic. While there was a clear desire to involve as many institutions as possible in research and development, it was clearly understood that this would be to centrally determined goals. At the same time and as a counterbalance a programme of rigorous evaluation was approved which would show how wisely the money had been allocated.

The critical area is undoubtedly support. Publishers have worked in a climate where support was barely needed beyond the odd replacement copy of a book. But the complex nexus of data, telecommunications and software requires extensive support which may be summed up in the maxim, "User-friendly systems are not".

The other critical lesson is that of partnership. Many libraries have tried to build their own digital collection. We believe that there are lessons to be learnt and shared together rather than alone. Similarly co-operating libraries cannot alone afford to create and/or provide all the digital content which will be required in future. We need partnerships with publishers and learned societies. We have lessons, technical skills and experience to offer them as they move into the cold harsh economics of the digital world.

Conclusion

The UK now has a wide range of electronic services available nationally. Perhaps more importantly it has achieved a number of expected and unexpected outcomes. There is a cadre of professionals experienced in developing electronic services. The UK has been able to drive some of the debate with publishers on how electronic services will be provided and charged for. The UK has had early and valuable involvement in such standards work as that conducted by the Dublin Core Group¹¹. University staff and students have become heavy daily users of electronic libraries. A large corpus of material has been created or purchased and we have moved a considerable way towards the dream of creating the Distributed National Electronic Resource¹².

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10 The research component is best known as the e-Lib programme. Its homepage may be found at <http://www.ukoln.ac.uk/services/elib/>.

11 Thiele, Harold: The Dublin Core and Warwick Framework: A Review of the Literature. March 1995 – September 1997. In: D-Lib Magazine, January 1998. <http://www.dlib.org/dlib/january98/01thiele.html>.

12 The collection policy of the Committee on Electronic Information is described on the JISC website at <http://www.jisc.ac.uk/in> a document called „An Integrated Information Environment for Higher Education: Developing the Distributed National Electronic Resource (DNER)“.