CWIS: CAMPUS-WIDE INFORMATION SERVICES AT THE UNIVERSITY OF BIRMINGHAM

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An overview of the CIS

By the early 1990s, and following the general trend within universities, Birmingham recognised the need for some kind of campus-wide information service to draw together existing electronic services and printed documents produced by the University. In addition it was widely recognised that the development of such a service would stimulate use of the recently installed FDDI network.

Birmingham's Campus Information Service (CIS) is provided using software developed jointly by BLCMP and the University. Development has been overseen by a small management group consisting of staff from BLCMP, the Library and the Academic Computing Service (ACS). An Active Participants Group progresses software upgrades, bug fixes etc. The service is run on a day-to-day basis by the ACS with data collection organised by one half-time clerical assistant provided by the Library. The copyright and marketing rights to the software belong to BLCMP, but the University receives free use of it together with a royalty on sales to new BLCMP members and to non-members. Should the agreement lapse, both parties will continue to have access to the product as it then exists. Information is arranged hierarchically on the CIS with access via menus. The service is available on a wide variety of terminals and is simple to use. It offers information managers a series of useful tools and monitoring facilities.

The CIS was released in the University in the summer of 1993, on the various campus networks, on JANET and on dedicated terminals in three public sites - the Guild of Students, the Munroe Sports Centre and Staff House. Operated on the client/server model, the service was initially implemented on a SUN server and a Data General client and later ported to two SUN Sparcserver10s. It has been widely used since then, and currently logs over 4,000 document accesses in a typical week. User comment has generally been constructive and the product has been significantly improved since its introduction, partly on the basis of such comments. In January 1994 it became possible to access the CIS as a Gopher server, thus making it available to Gopher users world-wide. 1994 software updates scheduled for April and June will improve the

CIS's management tools and provide service enhancements in functionality and interface.

Information providers

A strength of the CIS in Birmingham is that it offers a broad range of current information. It has proved to be a major task for the Library to collect and present this information and a substantial 'central' input for management and advice always seems likely to be required. At present the Library has to re-package many of the documents but the software for information providers will be enhanced in the near future to allow them to undertake more management themselves. If this is to be a success, information providers will need to be persuaded to devote resources to generating documents specifically for the CIS, since it has become increasingly apparent that simply transforming current paper copy to disk is inadequate.

The Library has been most successful in recruiting information in those areas where it is in the interest of the Information Provider to promote their services and with those departments familiar with working with PCs. Major contributors so far include the Careers Service, Staff Development Unit, Staffing, Planning Office, Research Support and Industrial Liaison and the Library. The latter provides data about its own services and brokers local information - what's on and general interest-type information.

Some important areas of information have remained elusive. Little progress has been made with the Guild of Students and attempts to encourage contributions from the Guild have not been helped by communication problems which caused the service to run very slowly in the Guild building. Faculty and Departmental information has also been identified as a weak area. The CIS needs more information on regulations, courses, examination timetables and lecture notes in order to appeal to students. The Faculty handbooks were mounted but a considerable amount of re-formatting was required and the information was not presented in an interesting way.

To make progress in this area an institutional strategy is required from the University's IT Executive, the University's policy-making body for IT matters, to review the various types of documents being produced by the University and to make positive recommendations that documents should be produced with the CIS in mind. Some universities have already done this and a number are now making some of their publications available on-line.

The trend to mount more sophisticated documents highlights the need for a more interactive system and one that can handle graphics etc. The introduction of Mosaic, as a front-end graphical interface, linked to a World Wide Web server would achieve this goal, but would have implications both in terms of technical support and the higher specification of PCs required to access it.

A move to hypermedia would also have implications for information providers in terms of the effort required to create and restructure documents for a multimedia environment. Most providers would undoubtedly prefer to see their documents presented in a more attractive way and, if the document had been produced to a high standard, it could be displayed in exactly the same way as it would appear in the printed form. This would certainly address some of the questions that have been raised about the CIS and the University's corporate image.

The whole area of corporate image is one which has become more prominent as the CIS has developed. Discussion has centred on control of the information mounted by Schools and Departments on the suitability of information and on how it can be identified as being authorised by the University rather than taken from secondary sources. External access to the CIS has provoked discussion as to whether its major function is to deliver information on campus, or to project the corporate style to potential applicants to the University. With the standard text interface it is difficult to differentiate between sources of information but the possibilities offered by images change the situation. Electronic versions of documents containing text, graphics, sound, image, video could also carry an electronic corporate image. Effective management of this aspect of the CIS is the responsibility of the University's Public Affairs Office.

Progress will very much depend on whether the CIS is to be regarded as the pinnacle of the University's information tree - the top-level menu which will signpost most other networked

services - or simply as one such service amongst many. With the proliferation of electronic services supporting teaching and research the University is being pressed to make a decision on how this information should be made available. Document delivery services will present particular problems, involving as they do, a debate as to who pays for the service.

The second generation CIS

Initially the CIS was conceived as a discrete service, with a substantial amount of data residing on a central server and with a distinct managerial structure to oversee the development of the service. Recent trends have shown that the data will no longer be stored only on a central server but will reside on distributed network servers, with the CIS providing a single integrated and user-friendly interface and not necessarily being the only means of accessing particular services. As X.500 directory servers become more commonly available they will provide the CIS with up-to-date 'people information'.

Increasingly the CIS software will be seen as a bolt-on to other products such as Gopher and World Wide Web. BLCMP and the University are already planning to transform the CIS into a World Wide Web hypermedia service employing a Mosaic graphical interface. Other sites are also planning to move their CIS in this direction. Local co-operation is under discussion between BLCMP and Aston and Birmingam universities. In addition BLCMP is investigating Mosaic and World Wide Web for their Talis OPAC and this raises the possibility of a common user interface for CIS and OPAC at Birmingham.

Common protocols will also be employed. As well as X.500 direction servers, the CIS could easily contain a Z39.50 client to access other library OPACs or databases where a standard search strategy can be employed. Also of significance are the developments in library management systems which are moving away

from proprietary hardware and software to UNIX platforms and Open Systems software. These trends will enable more flexibility, with the possibility of the library management system converging with CIS to provide a gateway to other forms of electronic information such as reference databases and electronic journals. Alternatively, the library management system could easily become an information gateway in its own right.

The increasing focus on images of all types, rather than on text, will lead to increased processing and storage requirements. It is difficult to be precise, but images require at least ten times greater disk capacity than text, depending on the degree of compression achieved. The role of public terminals will need to be re-assessed, not only in the context of security, but also to ensure that images can be displayed at a small number of public locations.

Conclusions

For the CIS to survive in the academic world it must form part of the institutional information services strategy. Increasingly it will be bolted on to other software as more sophisticated public domain software becomes available. The CIS must ensure that the information it carries is accurate, relevant and up-to-date. The service cannot be viewed in isolation and must be integrated into all the other information services being made available to staff and students. The method of delivering these services needs careful consideration. Should CIS be the top level access method or should there be some kind of menu above the CIS? Where does the library management system and the Gopher server fit into this scenario? How can electronic journals and scanning services that involve document delivery mechanisms be disseminated? These are the questions that need to be answered in the near future if universities are going to deliver the wealth of data that is now available on the Internet.