



Library Systems

An innovative overview of library automation

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Peer-to-peer architecture explained

The publicity surrounding the Napster case has made readers of *Library Systems Newsletter* curious about peer-to-peer architecture, a distributed network of hundreds or thousands of PCs sharing information. Peer-to-peer architecture, known as P2P in the computer industry, was the key to the technological success of Napster. But does P2P have potential for libraries?

Until recently, organizations requiring a great deal of computing power had two options: 1) they could run the applications on a high-end server costing hundreds of thousands of dollars or 2) they could cluster several mid-size machines costing almost as much. The relatively new P2P architecture makes possible combining many PCs and having them share the processing load. This process significantly reduces hardware costs.

P2P architecture differs from client/server architecture in that the applications act as both clients and servers. They not only request information

but respond to requests for information. A pure P2P application has no central server. It dynamically discovers other peers on the network and interacts with each of them. Although there is a cost advantage in not having a central server to register the peers so they can be found, the disadvantage is that the number of peers that can interact with one another is much reduced. For that reason, most P2P networks have a "discovery server." In this model the peers identify one another by consulting the server.

Banks and insurance companies were the pioneers in using P2P. Rather than processing everything on large mainframes, they distribute some of the work among hundreds or thousands of PCs on desktops after their users have left work.

P2P is most cost-effective when used for applications that require a great deal of computing power and that lend themselves to parallel processing. Parallel processing splits a large

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Microsoft warns of Windows 2000 flaw



Microsoft disclosed in early May that it has discovered an "extremely serious" flaw in an extension included in Windows 2000 that could allow a hacker to gain complete control of any computer running the Internet Information Services (IIS) 5.0 software built into the operating system. Microsoft urges all users of IIS 5.0 and the associated Internet Printing Protocol feature to install a patch available at its Web site.

Contact: Microsoft
www.microsoft.com/technet/security/bulletin/MS01023.asp

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task into many tasks that can be performed simultaneously on separate machines. P2P is not efficient when computations have to be performed sequentially because information from a previous computation is required to begin a new computation.

P2P could be used in a library consortium or a school district that wishes to exchange information among many sites, each with a small number of PCs. Calls to seven vendors confirmed the impression that no library automation vendor has chosen to adopt P2P; rather, they use a distributed client/server architecture. Three of the interviewees said the processing load of even their largest sites would not make P2P cost-effective. Their reasoning is that the server hardware of most automated library systems represents less than 15% of the total system cost. For most libraries that cost is between \$10,000 and \$50,000. Only a few huge libraries and consortia have spent as much as \$250,000 on server hardware. Any hardware savings realized by using P2P would probably be offset by the increased software costs.

P2P is still relatively new. Standards are only now beginning to be developed. Although libraries possibly will find P2P to become cost-effective in the future, the best strategy today is to watch, rather than plunge. Microsoft has recently launched a major P2P initiative, as has Sun, so the picture could change quickly. ■

NEW PRODUCTS AND U

Innovative's MY MILLENNIUM explained

Innovative Interfaces' My Millennium is not a distinct product that is packaged separately; it is a suite of enhancements to Innovative's Web-based patron access catalog that seeks to tailor sessions to the patron. A patron logs in to the catalog using his or her library patron number, and in so doing activates a previously stored profile. The profile may include personalized lists of commonly issued searches and frequently used databases. The profile, which may be updated at any time, also includes personal data such as contact information, e-mail address, PIN, and preferences as to how notices are to be sent (e-mail, telephone, or post).

During a search session, the user is automatically authenticated for accessing restricted databases, placing holds on titles, and performing other activities that normally require separate authenti-

cation. Reading preferences may also be stored so the library can e-mail the patron when new acquisitions match a patron's interests.

A library has full control over the extent to which the My Millennium features are available to patrons because the features are separately enabled or disabled.

Contact: Innovative Interfaces, Inc.
5850 Shellmound Way
Emeryville, CA 94608
tel. 800-878-6600
www.iii.com

epixtech rolls out HORIZON SUNRISE 7.0

epixtech is beginning distribution of Horizon Sunrise 7.0. Enhancements, which include Z39.50 cataloging, borrower information check on request, hold suspension, cluster hold capability, Win 2000 client support, day-end optimization, and additional Unicode development.

Follett Software supports multilingual searching

Follett has introduced software that allows users of its WebCollection Plus to search information resources in French or Spanish as well as in English. Users can switch easily among the language interfaces. Users simply enter a search term in French or Spanish and related records appear (in the language in which they have been cataloged). French and Spanish help screens are also provided.

