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This column aims to draw your attention to various interesting Web sites which I have come across and which might appeal to you, and to keep you up to date with news and views on Web trends and developments. It offers essentially a personal selection rather than comprehensive coverage.

The geography of cyberspace

Does cyberspace have a geography? What do we know about the nature, shape, size, distribution and geography of the Internet, the World-Wide Web and cyberspace? It was pondering on these questions that led Martin Dodge, a researcher in the Centre for Advanced Spatial Analysis at University College London, to create the Atlas of cyberspace

(http://www.cybergeography.org/atlas/atlas.html). The Atlas is a compendium of maps and graphic representations of the geographical electronic territories of the Internet, the World-Wide Web and other emerging cyberspaces. These cybermaps enable us to visualize and comprehend the new digital landscapes beyond our computer screen, in the wires of the global communication networks and vast on-line information resources. They help us navigate the new information landscapes and are objects of aesthetic interest in their own right. For instance, the cybermap of the month likens the Internet to a jellyfish – based on a screengrab of a Walrus visualization of a huge graph which depicts Internet topology showing 535000 Internet nodes and over 600000 links (http://mappa.mundi.net/maps/maps_020/). There are maps of US domain names, European Internet exchange points, visualizations of Mbone and 6Bone, interactive maps of African Internet connectivity and performance (a bit outdated), and more.

The more you get into this, the more fascinating it becomes! There is material on information landscapes, information maps, ISP maps – with links like tendrils to places you never knew existed. These are contained in the Geography of Cyberspace Directory (http://www.cybergeography.org/geography_of_cyberspace.html) which is also maintained by Dodge. The Internet traffic and demographic statistics (http://www.cybergeography.org/statistics.html), for instance, provide real-time Internet measurement links – on the state of the Internet, on Net traffic from Cable & Wireless and AT&T; the size and scope of the Internet; Internet user surveys; Internet trends; headcount – who is on-line and where – Web usage estimates by country, language and region; most popular sites; and so on.

If you are interested in following this topic, then you can subscribe to the free cyber-Geography Research Bulletin. Martin Dodge has written a book on the subject with Rob Kitchin entitled Mapping cyberspace (published by Routledge, October 2000). The book aims to provide an understanding and explanation of what cyberspace looks like and the social interactions that take place there. It explores the impact of cyberspace, and information and communication technologies, on cultural, political and economic relations. It also charts the spatialities, spatial forms and space–time relations of virtual spaces, as well as detailing empirical research and examining a wide variety of maps and spatializations of cyberspace and the information society. Mapping cyberspace draws together the findings and theories of researchers from geography, cartography, sociology, cultural studies, computer-mediated communications, information visualization, literary theory and cognitive psychology (http://www.mappingcyberspace.com/).

Room 102

Room 102 is claimed to be the best search engine and directory on the Web. Unlike Alta Vista, Google, Yahoo and most of the others, Room 102 uses pictures – a quick-loading snapshot of Web pages. In Room 102 you can surf the Internet (using the categories of the Open Directory), pick a topic and catch a wave of Web sites, click through dozens or hundreds of Web sites that relate to your interests. When you see a picture of a site that interests you, click it and they will take you there. The screen shots are currently updated every 10 to 15 days, though it is anticipated that screen shots will soon be refreshed every couple of days.

Room 102 showcases its Web site SlideShow Technology, but their real business is delivering their technology to customers and enhancing how directories and search engines interact with visitors to Web sites. What the user gets is a slide show of the actual Web pages rather than just a static text-based list – which benefits the surfer as well as the Web site owner. You can click through them manually or automatically – you can stop at any time and go back to the previous one (it does not seem to give the number of hits for a search). The size is not full-screen, but is still readable. Rather than just getting one image per screen, you can ask for thumbnails in which case you get ten per page (the number of hits is given in this case, but the image is not readable.) You get a brief accompanying description of the site, plus title and URL and you can also elect to receive the images in low rather than high bandwidth to speed things up a bit or get the text only if you really prefer. Have a look at this search engine at http://www2.room102.com/.

The invisible Web

Material invisible to or 'hidden' from the general search tools like Alta Vista and Google is said to reside on the invisible or deep Web – a vast part of the Internet that the search engines cannot, do not or will not include in their indexes of the Web. A new study by BrightPlanet puts the size of the invisible Web at 400 to 550 times larger than the visible Web, which is currently estimated to be more than 2.5 billion pages, according to Cyveillance's Real Time Web page ticker. Much of this material is authoritative information and invaluable in that it is largely comprised of content-rich databases from universities, libraries, associations, businesses and government agencies around the world. Many times you will get to the front door (i.e. the home page) but you will not find the pages behind in a 'normal' Web search – nor will you find the content behind forms and dynamic pages.

