

1. COMPUTER FUNCTIONS

There are 4 major functions for computers within the library service:

- Library system;
- Electronic Resources (including Internet);
- Electronic exchange of bibliographic information;
- Administration.

To make each of these functions available to appropriate public and staff users requires a number of networks, servers, PCs, and software applications.

To clarify the way each library function is connected and inter-connected, a number of network diagrams have been produced. Please select as appropriate:



Note: this paper will not include costing details. The Annual Report of Blacktown City Council provides information about the library budget.

2. GENERAL INFORMATION TECHNOLOGY HARDWARE

Originally, PCs in the library were used as stand-alone computers with a single function, such as word processing. However, with the exception of CD & DVD ROM and genealogy PCs, all are now networked and provide the ability to access multiple functions, such as terminal emulation, office applications and the Internet.

The library does not replace all its PCs in a single process and so it is impossible to give a single description, as the PCs will be from a variety of manufacturers and configurations. Currently, Council uses Hewlett Packard (www.hp.com.au) as its PC supplier. Where the library replaces a PC, the older machine is relocated to a different function within the service or disposed of according to Council policy.

Metrologic laser (Barcode Direct www.barcodedirect.com.au) and Cipher brand CCD barcode scanners (JRC International www.jrc.com.au) are used to speed up circulation transactions, such as issues and returns. Each item in the library collection has a unique barcode.

All PCs that are networked have access to black and white laser printers. Standalone CD-ROM PCs have black and white laser printers connected.

The Library also has a Kodak digital camera, CD-Writers and a number of flatbed scanners.

In general, peripheral hardware is manufactured by Hewlett Packard. (www.hp.com.au).

3. GENERAL INFORMATION TECHNOLOGY SOFTWARE

Blacktown City Council uses the following software as its corporate standard:

- MS Windows - operating system from Microsoft (www.microsoft.com/).
- MS Word - word processing from Microsoft (www.microsoft.com/).
- MS Excel - spreadsheet from Microsoft (www.microsoft.com/).
- Ttwin - terminal emulation from Turbosoft (www.ttwin.com/).
- Internet Explorer - web browser from Microsoft (www.microsoft.com/).
- Adobe Reader - open and view Portable Document Format (PDF) files from Adobe (www.adobe.com/)

- Library-installed plugins, such as Macromedia Flash Player (www.macromedia.com/software/flashplayer/).

4. LIBRARY SYSTEM FUNCTIONS

The integrated library management system operates the primary functions of the service: the acquisition, cataloguing, circulation and retrieval of material for library users.

In August 1994, the library upgraded to the ADVANCE integrated library software package, supplied by Geac Computers (www.geac.com.au). This replaces the URICA system that was supplied by AWA Computers (now Civica Computers www.civica.com.au/) in 1982.

The ADVANCE library system operates on the Pick-based UniVerse database.

An integrated library management system, such as ADVANCE, means that all modules, or functions, are linked to each other. So when a book is borrowed, the new due date is immediately reflected in the catalogue.

Acquisitions is the purchase of library material. The library currently holds not just books in various formats and languages, but cassettes, DVDs, videos, compact disks, toys, read-a-long kits, language kits, literacy kits, books on cassette and toys.

Cataloguing is the collection of all the information about an item (i.e. its bibliographic information) in a formal way. This includes the author, title, publisher and so on, as well as the assignment of subject headings and classification numbers.

The format of a catalogue record is called MARC, for MACHine Readable Cataloguing; the library uses the USMARC scheme for cataloguing its collection. Subject headings are formatted according to the Library of Congress (www.loc.gov) thesaurus; and the classification scheme used is Dewey Decimal. The Dewey Decimal Scheme allocates a number to each subject area not each book e.g. all Shakespeare's works are at 822.33.

Circulation is the issuing of material to members of the library service. It includes registering members, issues, returns, overdues and so on.

The retrieval of information is finding out what material the library holds. It is for the "Do you have a book called ... ?" questions. This retrieval is done via the OPAC or Online Public Access Catalogue module. OPACs are available at all branches of the library service and may be used by anybody to search the catalogue. Search options available include author, title, subject and keyword.

