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The Joint Academic Network (JANET) was established in 1984 by the Computer Board for Universities and Research Councils and is now funded by its successor, the Information Services Committee (ISC) of the Universities Funding Council. JANET links users to the facilities of over 2000 registered computers on more than 200 sites within the U.K. All universities, polytechnics and the institutes funded by the various Research Councils are connected, as are many educational institutions. There is also a growing number of industrial and commercial organizations connected, all working in collaboration with members of the academic community. The Computer Board has always insisted on the need for rationalization in centrally funded academic computing and on the use of a standardized set of protocols on mainframe computers purchased with their money. As Mike Wells, the first Director of Networking wrote in 1988 "JANET is not the largest network in the world. JANET is not the most reliable network in the world; but JANET is almost certainly the most heterogeneous network using a single set of commonly adopted standards and integrating a large number of local area networks, in the world".[1]

JANET is managed by the Joint Network Team who are responsible to the Networking Advisory Committee of the ISC for the implementation of policy and for the day-to-day management and operation of the service. It is an X-25, packet-switched network largely running over 2Mbps lines, with gateways to other academic networks especially in Europe and North America, and through PSS to interactive and X.400 mail services on the public networks. The costs of running the network is met by the Computer Board "top slicing" money before it is dispersed to the universities for academic computing.

JANET NEWS, maintained by the Network Executive is the main source of information about JANET and this Bulletin board includes information about the Name Registration Scheme, contact names, guides and information about the gateways, committee papers, etc. There is a LIBRARY section on JANET NEWS which contains e-mail addresses of library staff, OPAC address and information of interest to librarians. The information files can be transferred back to one's own machine for re-editing and printing.

Library Uses of JANET

Librarians soon realized the possibilities of JANET for improved communication and for the delivery of information services and in 1986 the JANET User Group for Libraries (JUGL) was established to both encourage librarians to use the network. JUGL works closely with the Joint Network Team and with the other user groups to effect improvements for users of the network.

The first use of the network was to link OPACS to JANET and so to provide access to them from outside the campus. Most OPACS were already connected to their campus network and through the Name Registration Scheme (NRS) it was easy to list their JANET address. It is then a simple procedure, from a terminal which has access to a PAD, to call the required catalogue using the 14 digit JANET address or the shortened name. No prior registration is necessary to use the many library catalogues and most of the other information services on JANET. There are, of course, a wide variety of integrated systems in U.K. university libraries and so a wide variety of interfaces that users have to cope with. A software package known as SALBIN (Scottish Academic Libraries Bibliographic Information Network) was developed by the eight Scottish university libraries, with funding from the British Library, to
provide easy access to the remote catalogues. This software provides a menu to all the catalogues available on JANET and when a particular catalogue is selected the software will perform the dialling and connect the user to the catalogue. With a centralized interlibrary loans service based on the BLDSC, access to remote OPACS has certain limitations, but it is particularly effective in an area where a number of university libraries are reasonable accessible to the user.

JANET provides libraries with an alternative to mail and telex for the transmission of interlibrary loan requests, either between themselves or to the BLDSC. E-mail transmission of requests via the BLDSC's ARTTEL programme is free to the library and is the quickest means of transmission. However, relatively few interlibrary loans services are using the JANET route to transmit their requests and this is probably due to the reluctance to change established patterns, particularly in a busy service. However, as more and more libraries install interlibrary loan management packages with easy access to ARTTEL, this should change. Some libraries have indicated their willingness to accept interlibrary loan requests from other libraries via JANET and the newly established Forum for Interlending is encouraging this development through training and publicity.

JANET is used for individual e-mail communication, but in 1988 a general library mail distribution facility was established and any message addressed to the central mailbox was copied to each of over 150 library general mail addresses. This general mailing address was used for surveys, requests for information on items of equipment or on local policies and practices. However, with the advent of Project NISP (Networked Information Services Project) at Newcastle University, which provides managed mailing list facilities, a range of specific lists for library and information services have been set up on the NISP machine, covering such topics as information technology, rare books etc. The latest of these mailing lists is a closed list for library directors (LIS-SCONUL), which will be used to distribute SCONUL (Standing Conference of National and University Libraries) papers and as a general discussion medium.

The network is used for the transfer of bibliographic records between libraries and from some commercial suppliers like OCLC. The CURL (Consortium of University Research Libraries) formed by the seven largest university libraries, has set up a database for bibliographic records. This database allows them to pool the bibliographic records of the existing member libraries and to make them freely available over JANET to other university libraries for downloading into their systems, subject to agreements with the suppliers.

JANET provides gateway facilities to the PSS and IPSS network for access to online information services such as Dialog. Searching and downloading can be run at the maximum speed of the host and communications are charged at the lowest rate. It is now possible to reduce these costs even further as access to some European hosts such as STN, is available via the IXI (International X-25 Infrastructure) network.

