A Librarian's Perspective on Portals

Intellectually useful enterprise portals will combine horizontal portals, vertical portals, and channels

By **John R. Little**

Over the next few years many universities will upgrade their Web services by building portals. This represents a shift to a more proactive, user-centered, service-oriented model. Portals actively deliver relevant content and service applications in contrast to the "electronic brochure" Web sites that force users to browse extensively while mining for relevant data.

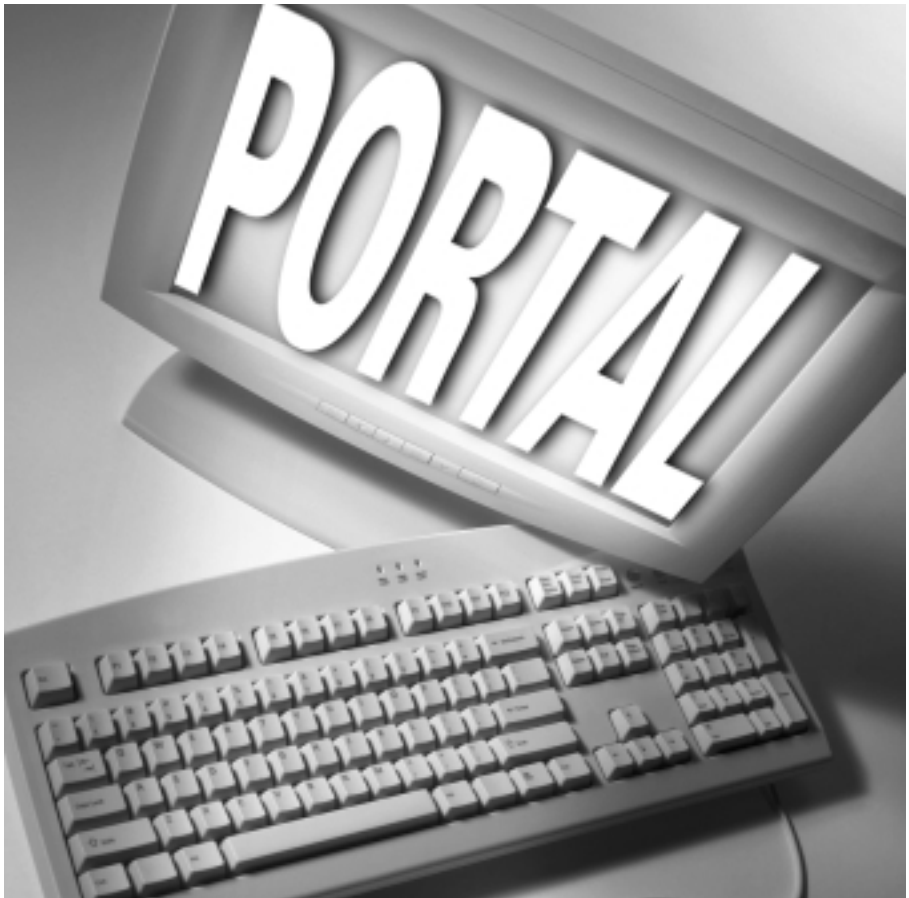
In this new model the main university portal, or enterprise portal, will provide an information service and navigation aid to other subject-specific sites. It will also serve as an integration point for applications such as Webmail. By developing in-depth subject portals, the library can profoundly influence the university portal's development and serve the information resource needs of our clientele.

Emerging university enterprise portals will present customized information to user groups based on a context, such as the user's role in an organization or affiliation with a community of interest. With these customized views, enterprise portal services provide information relevant to a particular user at a particular time and serve as a linking mechanism to other portals. At the same time, subject-based vertical portals — vortals — present information on niche topics. Vortals are the intellectual building blocks of portal networks, providing the content that gives the enterprise portal its value.

Most people have experience with megaportals such as Yahoo!, Excite, or America Online. These large, broad-based portals attempt to serve the needs of a very large audience. Megaportals also offer personalization services — MyYahoo! and MyExcite, for example. While many people equate personalization services with portals, this only confuses the discussion, as such services generally have a much smaller user base than the customized portal view. Typically, only five percent of portal users employ their personalization features.[1]

Many more users benefit from customization, creating thoughtful and logical group views. For example, a university's horizontal enterprise portal might present views for groups such as students, prospective students, alumni, faculty, and staff. While megaportal sites such as MyYahoo! will persist, they're unlikely to proliferate. On the other hand, you can expect to see an increasing array of horizontal enterprise portals and vertical portals.[2]

Such expansion suggests the benefits of a strategic alliance in portal building among campus IT, libraries, and other campus groups. By using robust chan-



nel capabilities, the enterprise portal can provide content from various parts of the university and promote resource discovery.