5. LIBRARY SYSTEM HARDWARE

The integrated library management system operates on a Sun E250 server, manufactured by Sun Microsystems (www.sun.com). The server is housed in the computer room in the Council building.

It has 512 mb RAM and 2 x 300 mhz processors. The E250 uses the Sun Solaris operating system, which is a version of Unix.

In the past, all library system access was via dumb terminal. A dumb terminal is a text-only monochrome link to the central server and has no processing power of its own.

Over the years the terminals have been replaced by PCs. The PCs are networked and use Ttwin terminal emulation software to access the library system.

The Advance library system uses a VT100 terminal setting.

6. LIBRARY NETWORKS

There are two main networks - a LAN (local area network) at the Max Webber Central Library and a WAN (wide area network) covering Council and the other library branches.

On the Max Webber Central Library LAN, PCs are connected via Ethernet (10/100BaseT) cabling.

The PCs are multifunctional and dependent upon the requirements of staff and public they are able to:

- access the library system via TtWin (ttwin.com/ttwin/) terminal emulation software
- access the Internet via a web server connection to the library's ISP, MCI (<http://global.mci.com/au/>)
- access word processing and other office applications via a Novell Netware (www.novell.com) server.

The Novell NetWare server determines access to these various functions via password control.

The connection to Council from the Max Webber Central Library is via a frame-relay. At the other branches of the library service, a Citrix (www.citrix.com) WAN has been implemented. PCs are networked via Ethernet (10/100BaseT) cable and 128k ISDN connections to the Citrix servers housed in the computer room at Council. There are two servers, each with 2 x 600 mhz processors and 512mb RAM.

Under Citrix all application software is installed and run from a central server. The PC then accesses its application software from this server. There is, therefore, no need to install application software on each local machine. The result is that all application software can be centrally maintained and administered.

In practical terms, this means that one copy of a word processing program is installed on the Citrix server. Each user who accesses the word processor has an individual session assigned to them, where they are able to use the program without affecting others. When a new version of the word processor is available, it then only needs to be installed in the one location to become immediately available to all.

7. ELECTRONIC RESOURCES

There are a number of different electronic resources available to library staff and users via PC. These resources may be accessed as part of a library network or on one of the standalone PCs available for use by the public.

a. OPAC

The most frequently used of these is the library catalogue, which is a module of the library system. This is available through OPAC (Online Public Access Catalogue) connections at each library branch. The library catalogue currently contains over 180,000 items.

b. CD and DVD ROM

The library makes available a number of CD & DVD ROM (Compact Disk & Digital Versatile Disk - Read Only Memory) titles for reference and research use. These include encyclopædias, newspaper and magazine indexes, and census information.

The library also operates a CD-ROM changer, for genealogy use at the Max Webber Central Library that allows 6 disks to be stored, although only 1 may be accessed at a time.

c. Internet

The Internet has grown rapidly in recent years as an important information source for both research and recreation. Internet access is available at all branch libraries.

Blacktown City Council's web address is www.blacktown.nsw.gov.au.

The library is part of the NSW.net project administered by the State Library of NSW. For more information about NSW.net, visit their web site at www.nswnet.net. The library is connected to the Internet via a 2048k ADSL line to the Internet Service Provider (ISP) MCI (<http://global.mci.com/au/>).

d. Word Processing and Other Office Applications

Word processing is available for public use at all libraries. The Max Webber Central Library has MS Office 2000 (Word, Excel, Powerpoint, Access), and MS Works software available. The branch libraries have MS Office XP (Word, Excel, Powerpoint) available via the Citrix server.

8. ELECTRONIC EXCHANGE OF BIBLIOGRAPHIC INFORMATION

The library is connected to two major bibliographic networks in Australia.

The first is ILANET, (www.ilanet.net.au/new.shtml) the inter-library loan network operated by the State Library of New South Wales. Its primary aim is to simplify the process of getting library books from one library system to

another. However, the network is expanding to include providing access to databases throughout Australia and the rest of the world.