The product is being promoted for bilingual students but should also be a good resource for students who are studying French or Spanish.

Contact: Follett Software Co.
tel. 800-323-3397
www.fsc.follett.com

PGRADES



Two of the enhancements warrant elaboration: Z39.50 cataloging facilitates the searching of Z39.50-conforming databases for cataloging records, and hold suspension allows a patron to suspend a hold for later reactivation, such as when a patron plans to be away for a few days.

Contact: [epixtech inc.](http://www.epixtech.com)
400 W. 5050 North
Provo, UT 84605
tel. 800-188-8020
fax 801-223-5202
www.epixtech.com

KLUWER ACQUIRES SILVERPLATTER

Wolters Kluwer of the Netherlands, already the owner of Ovid Technologies (a major provider of medical databases), has strengthened its position in medical and scientific databases by acquiring SilverPlatter, a major provider of scientific databases. SilverPlatter provides access to more than 250 databases, including a total of 2 million articles in 6,500 journals.

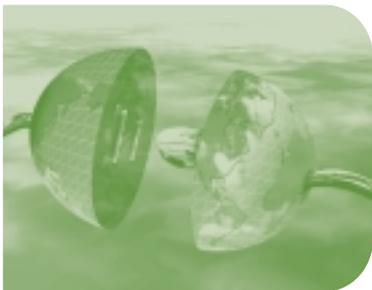
Kluwer is also a major print publisher. Its best known imprint is Lippincott Williams & Wilkins.

Contact: [Wolters Kluwer](http://www.wolterskluwer.com)
www.wolterskluwer.com

Antitrust nominee avoids comment on **Microsoft case**

Charles James, who has been nominated to become the head of the U.S. Justice Department's antitrust division, said at his hearing in early May that the high-tech industry should be as competitive as any other and that the role of antitrust law is to ensure such competition. He gave no indication as to whether the Bush administration would pursue the Microsoft lawsuit.

Once the U.S. Court of Appeals rules on Microsoft, the Bush administration will have to decide whether to continue the legal battle to the U.S. Supreme Court, seek a new round of settlement talks, or abandon the matter completely. ■



W3C adopts XML specifications

The World Wide Web Consortium has formally approved a recommended specification for defining the structure and content of XML-based business documents, including purchase orders and invoices. In the absence of a standard, a number of vertical industry groups and technology vendors have devised their own specifications for the exchange of XML-based business data.

Since the specifications are not industry specific, additional work needs to be done. Vendors of automated library systems may seek to use the specifications in their XML development, or the National Information Standards Organization (NISO) may seek to establish a committee of library automation vendors, publishers, and librarians. In either case, XML is still not viable as a replacement for EDIFACT, the current international standard on which most electronic transmissions of purchase orders and invoices are based. ■

TIPS & GUIDELINES



Books **INTERFERE** with wireless LANs

Many academic institutions that have successfully installed wireless LANs in classroom buildings and student centers have reported performance problems in their campus libraries. An investigation at Cornell concluded the problem was caused by moisture in the books. The moisture absorbed the radio signal. The installation of additional access points solved the problem, but many access points had to be moved several times to achieve complete coverage of the areas selected for the wireless LAN. ■

Task lighting **ZAPS** computer

Although most architects and technology consultants warn their clients that PCs should be on dedicated circuits, the reality is that most PCs are plugged into regular outlets. Fortunately, the risk is moderate. Plugging

EBSCO passes 4,000 title mark

More than 4,000 journal titles are available on EBSCO Online, the Web-based electronic journal service provided by EBSCO Information Services. All the titles are available in full-text as well as tables of contents and abstracts.

Among recent additions to the service are 26 journals published by Bentham Science Publishers; 54 journals published by Brill and VSP, a Brill subsidiary; 34 peer review journals and seven newsletters published by Technomic; 26 journals by the BMJ Publishing Group; and 49 journals by Lippincott, Williams & Wilkins. All these additions are STM (science, technology, and medicine) titles.

Ebsco also added several hundred titles in the behavioral and social sciences, including journals published by the British Psychological Society, IP Publishing, Kingston Press, M. E. Sharp, Policy Press, and Rodopi.

Coverage of the field of linguistics was significantly strengthened by the addition of 30 titles from John Benjamins Publishing.

Ebsco has also added netLibrary, a service that provides links to electronic books. Ebsco and netLibrary have organized the links into 16 collections, including American history, business management, computer science, education, manufacturing, medicine, and religion.

