International Journal of Education and Science Research Review
E-ISSN 2348-6457
Volume-1, Issue-4 August- 2014
www.ijesrr.org Email- editor@ijesrr.org

UTILITY OF INTERNET AND ONLINE PUBLIC ACCESS CATALOGUE (OPAC) FOR LIBRARIES

Km Richa Khare
Research Scholar
Sunrise University
Alwar, Rajasthan

Dr. Pravish Prakash
Supervisor
Sunrise University
Alwar, Rajasthan

ABSTRACT:
Information technology has profound effect on the progress and development of human civilization. The advances in science and technology has made a tremendous improvement and changed all activities of present society. Due to revolution of information technology, increased tremendously demand, consumption, and importance of information in present society. The librarians are faced challenges to managing massive volume of information for storage, process, retrieve, and disseminate in libraries. Rapid advances in Information Technology in the past two decades have brought revolutionary changes in the concept, organization, functioning and management of library and information systems through out the world. The paper focuses on the impact of internet on various library processes, services and products. It also emphasizes the challenging role of librarians and information professionals in the present internet era. Today the internet has revolutionized the traditional library activities viz document acquisition, technical processing, circulation, reference service, resource sharing, document delivery, etc. The paper also emphasizes the crucial role of librarians and information professionals in designing and maintaining libraries' web page/website leading to increase in library efficiency.
.

KEY WORDS: Information technology, worldwide libraries

INTRODUCTION:

One of the most significant achievements in the information and communication sector is the introduction of advanced communication network i.e., the Internet, the technology connecting a computer with millions of computers in the network. The internet today has become one of the most important mode of communication and its services are being exploited by people in every walk of life such as business, education, defence, medicine, etc. In the field of library and information science, the Internet has become one of the most popular and talked about subject. In fact the library profession is one that has been most intensely affected by the challenges of internet and the World Wide Web (WWW). The shift from collection management to information management, from ownership to access, and the change in nature, boundaries and structure of information all call for a change in mind set of library professionals.

Today, library environments are increasingly reliant on computer technology. Many libraries of all sizes have discontinued use of card catalogs in favor of electronic versions – and many of the electronic versions previously accessible only via terminals within library buildings are now Web-accessible. Online searching of a plethora of databases and other information sources has become ubiquitous for the end user, rather than being restricted to librarians trained in online searching. Access to generalpurpose microcomputers and software, as well as to the Internet, is offered in nearly all libraries of significant size. It is the position of this paper that security training for librarians is extremely weak, both on the job and in educational institutions. One result is that opportunities for problems related to information security in libraries are likely in many library environments. Although some recent texts on library security address aspects of information and

computer security (for example, Shuman, 1999), most do not. In this paper, a pragmatic approach to addressing the information security needs of libraries is presented. Effective information security must involve active staff and active measures to minimize risk of damage, theft, subversion or sabotage. Following an overview of information security, sections discuss security personnel, privacy policy, the OPAC, public access workstations, and the library's Internet connection. A concluding section addresses the emerging role of security training for librarians.

THE OPAC:

Traditionally, the most sensitive data that libraries collect are circulation records. By necessity, these are linked to identifying information for individual patrons who borrow books or other materials. Online Public Access Catalogs (OPACs) are centralized systems that handle circulation and holdings information, as well as a variety of other data ranging from acquisitions budgets to cataloging modules.

OPACs are still with us. Two important changes to OPACs in the final decade of the 1900s have been consolidation in the OPAC industry and the expansion to Web- and Internet-based access models. For consolidation, the number of companies selling OPAC systems suitable for use in all but the smallest libraries has diminished rapidly. Fewer than a half-dozen companies would be suitable choices for, say, a large academic or public library. Nearly all new OPAC systems are based on variants of the Unix operating system.

Modern OPACs include functionality to make the holdings information searchable via a Web interface. Here lies the substantial security risk: Unix systems have many potential security flaws, and many well-known flaws have easy exploits available to any potential intruder.