The second is the Kinetica National Bibliographic Database, (www.nla.gov.au/kinetica) operated by the National Library of Australia in Canberra. It is a database of over 12,000,000 bibliographic records that may be accessed by libraries all over Australia to help them catalogue their own material. Kinetica holds information for over 80% of the titles held by Blacktown library.

The ADVANCE library integrated management system allows records from Kinetica to be loaded directly into the library catalogue without the need for re-keying any information.

9. ADMINISTRATION

The library also uses PCs for administrative purposes, such as word-processing and statistics.

Another tool used for various purposes is a scanner that can "copy" images into the computer so that they may be used in signs, handouts and so on.

10. STAFFING

The library employs an Operations Librarian to oversee the library's automation needs now and in the future. This includes maintaining the current integrated library system and PCs; evaluating software and hardware; producing reports for management information; and staying aware of trends in computerisation to evaluate what can be applied to the needs of the library.

The Operations Librarian is part of the library's management team and reports to the Manager Library Services. He may be contacted during normal business hours on 9839-6601.

In addition, the library employs a Library Information Technology Officer. His duties include hardware and software maintenance, documentation, training and assistance to the Operations Librarian.

All staff work with the integrated library system. They are trained to operate circulation and enquiry routines. In addition, some staff have special responsibilities in other areas, such as cataloguing, acquisitions and administration.

It is difficult to assess the affect computerisation has had on staff numbers. As the library service has grown there has been a necessary increase in the numbers of staff required to perform all library tasks. Automation has affected the number and type of services provided, rather than the number of staff. In other words, automation allows fewer staff to do more in a given time; but rather than provide limited services as in a non-computerised library, Blacktown provides a larger number of services with the same number of staff.

11. ERGONOMICS

Computerisation requires an understanding of ergonomics, or the way work is done. The library has responded to ergonomic requirements in several areas.

All library staff use adjustable seating. Special computer desks have been installed in workrooms.

From 1994, all library terminals or PCs were adjustable, both in the positioning of the monitor and the keyboard. Where appropriate, some staff have had document holders purchased to simplify the transfer of data from paper to terminal.

Work practices have been assessed by occupation health and safety officers to ensure that they comply with current standards.

It is also fair to say that unlike some industries, the library has no staff who spend their entire working day in front of a computer. With work on public desks and the gathering of material for data input, library staff do not use computers to the same intensity and duration as, for example, a data input clerk would.

12. DATA PRIVACY/SECURITY

The foundation of a public library's information holdings is the catalogue; the listing of all material in the library. Far from making this secure, the library endeavours to make this data as accessible as possible. In fact, the library offers public access points (OPACs), so that members of the public have direct access to the library catalogue.

However, the element of privacy is important in relation to the membership record. When someone joins the library, access to that personal information is restricted only to library staff. The alteration of such information is restricted to specific staff. Under no circumstances is another member of the public given information concerning someone else.

OPACs do not include access to membership information.

Library staff are able to access the integrated library system via a password. In addition, some specific functions are further limited by additional passwords, so that only specifically trained and authorised staff may gain access.

Access to the operating systems of both the library server and PCs is very restricted.