Serving Users

Even megaportals cannot keep a user at one site for long. Nonetheless, site designers can promote lingering, capture attention, and deliver targeted messages. Having multiple channels available provides diverse sources of information and increases the likelihood of keeping users focused on one enterprise portal. To build this functionality, the enterprise portal must partner with data providers across campus. A successful university portal offers tools to let novice content producers easily populate the information channels. Vitally important is the ability to build sophisticated channels that promote efficient dissemination of content, particularly in developing content-rich vortals from organizations such as a library.

The ability to exploit channel development will underlie the success of campus portal networks. Thus libraries must make subject-specific information available on multiple portal channels to maintain a competitive service role in the increasingly portal-dominated university information space. While institutions might prefer a single enterprise-level, horizontal portal, discouraging the proliferation of niche portals seems unlikey to succeed — and undesirable.

Research libraries must push for multiple and varied vortals by creating subject guides. A carefully planned and executed enterprise portal built upon a robust and developing portal network yields a more rewarding experience for users, allowing them to navigate from portal to vortal and back. Furthermore, it's likely that rich channels of vortal information will increase use of personalization features. The important goals, however, are customization, portal networks, and channels. Thus the enterprise portal won't become the information service of last resort, instead operating as a channeling service that supports interaction and launches users to specialized portals covering specific subjects (vortals and Web pages).

Precisely because of this, the enterprise portal can only be as good as the channels that support it. Hence, libraries must begin building vertical portals to support a robust channel network that may not even exist yet. Basic channels of a university enterprise portal can include stock ticker tapes and headline news, but the portal network must also provide unique content that is distinct and research oriented. Without that content depth, users will have little reason to use the enterprise portal to its full potential, perhaps opting instead to stick with the more established megaportals. For this reason the library must engage the portal network at two levels:

1. as a data provider, and
2. as a vortal hosting service.

The library must become a data provider by serving data via standard protocols that cover subject-specific "channels" or topics such as new books on political science, new sources of electronic journals, grants, names of specialists, and announcements of speakers.

By becoming a vortal hosting service, libraries can aggressively build vortals in their areas of strength and simultaneously provide data in areas better covered by other organizations or even other institutions. Libraries must harness the metadata or channels available through other vortal services, exploiting the same portal network and channeling system that draws relevant data from other sources, such as grant data from the Department of Energy or National Science Foundation. Other data available for use in vortals might include interest rates from the Federal Reserve Bank or economic policy research from think tanks.

It's easy to see how a strong portal network and channeling system permits the campus IT group to rely on the expertise of other data sources. IT groups can thus focus on maintaining systems and not be burdened by the information content. Such a cooperative system lets various campus groups leverage their respective strengths.

Roles for Libraries

For libraries, building subject resource guides as vortals is the first step in supporting the universitywide enterprise portal and the channel distribution system. Even earlier, certain areas of development seem ripe for cooperation. Libraries have areas of expertise that campus IT groups would likely want to exploit in developing the university's enterprise portal:

- Taxonomy/thesaurus development
- Content gathering
- Interactivity

Enterprise portals and vortals need clear, logical organization. Libraries have entire departments that specialize in this type of organization and categorization. Their expertise in taxonomy and thesaurus development can help build efficient portals, and they will want to participate in this process.

Once in place, the channel system needs a mechanism for obtaining regular content, whether self-organized, editorially organized, or some combination of the two. Libraries should concentrate on gathering information on specific topics and making that information widely available. One obvious benefit is using channels to publish listings of newly acquired resources within any given subject area.

Building on the idea of integrating applications with portals, the library should offer virtual help services to facilitate resource discovery. Lands End and other retailers have succeeded by making it easier for customers to ask questions of "consultants" during a Web transaction. An interactive service such as "ask a librarian" can make requesting assistance simple and convenient by connecting Web users with librarians. The library should exploit collaborative features where possible, particularly virtual interactive reference. Similar opportunities for interactivity exist with other campus services, such as campus box offices or prospective students looking for information from admissions offices.