Connecting a system with critical data to the Internet is a bad idea. On the Internet, tens of thousands of amateur (and professional) potential intruders may try to get access to the system. Even if the OPAC software itself is thought to be relatively free of security problems – a risky assumption to make – the underlying Unix operating system is almost definitely not.

Yet, this potential risk needs to be balanced by the desire to make OPAC services available to the outside world. Recommendations include:

1. Only services needed should be running on the OPAC computer(s). Specifically, all Unix services (such as email, FTP, rlogin, telnet) that are not required for OPAC functions should be disabled.
2. · System logs must be kept, and analyzed regularly (daily or weekly) by staff. A logins record should be maintained; integrity checkers such as Tripwire should be used to spot illicit changes to the system software, and the system should be audited regularly for usernames, programs or data that are no longer used.
3. Ideally, the OPAC should only communicate with authorized terminals. For example, computers located within library buildings. If outside (Internet) access is required, the ideal scenario is to have a duplicate of the holdings database (or other information, if needed) on a separate server. This way, if the duplicate server were compromised, the original data and services would be intact.
4. · Personnel must be specifically responsible for monitoring security updates from the OPAC vendor, as well as the underlying Unix system vendor.
5. Regular attempts should be made to bypass OPAC security from both within the library (at computer stations) and outside the library via the Internet. Intrusion tools are widely publicized on resources such as the BUGTRAQ mailing list1 and Packet Storm Security Web site2

Historically, OPAC security has relied on (a) obscurity, and (b) OPACs' relative inaccessibility. These factors have changed. The Unix systems that OPACs are based on have well-known security flaws, and flaws in the OPAC software are more likely to be found when the OPACs are accessible to the thousands of potential intruders on the Internet.

INTERNET HISTORY:

The origin of the Internet is usually traced to 1969 and the begging of ARPANET. The Advanced Research Projects Agency (ARPA, later known as the Defense Advanced Research Projects Agency, or DARPA) was investigating using packet switch in technology for an experimental network. The fears from the cold war instigated the research from which the ARPANET developed. The Internet was that the network could survive a nuclear attack, and packet switching seemed well suited for this task. Vinton Cerf, often known as the father of the Internet and one of the those involved in his early research, recalls the beginning of ARPANET.

As the technology improved, those involved with the networks began to for uses of the technology. With the waning cold war fears in the 1980s, other federal agencies looked toward the possibilities of ARPANET. The National Science Foundation (NSF) took a major role in the development of the Internet with the creation of its network. NSF Net, which would take over control of the backbone of the growing network.

The NSF's Interest was in developing the network for remote connections to supercomputers. By taking over responsibility and control of the backbone, NSF could enable many research projects in disparate fields to benefit from the computing power available on a supercomputer. Few universities or research centers could afford their own supercomputer, so the Internet provided a means by which the supercomputing centers could maximize the use of the machines by scheduling different projects at different times in a way that did not require researchers to be located at the supercomputer center site. ARPANET itself was officially dismantled in 1990, but by that time, NSF Net and many others TCP/IP interconnected networks and become the major traffic carriers, and most users did not even notice when ARPANET was turned off.

CLIENT-SERVER:

The client-server approach permits great variation in the kind of front end with which the user interacts. An X Window, Microsoft Windows, or Macintosh front end can provide point-and-click graphical clients. While each client will possess certain similarities, they can differ in important features. The more advanced clients can simplify the transaction, store frequently used addresses, and interact with other programs. In the basic Internet tools, the client may not make much difference.

However, especially with the Internet connectivity tools, the specific client can make a significant difference. Some of these tools can be used to retrieve sound files and broadcast the output or retrieve and view full-color graphics and movies. With sufficient bandwidth and file compression, real-time video can be seen on the Internet. Only the most advanced client software can handle all of the necessary file types and auxiliary programs.