One of the newest uses of the network is for access to the three ISI databases (Science Citation Index, Social Science Citation Index and Arts and Humanities Citation Index), which are mounted on a computer in Bath and can be accessed via JANET. This database is known as the BIDS (Bath ISI Date Service) and the data has been purchased cooperatively by the U.K. universities and the ISC and is freely available to staff and students at subscribing institutions. Although the service has only been available for a few months and only on two years of data is currently mounted, it has proved popular with users.
USER GROUPS

JANET has had a structure of user groups since its establishment and the JANET National User Group, whose membership is drawn from regional user groups and special interest user groups, meets two or three times a year. The original aim of the user group structure was to provide an effective voice for end users of the network, but not surprisingly the active membership of the user groups tends to be drawn from the staff of local computing services: intermediaries not end users.

The JANET User Group for Libraries (JUGL) was established in 1986 and keeps under review the use of the network by libraries. It works closely with both the Network Executive and the National User Group and has two seats on the JNUG. It consists of one representative of all libraries connected (or potentially connected) to JANET. JUGL organizes its activities through an elected committee of eight, to which it coopts individuals or representatives of other organizations as necessary. During 1990/91 the Committee articulated its aims and objectives and defined its broad mission as:

"JUGL encourages the use of the Joint Academic Network (JANET) by libraries and their users, acts as a forum for the discussion of their uses of the network and makes proposals for its future development. It aims to assist in the development and training of the library profession in the effective use of the network and promotes standards and service objectives for new forms of information dissemination."

JUGL has provided a number of workshops for library staff with "hands-on" practice in connecting to JANET, in accessing information services over JANET and in using electronic mail. An annual meeting is held every autumn at which a number of papers provide updates on developments of interest to library users of JANET. In September 1990 a two day conference was held at Heriot-Watt University (JUGL '90) and attendance topped 100, including some librarians from Europe interested in networked information services. A quarterly newsletter, JUGL Newsletter: network news and developments for libraries, has been published since 1990 and this has reached a wide circulation through the JUGL personal membership scheme. In addition to the Newsletter, JUGL has encouraged and funded the publication of a guide to UK OPACS, which is available from Peter Stone, University of Sussex Library, Brighton BN1 9QL, together with a directory of e-mail addresses of library staff, maintained on JANET News and published as a booklet by the Library. JUGL has formed links with other relevant groups, such as the Forum for Interlending (FIL) which was formed by interlibrary lending librarians. Guidelines on the use of Janet for interlending have been drawn up and a number of training seminars for interlending staff have been provided jointly by JUGL and FIL.

JUGL has convened a meeting with library system suppliers to inform them of the use of the JANET network by libraries, particularly for OPAC access and record transfer, and to encourage them to ensure that their systems are hospitable to the communication protocols used by JANET. A meeting was also arranged by JUGL between the JNT and a number of booksellers and library suppliers who had expressed an interest in obtaining JANET connections for the delivery of services both to libraries and to academics. JUGL has also formally brought together the JNT and the senior management of the British Library Lending Division (BLDSC) to explore areas where closer cooperation could benefit libraries and their users.

One of the most significant of JUGL's initiatives was the establishment in 1988 of the two-year Project JUPITER (JUGL University Project for Information Transfer, Education and Research) with funding from the University Grants Committee. The project, which has the overall aim of promoting the use of
JANET by academic libraries, ran a series of training courses and visits to university libraries to raise awareness of JANET. A Guide to JANET for Libraries has been a major part of the Project and the Guide consists of four parts: (i) JANET Basics; (ii) Methods of access; (iii) Services on the Network; (iv) OPACS. (A copy can be obtained from The University Library, Hillhead Street, Glasgow, G12 8QE.)

CONCLUSION

Library uses of JANET account for a significant amount of the traffic over the network and they have grown rapidly from the enthusiasm of individuals using the basic network services of electronic mail or remote computing, to share access to a new idea. Much of this individual enthusiasm of librarians has been channelled and focused through JUGL and it is no coincidence that the present and immediate past chair of JNUG have come from the library community.

JUGL has encouraged librarians to be aware of the communication facilities that the use of the network can provide and of its potential for the delivery of innovative information services. However, users of networks need training and documentation and librarians, who are constantly involved in the training of both staff and students in access to information, are well placed to provide the training to the new networked information services. The providers of the networks themselves can often be distant from their users and particularly from their non-users, who do not know where to start. There needs to be strong links forged between the providers of the technology, the intermediaries and the end-users, and it is as a result of the structures that have been put into place, that JANET and the services it supports have been so successful.

REFERENCES