13. FURTHER INFORMATION

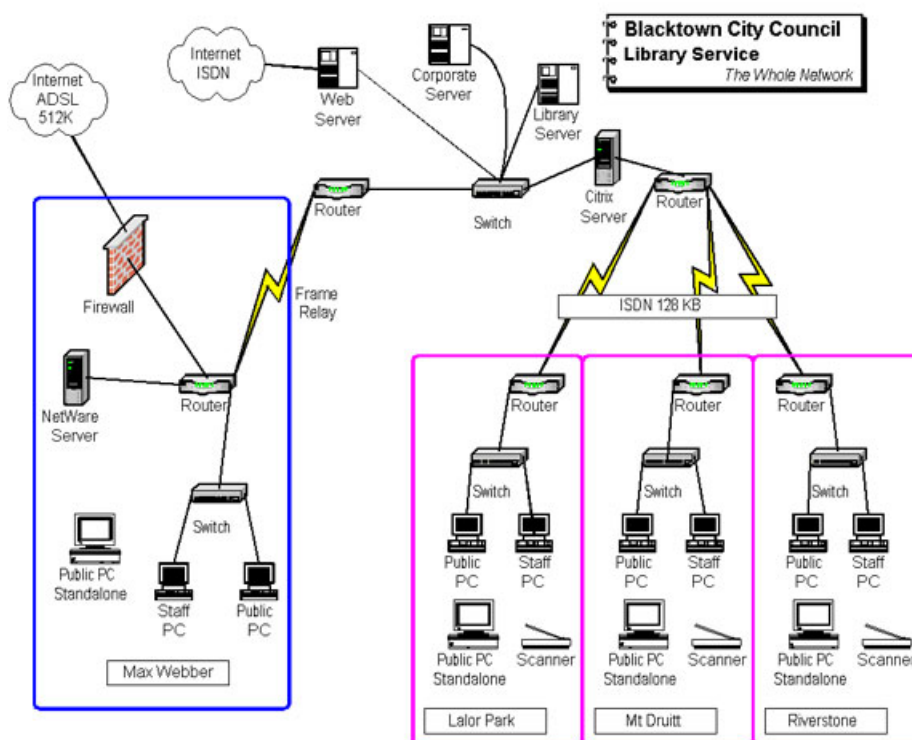
The Operations Librarian may be contacted on 9839-6601 during normal business hours and may be contacted via email at Mark.Grosvenor@blacktown.nsw.gov.au.

The Library Information Technology Officer may be contacted on 9839-6626 during normal business hours or via email at Leon.Alavoine@blacktown.nsw.gov.au.

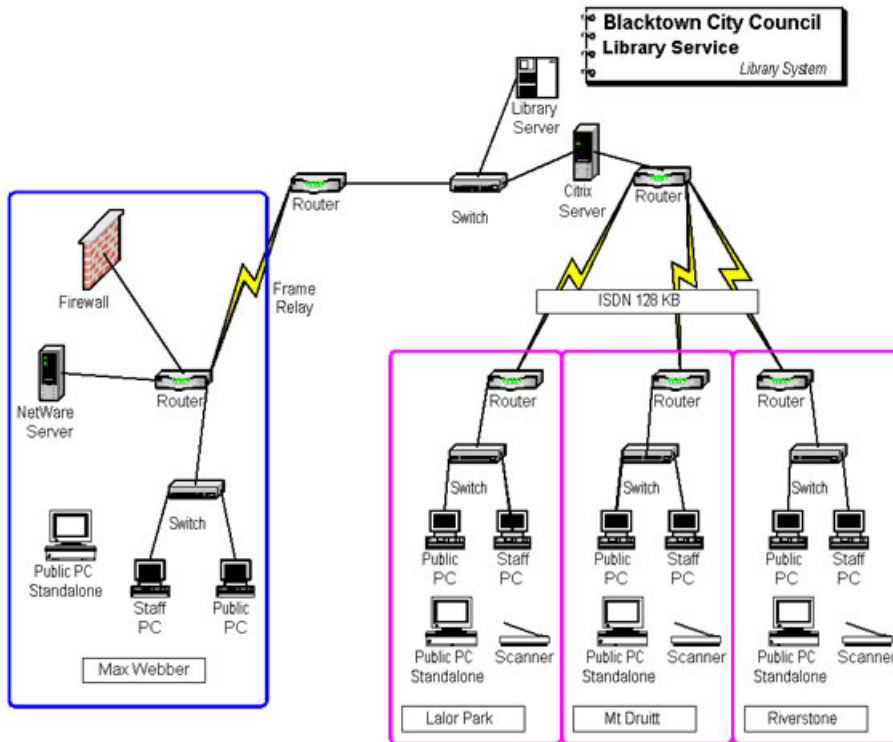
Information desk staff are also willing to provide assistance, or check the shelves at:

- 020 - 027 for librarianship;
- 001.6 and 004 - 006 for computers.