INTERNET ADDRESSING:

Each computer on the Internet has at least two address, the IP (or numeric) and the canonic (or alphabetic). Both the IP and canonic addresses contain multiple segments separated by periods. The Internet protocols will use the IP address, even when the canonic address is specified in the command. The canonic addresses are available since alphabetic sequences are easier for humans to remember than numeric sequences.

However, both addresses can change. Many sites will make efforts to maintain their canonic address, even if network and machine upgrades cause IP address changes. Since an individual connects to the Internet through a computer, individuals have user names on specific machines.

YOUR INTERNET CONNECTION TO THE OUTSIDE WORLD:

Connecting a library to the Internet means that the Internet can also connect to the library. Procedures for minimizing risk that potential intruders could steal, modify or delete information are well known, and focus on the use of Internet firewalls (e.g., Chapman and Zicky, 1995). A firewall can help insure that many exploits used to gain illicit access to data or systems will fail, such as IP spoofing attacks (where an outside

computer masquerades as an inside computer to get elevated access privileges). Libraries that host their own OPACs (versus those that use a regionally shared one) should consider an additional firewall for the OPAC itself, also perhaps for other particular resources such as cataloging workstations or circulation workstations. This would deliver a two-tiered approach to network security. At the first tier, a firewall system would help protect the library from unauthorized data. At the second tier, a separate firewall configuration would help protect particularly sensitive systems within the library from unauthorized use. For example, it might be determined that many sorts of Internet data are allowed to go in and out of the library, but only data to particular ports would be allowed to reach the OPAC. The second level firewall would also prevent computers inside the library from sending illicit data to the OPAC.

CONCLUSION:

Information security includes personnel security, privacy, policy and computer security. Specific personnel must be assigned security-related tasks in order for any security system to be effective. Due to the continuing emergence of new security exploits, tools and techniques – coupled with the constant parade of software and hardware upgrades likely in most library environments – ongoing diligence is required to keep informed of security developments. This paper has not attempted to cover every aspect of security-conscious systems administration and library management, only those issues that may be particularly under-appreciated or help lead to more rigorous thinking about security. For example, any information system should have good physical security, to prevent unauthorized access by both casual or planned attempt. Data backup and backup policies are a necessity for any data collection system, and hopefully are in place for all OPACs and related systems.

REFERENCES:

1. Gallimore (Alec.) Putting partnership on the web. The Library association record. 98 (4); April, 2004; 205-212
2. Nomani (M.S.). Problems of Special Libraries. IASLIC Bulletin. 10 (1); March, 2008; 31-36.
3. Abdoulaye (Kaba) and MAJID (Shaheen). Use of the Internet for reference services in Malaysian academic libraries. Online Information Review. 24 (5); 2009; 381-389.
4. Bawden (David) and others. A distant mirror?; the Internet and the printing press. Aslib Proceedings. 52 (2); Feb, 2008; 51-59.
5. Cruz (Jose Villareal). Intranet/Internet technology ASTINFO Newsletter. 12 (1); 2009-6-7
6. Floridi (Luciano). Internet: Which Future for Organized Knowledge; Frankenstein or Pygmalion? The Information Society 12 (1); 2011; 5-6.
7. Hollis (Ann). The Internet and acquisitions in academic libraries. Library Review. 47 (1); 2001; 26-30.
8. Levy (Philoppa) and (Foster) (Allen). Communicating Effectively in the Networked. Organization Pulsing Mail Academia libraries Aeanal of Documentation. 54 (5); Dec, 2004, 566-583.
9. Guice (Jan). Looking Backward and Forward at the Internet. The Information Society. 14 (3); 2007; 201-211.
10. Jayaram (Anup). Is India ready top the net. Business world 15 (5): Aug, 2010, 28-33.
11. Komito (Lee). The Net as a Foraging Society: Flexible Communities. The Information Society. 14 (1); 2004; 97-106.