Channels

While portal networks aren't yet a reality, it behooves campus IT groups

to use appropriate standards and build an enterprise portal sufficiently open to support interoperability. These steps will facilitate development.

Failure to use interoperable standards will probably result in data silos that cannot share data and clutter the data landscape with multiplying user accounts and passwords. Creating, promoting, and using interoperable standards that promote channeling puts the enterprise portal in a position to engage users as active participants in determining what's relevant to them.

One premise of this grand design is a robust channeling system serving as the backbone of a portal network. Building this channeling system requires developing basic tools for channel data submission along with more advanced tools. Basic tools can be simple Web-based forms allowing submission of bits of information on an intermittent basis. Complex information organizations on campus, such as libraries and news services, will want more advanced channeling services. Two options are worth noting: Rich Site Summary (RSS) and the Open Archives Initiative (OAI).

RSS, the most established and popular format for news headlines, is used to distribute and gather information. With it, a Web site can present specialized panels of information from different sites. Each headline in a panel can present an image and link back to the original document for more information. Information providers can focus on the process of distributing content without trying to focus all eyes on one homepage. The format continues to evolve but has a strong grounding in the Dublin Core metadata standard and the Resource Description Framework (RDF).

OAI is arguably more suited to the needs of institutions such as libraries and museums, although still under development. The initiative involves an XML record, repository-based system for harvesting metadata. According to Lynch,

> The goal of this interoperability architecture is to provide an easy way for data providers to expose their metadata and for service providers to access that metadata and use it as input to value-added services. A key component of the interoperability architecture is the use of the Dublin Core element set as the required resource discovery metadata vocabulary. The OAI invites representatives from a variety of communities, including publishers, libraries, e-print and preprint providers, and museums to participate … and discuss the applications of this interoperability architecture ….[3]

An early vision statement shows that the OAI focus of sharing and harvesting metadata is designed to overcome the paradox of widely available in-depth resources that are virtually invisible to anyone except those already aware of them. This concept of interoperability — of being able to richly describe a data resource and share that data via a protocol that supports services such as portals — looks very promising. I recommend monitoring the OAI because of its potential value in research-oriented portals.

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Libraries into the Future

We don't yet know how to integrate existing resources like library catalogs, commercial full-text bibliographic databases, local databases, and other legacy applications within an enterprise portal. Still, a logical starting point would be a cooperative effort among campus information service providers to simultaneously build vortals within their respective areas of strength, then link these vortals with accepted channel delivery protocols. This would inevitably promote a richer level of content and a more integrated enterprise portal environment.

In the meantime, library Web sites won't disappear any time soon, and portals won't replace main university Web sites in the near future. However, discussions of enterprise portals and scholarly portals[4] are on the rise, indicating a shift in the information sphere and the space in which the library can exercise its influence as well as contribute hard-earned expertise.[5]

Libraries must begin now to participate in building portals, vortals, and channel networks. Creating vortals and partnering with campus IT groups during construction of universitywide enterprise portals will help promote open and robust channels, leading users to discover the depth of information already at their fingertips. *e*

Endnotes

1. D. S. Ketchell, "Too Many Channels: Making Sense out of Portals and Personalization," *Information Technology and Libraries*, 19(4) (Dec. 2000), 175–179.
2. G. Phifer, "CIO Alert: Be Prepared to Support Multiple Portals in Your Enterprise," *Gartner Advisory. Inside Gartner Group* (Apr. 2000, IGG-04192000–02).
3. C. Lynch, "Open Archives European Public Meeting," CNI Announce listserv (Jan. 5, 2001) [http://www.cni.org/Hforums/cni-announce/2001/0003.html].
4. J. D. Campbell, "The Case for Creating a Scholars Portal to the Web: A White Paper," *ARL: A Bimonthly Report on Research Library Issues and Actions from ARL, CNI, and SPARC*, 211 (Aug. 2000) [http://www.arl.org/newsltr/211/portal.html].
5. S. E. Thomas, "Abundance, Attention, and Access: Of Portals and Catalogs," *ARL: A Bimonthly Report on Research Library Issues and Actions from ARL, CNI, and SPARC*, 212 (Oct. 2000) [http://www.arl.org/newsltr/212/portal.html].

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