Contact: EBSCO Information Services
www.ebsco.com

BIOSIS Previews extended back to 1969

BIOSIS has announced that the full *BIOSIS Previews* database, dating to 1969, will be loaded by SilverPlatter and the ISI Web of Science. Dialog, STN, Ovid, and DIMDI have earlier loaded the full database. The database, which consists of more than 13 million references, covers nearly 5,500 journals on current biological and medical research findings as well as traditional biology and interdisciplinary fields such as biochemistry, biomedicine, and biotechnology.

The increasing reliance on electronic files for research led to the demand to provide access to earlier years of the database, a decision that was made easier in light of the dramatic drop in storage costs in the past three years.

Ideally, the online reference services will eventually load all available years of important research tools. Searching bound volumes to find the critical building blocks on which later research has been built is time-consuming.

Contact: BIOSIS
www.biosis.org

something else into the same outlet, however, can dramatically increase the risk.

A librarian who was bothered by glare on her computer screen was advised that task lighting would substantially reduce her problem. She purchased a 4-foot fluorescent light and plugged it into the same duplex outlet as her PC. When she switched the light off at the end of the day her computer failed. What she did not know is that turning off a fluorescent tube can cause a voltage transient in excess of 1,200 volts. Turning off a space heater plugged into the same outlet can have a similar effect. Most surge suppression strips cannot protect a computer from a 1,200-volt transient.

If you can't plug a PC into an electrical outlet on a dedicated computer circuit, at least plug it into a dedicated outlet.

Photocopiers, laser printers, and room air conditioners—which often have variable-speed motors—can also cause serious damage to computers. They should never be on the same circuit as a computer. ■

Cat 5 **VERSUS** Cat 5E

The article warning of problems with Cat 6 in the February 2001 issue of *Library Systems Newsletter* didn't differentiate between CAT 5 and Cat 5E. Here is a description of the two versions of the Category 5 UTP (unshielded twisted pair) cable standard: Cat 5E is an enhanced version of Cat 5. Most of the specifications are identical, but Cat 5E requires a thicker jacket, better insulation, and a plastic rib in the center of the cable to separate the pairs. The insulation also has less pigment in it to minimize the effect on the insulating qualities of the plastic insulation. The enhancements are designed to reduce crosstalk, which is the interference of one channel with another.

Most of the cabling companies use Cat 5E, rather than Cat 5, but Cat 5 is still available. The main reason to purchase Cat 5 is its lower price. Given that the cable itself is only a small fraction of the total cost of installing a local area network, though, using Cat 5 doesn't save enough to merit its use. ■



SIRSI TO ACQUIRE DRA

Sirsi Corp. announced on May 17, 2001, that it has agreed to purchase Data Research Associates (DRA) and to make it a wholly owned subsidiary. The purchase price is more than \$51 million. Michael J. Mellinger, DRA's chairman and principal stockholder, will serve as chairman of the new DRA. The parties

expect the deal to be completed within 75 days, subject to customary conditions, including the tender of at least 75% of the outstanding shares of DRA. Sirsi already has tenders for 56% of the shares. Sirsi expects to be a multiplatform vendor; that is, it is not purchasing DRA just for the customer base with the

intent of migrating those customers to its own Unicorn product. ■

Contact: Sirsi Corp.
tel. 256-256-7000
fax 256-704-7007
www.sirsi.com

St. Louis Public Library's Electronic City Hall

Although not a unique service, the St. Louis Public Library selected a catchy title for its portal to city information: *Electronic City Hall*. Patrons accessing the Library's homepage see that phrase as one icon, with Collector of Revenue, License Collector, Board of Alderman, and St. Louis Personnel Office as subheadings.

Some libraries have overwhelmed themselves collecting information about their communities and essentially putting themselves in the publishing business, but St. Louis has followed the

more traditional library practice of selecting and providing access to information published by others. All the information about St. Louis's city government is maintained by the various city agencies, freeing the library to provide a community portal through which citizens can find information.

The library's site can be accessed at www.slpl.lib.mo.us. Click "Premier Library Sources." Look for the highlighted phrases. ■

High-grade DSL gains momentum

NEW SOFTWARE RELEASE

LibraryHQ offers free SiteSource trial

LibraryHQ, a portal for libraries, is offering a 30-day free trial of SiteSource, the database of cataloged Web sites. The database already contains more than 27,000 MARC records for selected Web sites with hotlinks to the actual Web sites. About 1,000 sites are selected and cataloged each month. The free-trial offer is available for an indefinite period, but at least through the end of 2001. Annual subscriptions are available to libraries that wish to continue after the trial period expires.

LibraryHQ has also added another feature, Speaker Source, a listing of speakers who are experts in areas of interest to libraries. Searching can be by the name of a person or a topic. The list, which has no charge to use, includes links to many of the speakers' e-mail addresses.

