3. Recommendations for librarians

Librarians often find themselves in charge of rooms located in the library where students can access the Internet. In addition, they are required to provide library services and information distribution over the Internet. For these reasons, librarians typically have an interest in network optimization and control, even if it is at a non-technical level.

If the library has enough computers, the librarian might be able to make a convincing case that the library should have its own proxy server (and even its own IT technician) for reasons of optimization and control.

Librarians who are in charge of computers connected to the Internet should have access to daily or weekly Web access logs and statistics of the usage at the library. They should be able to tell what the computers in the library are being used for without having to look over the user's shoulder.

Webalizer statistics of a library's proxy log can show the top sites visited, as shown in the screenshot below. In this example, the librarian might want to know why Windows updates and Symantec (Norton Anti-virus) as well as Web-based e-mail services are the top bandwidth destinations at the library. (They might also ask why the IT team is not distributing Windows and Anti-virus updates from a local server.) Also, they might wonder why are there so few academic sites on the list.

Since this program is free, this information is the minimum that a librarian should expect from the IT team.

#	Hits		KBytes		URL
1	7451	22.00%	10321	7.63%	http://windowsupdate.microsoft.com/ident.cab
2	184	0.54%	6309	4.66%	http://www.yahoo.com/
3	171	0.50%	4045	2.99%	http://www.msn.com/
4	152	0.45%	3362	2.48%	http://mail.yahoo.com/
5	3	0.01%	2212	1.63%	http://liveupdate.symantecliveupdate.com/ensnfull2.x86
6	3	0.01%	1530	1.13%	http://defender-downloads.eaccelerator.com/defender/UPDATES/AnthologyApp_Update.exe
7	1	0.00%	1417	1.05%	http://www.reebok.com/r/ra/rbk/features/atrRemixed/atrRemixed.swf
8	20	0.06%	1403	1.04%	http://www.spk.umich.edu/epid/GSS/applications/gssapp.pdf
9	85	0.25%	1348	1.00%	http://www.google.com/search
10	3	0.01%	1282	0.95%	http://defender-downloads.eaccelerator.com/defender/UPDATES/defscan_setup2.exe

In cases of abuse, other products (such as Sawmill) may be used to indicate which users have used which sites. This will only be possible on a network where users have to log on.

Librarians may also see the need for a usage policy or ‘Internet usage agreement’ if the institution doesn’t already have one, or if they want to address certain library-specific issues. Appendix C includes Addis Ababa University Library's ‘IT-Related Policy’, which co-exists with the University’s general ‘University Use and Security Policy’.

3.1 Bandwidth

Librarians need to be aware of bandwidth and other technical issues in order to make good use of the Internet. The section about bandwidth in this document shows, for example, how the actual amount of bandwidth to the library can be tested. Armed with these figures, and comparative bandwidth figures from similar libraries, they may be able to make a case for more or guaranteed bandwidth to the library. The section on bandwidth management in this document (and the greater detail in Appendix A) describes methods of prioritization that can be used to guarantee a minimum amount of bandwidth to the library.

3.2 Access to journals

Many journals are available via the Internet for free (for example the *British Medical Journal* <http:// http://bmj.com/>), and a comprehensive list of free resources can be found on the INASP website. In addition, many publishers make their journals available at reduced prices to developing countries. Librarians can obtain further details from INASP. Examples of initiatives to provide content to developing countries include the following:

- The World Health Organization has created the Health InterNetwork (also called Hinari). Articles from many health-related journals are available from <http://www.healthinternetwork.org>. Since these journals are normally very expensive, the content is password-protected, and must be accessed via a secure connection (HTTPS, see glossary). However, researchers from certain countries can get access to this massive knowledge base without charge. The secure site is at <https://hin-sweb.who.int>. In order to access secure sites, the network layout and firewall needs to be set up to allow this.
- INASP manage the PERI project (Programme for the Enhancement of Research Information), which negotiates reduced rate (or sometimes free) access to online journals from a variety of publishers in different subject areas. Access to these resources is through the publisher's own website, and involves either an assigned password, or a recognised URL.

Universities can provide their own front page, providing links to all the journals that the university has access to. It is also possible to create a Web-based interface from which users can request journal articles, which the library could then send to the user via e-mail. An example of such an interface can be seen at <http://www.nlm.nih.gov/mimcom/document_delivery.html>.

Where universities have their own electronic copies of journals, these could be made available via the Internet, particularly for students in continuing education who may live and work away from the campus. These students may benefit greatly from online access rather than having to travel to the library. If no Web-based system exists, the librarian or study leader may be able to send articles via e-mail.

All university computers should have PDF and PostScript reader software installed. This is important to prevent users downloading these (large) programs and using bandwith to do so. Most journals and other articles are distributed via PDF and are often also available as PostScript. Software that can read PostScript includes Gsview PostScript Previewer <http://www.cs.wisc.edu/~ghost/gsview>; Gsview can also read PDF files. Another PDF reader is Acrobat Reader <http://www.adobe.com/acrobat>, but it cannot read PostScript files. Where material is available in multiple formats, users should be encouraged to download the smallest files for reading (PDF is usually smaller than postscript).

If students and researchers are unable to access journals and other online resources because of network or bandwidth problems, the Internet link is failing in its core function. In this case, heads of departments, including the librarian, are entitled to ask questions such as these about the Internet link:

- Are connections to journals failing because of abuse elsewhere on the network?
- How much is spent on bandwidth? Can we afford or get funding for more?
- What steps are taken to maximize the available bandwidth?
- Why was the Internet connection so slow at a particular time?
- Can the IT department solve the problem of library computers automatically wasting bandwidth by accessing Windows updates, anti-virus updates, etc.
- What proportion of the total university bandwidth is used by the library?
- Can the IT department create an off-line downloader, to enable users to schedule a large download for night-time usage?

Other questions to ask include

- How many PCs can we support on our link?

- How do we control users and what should they be allowed to do and not to do?
- Who should set controls up and what will the costs be?
- How can we make the resources we have on CD available more widely? Can we put them on a server's hard disk and make them available on the campus network (e.g. through read-only file sharing or a Web interface).
- Can we get a CD writer to distribute study material on CD to users on remote campuses? (Where copyright restrictions allow.)