The invisible Web is an interesting topic which you can read more about at http://www.freepint.co.uk/issues/080600.htm#feature and http://Websearch.about.com/internet/Websearch/library/weekly/aa091800a.htm. The authors of these pieces, Gary Price and Chris Sherman (who has recently joined SearchEngineWatch as Associate Editor) are bringing out a book on the invisible Web this July published by CyberAge Books (an imprint of Information Today). In the book, The invisible Web: uncovering information sources search engines can't see, the authors introduce the reader to top sites and sources, and offer tips and techniques to find the hidden information.

However, more help is at hand! Gary Price of George Washington University in the USA has compiled Direct Search – a regularly updated and growing compilation of links to the search interfaces of resources that contain data not easily or entirely searchable or accessible from general search tools like Alta Vista, Google or Hotbot. The Direct Search SearchCenter interface provides search access to all Direct Search pages as well as the following Web reference compilations: fast facts; Price's list of lists; speech and transcript centre; news centre; streaming media: news and public affairs resources; and Web accessible congressional research service reports. Direct Access categories include archives and library catalogues; bibliographies/bibliographic aids; books (full-text); business/economics; government (US and international); government (US state and city);

humanities; legal; news sources and serials; ready reference; recent additions to the collection; science; social sciences; and additional subject-specific resources. It also gives access to advanced search engines like Alta Vista, Google, Fast, Yahoo, etc. Find Direct Search at http://gwis2.circ.gwu.edu/~gprice/direct.htm.

Another huge Web undertaking is the collection of links to special search engines and searchable directories, which in a number of cases can be used as an alternative for the big search engines like Northern Light, Hotbot, AltaVista, Excite and Infoseek. Most of them are discipline or subject specific, others are (collections of) national or regional search engines. This collection is preceded by a few sites where one may learn to search on the World-Wide Web, a collection of synonym dictionaries and thesauri (to find the right search terms), experts to answer questions and the URLs of a number of fee-based services which offer to do the searching for you. Under the heading 'Search engine code texts', the user can find the addresses of some sites with pieces of code which can be pasted into the user's own homepage to offer direct access to a number. There are also directories of free bibliographies and bibliographic databases on the Web, as well as free journals and magazines on the Web. This collection of specialized search engines and databases was compiled by Marten Hofstede at the University of Leiden in The Netherlands and can be found at http://www.leidenuniv.nl/ub/biv/specials.htm.

Managing Internet and intranet technologies

Managing Internet and intranet technologies in organizations: challenges and opportunities, edited by Subhasish Dasgupta, is a new title from Idea Group Publishing.

The book is a collection of 12 essays that illustrate different real issues faced by organizations when they implement Internet and intranet technologies. The essays provide theoretical and applications-oriented research and are brought together from different perspectives and experiences from authors all over the world. Together they combine conceptual, survey and case study methodologies and provide a unique look at the challenges and opportunities faced by organizations in the area of Internet and intranet technologies.

The book provides a comprehensive treatment of Internet and intranet technologies, electronic commerce, and the management of these technologies within organizations. It is divided into three different sections, the first of which consists of four chapters that describe the applications of Internet technology. These chapters look at the organizational use of Internet technology, development of extranets and the use of Internets in education and learning. The second section addresses inter-organizational uses of Internet technology and includes research on business-to-business and business-to-consumer electronic commerce. Chapters collected in this section provide a theoretical model for virtual shopping on the Web, inter-organizational ERP applications and electronic commerce applications and infrastructure. The last section consists of technical papers that identify important technical issues in developing and maintaining Internet and intranet applications.

The book aims to assist readers to identify major Internet and intranet technologies that organizations have adopted in the past few years and identify the challenges and opportunities provided by the adoption of these technologies.

The author, Subhasish Dasgupta, is professor of information systems at The George Washington University in the United States. His research interests include electronic commerce, information technology adoption and diffusion, effects of information technology investment on firm performance, group decision making and global information systems.

Managing Internet and intranet technologies in organizations: challenges and opportunities is available from Idea Group Publishing, Hershey, PA (224 pages, copyright 2001, ISBN: 1-878289-95-0, http://www.idea-group.com or 1-800-345-4332).

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