

Intranets and Extranets



By Richard W. Boss

Most public libraries offer staff access to a variety of applications—often on a local area network accessible only to staff—and the Internet. They also offer patrons in the library access to the online catalog, local databases, subscription databases—often on an unrestricted local area network—and the Internet. Patrons outside the library have unrestricted access to the online catalog, but may be required to enter a patron ID for access to other resources. However, only a few have implemented Intranets and Extranets, Internet-like networks that are restricted in access.

Definitions

An **Intranet** has been defined as an internal Internet. While it uses Internet protocols such as TCP/IP (Transmission Control Protocol/Internet Protocol), HTTP (Hypertext Transfer Protocol), HTML (Hyper Text Markup Language) SMTP (Small Message Transfer Protocol), FTP (File Transfer Protocol), and AAA (Access, Authorization, and Authentication); access is limited to those within an organization—which can be any type of organization, including a library or its parent body. An Intranet may connect a number of LANs (local area networks) within an organization. While most Intranets connect to the Internet, there is a firewall that protects the Intranet from the broader community of the Internet.

An **Extranet** is an extended Intranet, one that links several cooperating libraries or other organizations and limits access to those within the cooperating entities. In many cases, only some of the features of an Intranet will be available to Extranet users from other organizations.

History

Intranets and Extranets date back to the early 1990's. The earliest Intranets were limited to large geographically dispersed corporations that sought to provide staff at all locations access to information and applications; the earliest Extranets were limited to large corporations that wished to provide access to parts of their network to customers and/or suppliers.

Among the earliest library implementations of Intranets were those of the state libraries of Colorado, Ohio and Utah. Those of Colorado and Utah were part of the Intranet of their parent agency. The former was undertaken by the parent agency and the latter was a joint effort of the parent agency and the state library. The Ohio implementation was undertaken as an independent effort of the state library. All three are protected by firewalls and passwords. When most recently checked, the content of the Colorado Intranet was limited to ILL forms, a link to the state network, and state publications; that of Ohio included job openings in the library, training opportunities, employee newsletter, planning documents, and employee policies and benefits; and that of Utah included business information, Utah Facts Book database, selected Internet resources, Utah State Library services, and news articles about the Department of Community and Economic Development, the library's parent body.

None of the Intranets of these libraries offered access to the acquisition, serials, cataloging, and circulation modules of the library's integrated library system because these applications usually require the use of the vendor's proprietary graphical user interface. Most vendors of integrated library systems limit the use of Web browsers to the online catalog application.

The earliest Extranets were those of the state libraries of Alaska, Colorado, Oregon, Rhode Island, and Utah. The Alaska State Library actually developed two Extranets, one for state government and one for the library community. The Colorado Extranet was developed jointly for the state's library community by the library and the Colorado Department of Education, the library's parent body. Oregon's Extranet was developed by the library for state government employees. The Rhode Island State Library developed two Extranets, one for state employees and another for the state's library community. Utah's Extranet was designed by the state library for the library community.

The content of these Extranets tends to be broader than that of the Intranets. All of the Extranets require a password or prior registration to gain access. They include descriptions of services, forms to request assistance, available publications, access to online catalogs, e-mail directories, access to databases, links to state publications, and calendars of events.

While some public libraries have developed Intranets and Extranets, it is extremely difficult to identify those that have done so as they are not accessible unless one is a staff member or library patron. Several of the libraries mentioned in the literature dated between 1997 and 2009 limited their Intranets to staff policies and procedures, preferring to have other applications accessible by staff on a dedicated staff LAN and to provide access for patrons through links on the library Web site. Also, an Intranet presupposes the use of a Web browser, an option often not available for access to the staff functions of an integrated library system.

The term "Extranet" is sometimes misused. For example, a public library has called its Web site for the library community an "Extranet" even though anyone from anywhere can access the information on it. As fine a service as it is, it does not meet the definition of an Extranet as a limited access resource.

Advantage of Intranets and Extranets

One of the major advantages of both Intranets and Extranets is that the use of Internet protocols avoids costly hardware and software to interface heterogeneous computer systems in a network.

Staff productivity is improved when all information and applications on several hardware platforms are accessible with a Web browser as opposed to multiple user interfaces. That also leads to a reduction in costs.

The use of an Intranet assures staff that they have access to all information and applications meant for them from any client on the Intranet.

Maintaining applications and information online assures that all authorized users have the same level of currency.

An Intranet or Extranet makes it possible for staff to work from remote locations, including from home, when an application supports a Web browser.

The amount of paper in the files of people in the organization can be reduced.

Communication among staff can be facilitated, including staff conferences.

Extranet users realize improved service because the familiar Web-browser interface gives them quick access to a variety of resources.

Disadvantages of Intranets and Extranets

Some applications, especially staff applications, may not be accessible with a Web browser. For example, the acquisitions, serials, cataloging, and circulation modules of a library's integrated library system may only be available using the graphical user interface of the system's vendor.

Maintaining currency of information is often difficult because of lack of staff resources. While hardware and software costs may be reduced by implementing either or both, staff time is often increased.

Security may be compromised unless a variety of measures are undertaken, including firewalls, server management, and user authentication.

Conclusion

Intranets and Extranets were not yet widely used by public libraries as of the first quarter of 2010, but the technologies may become more important as an increasing number of staff applications become accessible with a Web browser.

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