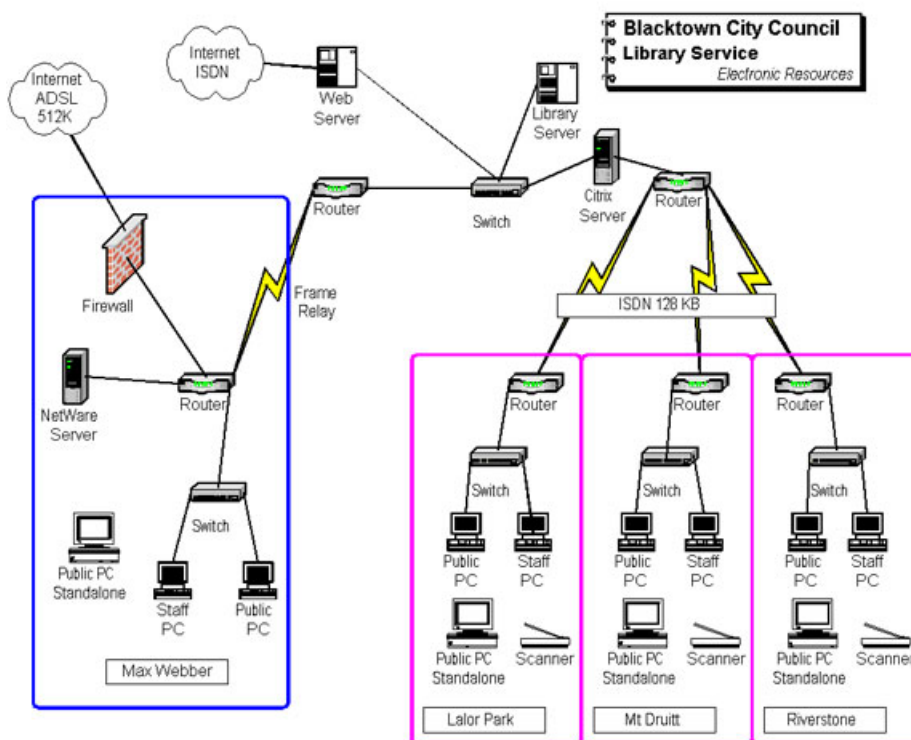
a. Complete network



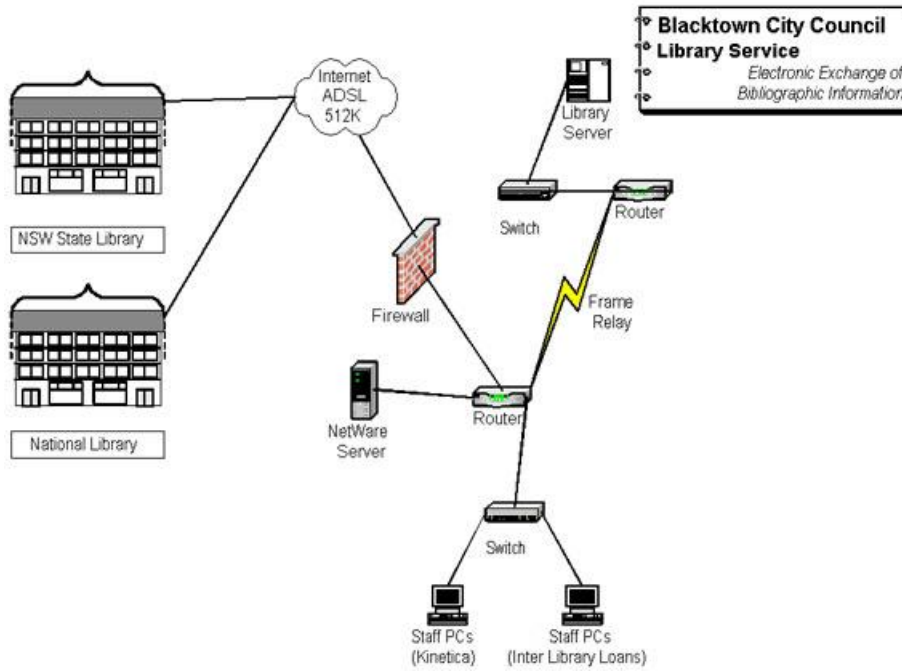
b. Library system



c. Electronic Resources (including Internet)



d Electronic exchange of bibliographic information



e. Administration