Both SiteSource and Speaker Source are available at www.libraryhq.com. ■

The future of DSL has been cloudy for the last few years, but current signs indicate the technology may have a long life. A new variant of the core technology, SHDSL (Symmetric High-bit rate DSL) is generating considerable enthusiasm. SHDSL provides data rates of 2.3 Mbps over a single copper pair, a significant increase over the 1.5 Mbps speed of a conventional DSL line. The new standard, which was approved by the International Telecommunications Union in February, also provides for 30% greater distances. The principal customers are expected to be small and mid-size businesses and other organizations.

SHDSL should be available at lower cost than multiple T-1 or T-3 circuits. European providers are expected to deploy the technology this summer, North American providers will do so late this year, and Asian providers should do it by early next year. ■

3.2 Tbps transmission achieved



Optisphere Networks, a subsidiary of Siemens, and WorldCom have completed a one-month trial of high-speed data transmission over a fiber-optic network. The companies achieved a sustained rate of 3.2 Tbps (trillion bits per second) over a distance of 250 kilometers, the equivalent of 3.1 million simultaneous Internet connections or 41 million telephone calls.

The trial proves that the fiber-optic medium will not be a constraint in expanding bandwidth and should encourage the IEEE, the primary developer of network standards, to move ahead with plans for 100 Gbps and 1.0 Tbps standards even as it is finishing the standard for 10 Gbps over fiber. Publication of the 10 Gbps standard is projected for March 2002.

The rapid developments in networking are significant for libraries in that the cost of Ethernet products for 10 Mbps, 100 Mbps, and 1.0 Gbps—products libraries are most likely to purchase than 10 Gbps products—is coming down rapidly. For example, Asanté has just announced a 12-port switch that supports all three bandwidths at a cost of \$400 per port, a 60% drop from a year ago. ■

TLC demonstrates COMMITMENT to CARL product

TLC announced shortly after its purchase of CARL in late 2000 that it would actively develop, market and support the system rather than relying solely on the existing customer base for revenue. It recently made good on the development commitment by completing a new version of CARLweb, the product's patron access catalog. Among the new features is access to book jacket images and tables of contents. TLC has also released an interface from CARLweb to TLC's Library Request, a Web-based interlibrary loan product.

TLC has also intensified the marketing effort. It pursued and signed the Wellington City Library of New Zealand. The library consists of a central library and 11 branches circulating more than 3 million items a year. The system will initially support 200 concurrent users. Baker & Taylor also has made a commitment to purchase a CARL solution for its Cataloging Library Services division. The system will support more than 150 catalogers in five locations in the United States. Among existing customers, the Atlanta-Fulton County Public Library has purchased a major upgrade after examining the market. TLC is actively pursuing several other large contracts.

Even when sales of CARL automated library systems lagged in 2000 because of uncertainty about the future of the com-

pany, sales of its "Kids Catalog Web" were robust. Nearly 100 libraries have purchased the software, which makes searches for children easier by using simple language and attractive graphics. The product can be used not only to provide access to selected library materials through screen icons, but to facilitate access to a core suite of more than 5,000 Web sites that have been preselected for age-appropriate content. A feature of the software called "WebBuilder Pro" can be used to customize a library's online offering by modifying the Web site database, creating special icons for specific study collections, and adding booklists.

Although customer support is being reorganized, no plans exist to reduce the size of the staff. For the past several years CARL has had the best customer support ratio (ratio of support staff to installations) in the industry.

Contact: TLC
tel. 800-325-7759
TLCdelivers.com
CARL
tel. 303-758-3030
fax 303-758-0606
www.carl.org

MICROSOFT TOUTS WINDOWS XP

Microsoft is preparing to roll out yet another operating system: Windows XP. Although characterized as a successor to Windows 95/98/ME, it is the first operating system geared toward consumers and small organizations that uses the same code base as Windows NT and Windows 2000, both aimed at corporate users. The major benefits claimed for the new operating system are improved stability, a more attractive user interface, and a built-in remote control function that help-desk staffers can use to diagnose and fix problems remotely.

Two versions of XP have been developed: Windows XP Home Edition for consumers and Windows XP Professional for small organizations. The latter has more features, including encryption options.

Windows XP Professional may displace Windows 2000 Professional on desktops because it doesn't require as much in the way of computer resources but offers comparable functionality and performance. Windows 2000 Server will probably not be affected because it appears firmly entrenched, surpassing Windows NT Server only a year after its introduction.

General release of XP is scheduled for Oct. 25, 2001. ■

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