Internet applications, sites, trends and happenings

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This column not only aims to draw your attention to various interesting Web sites that might appeal to you, but also to keep you up to date with news and views on Web trends, developments and statistics. It offers essentially a personal selection rather than comprehensive coverage.

South African on-line shoppers

A new report from Webchek (http://www.Webchek.co.za/) indicates that 26% of South African Internet users have shopped on-line and have spent an average of R2450 (USD238). Approximately 338000 South Africans have purchased products from the Internet and Webchek estimates that the total spending on on-line shopping in South Africa amounts to R28.8 million (USD2.8 million).

Around 53% of on-line shoppers in South Africa have purchased books, while 41% have bought CDs. Just over 20% of South African on-line consumers have purchased software and 16% have bought games. Other popular products that South Africans have purchased from the Internet include gifts (13%), flowers (12%), groceries (11%) and technology (10%).

New Zealand Web sites

Over half of businesses in New Zealand have a Web site and almost all have a domain name, reports IDG.net. According to a survey commissioned by the Ministry of Economic Development (http://www.med.govt.nz/), around 56% of organizations in New Zealand have an active Web site. Of those companies with a Web site, 37% can take on-line orders, but only 11% can currently accept on-line payment. A third of organizations in New Zealand claim to be actively engaged in e-commerce with other firms, while a similar proportion reports that their e-commerce systems are linked to their internal business systems.

To delete or not to delete

It is reported that over half of US Internet users delete an e-mail from an unrecognized name without opening it. According to a study conducted by Quris, 52% of survey respondents said that they immediately deleted e-mails from people they did not recognize. When it comes to permission e-mail marketing, around 40% of survey respondents said they thought it was valuable. However, another 40% said they deleted mail from permission e-mail marketing companies without bothering to read them.

Quris, the integrated e-mail solutions agency for Fortune 1000 companies, recently released a 25-page report entitled 'Permission e-mail marketing: the view from the inbox'. The report is based on survey responses from 1256 e-mail users in the United States (http://www.quris.com/company_news/press_releases/2002/051502.shtml) and contains a comprehensive analysis of consumer attitudes regarding permission, personalization and privacy in e-mail marketing programs.

The study revealed that marketers using permission e-mail programs face significant challenges in preserving e-mail as a viable customer communications channel. In particular, the increasing volume of unsolicited commercial e-mail (spam) will make it much harder for marketers to differentiate, gain and maintain relationships of trust with customers.

However, the data also clarified that, if done right, permission e-mail can be an effective channel for marketers to build valuable, long-term relationships with their customers. The data showed that respondents with the longest permission e-mail relationships with companies spend more on-line, respond more frequently to e-mail offers and value permission relationships significantly more than the average user.

Other key findings of the study include:

- Permission e-mail affected brand perceptions. The majority of respondents (56%) felt that the quality of permission e-mail relationships was important, positively or negatively, to their overall impressions about companies and their products.
- Permission e-mail subscribers with the highest standard of privacy were among the best customers. The 30% of all respondents that demanded the highest level of privacy (according to four privacy questions) were more inclined to think that permission e-mails sometimes affected their purchase decisions. They were also more inclined to open permission messages and were much more likely to value customizable e-mail.
- E-mail saturation was growing. Seventy per cent of respondents said they were receiving more e-mail this year than last year; spam was cited as a cause by 74% of those who said their e-mail volume grew. Permission e-mail was cited by only 28% of respondents as a cause of e-mail volume growth. Two thirds of respondents felt they received 'too much' e-mail.
- Respondents valued predictability in messaging highly. In questions throughout the survey, users consistently gave high marks to features of permission programs that established routines and long-term relationship building. The most popular types of permission communications were those programmatic in nature, including scheduled corporate newsletters, account status alerts and transaction confirmations. Unpredictable types of marketing programs, such as unscheduled company announcements and other one-off campaigns were distinctly unpopular with respondents. Clear expectation setting was also a highly valued attribute for sites aiming to establish trust. For a copy of the study, contact Michael Sippey (msippey@quris.com).

Search engine growth

According to Jupiter Media Metrix, the giants of Web search services are experiencing rapid audience growth. The number of unique visitors to the top three search engines has increased with between 16% and 54% over the past six months (http://www.jmm.com/xp/jmm/press/2002/pr_051502.xml).

Jupiter Media Metrix has just released the Media Metrix US Top 50 Web and digital media property ratings for April 2002. While the overall search category grew steadily over the

past six months – with 11% to 92,3 million unique visitors – the three largest search sites experienced especially strong growth. Google sites grew with 54% to 34,2 million unique visitors, Yahoo! Search grew with 20% to 38,4 million and MSN Search grew with 16% to 42,4 million. Jupiter Media Metrix attributes Google's strong growth to its partnerships with a number of portals, including Yahoo! and America Online.

Many smaller search sites have gained a foothold in the search category, largely as a result of leveraging advancements in technology, meta-searches and niche searches, and by forming alliances with larger portals. While audience acquisition is not always the primary reason for a smaller search engine to partner with a larger portal, differing levels of unique visitors inevitably follow suit. Search.com, whose parent property is CNET Networks, had an increase of 32% to 4,1 million visitors between November 2001 and April 2002. Webring.com, affiliated with Yahoo! Sites, had an increase of 57% to 1,4 million visitors over the same period. Conversely, Hotbot.com, affiliated with Terra Lycos, experienced a decrease of 21% to 2,3 million visitors and Webcrawler, affiliated with Infospace Network, had a decreased of 12% to 996000 visitors.

Among the biggest gainers in the search category were independent sites with partnerships similar to Google or those that have niche target audiences, such as with CNET's Search.com. Engine54.com, which combines meta-search technology with shopping directories, had an increase of 105% to 1,2 million unique visitors between November 2001 and April 2002. Bay9.com, which recently changed its name to Xuppa.com and targets on-line shoppers and auction hunters, increased with 89% to 2,3 million visitors. Picosearch.com, a hosted search engine that can be embedded within personal Web pages, grew with 45% to 985000 visitors.

Additional highlights of the Media Metrix April 2002 Internet Audience Ratings include the following:

- On-line universe rises: the number of people using the Internet increased from 114,1 million in March 2002 to 116,4 million in April 2002.
- Top growth categories: the car rental category had the largest increase in traffic versus the prior month, increasing its audience reach with 21% (from 2,8% to 3,4% of the overall on-line population). Fragrances and cosmetics increased their share with 20% , from 5% to 6% of the total on-line audience. Lotto and sweepstakes increased with 18% from 18,8% to 22,2% of the total on-line audience.
- Top gaining properties: Major League Baseball's Mlb.com was the fastest growing property between March and April 2002, increasing with 48% to 6,2 million unique visitors. The Discover Card property, driven by a strong advertising campaign and the addition of Novuslink.net, grew with 42% to 6,6 million visitors. CDNow Inc. grew with 38% to 6,7 million visitors.
- Breaking in: appearing in the Media Metrix ratings for the first time and attracting more than 500000 unique visitors, April's number-one top newcomer is Freemovietheatertickets.com, a movie ticket incentive site with 1,7 million visitors. Other notable newcomers include Bodyimprover.com, which sells the diet supplement Inferno, with 599000 visitors, Findserenitynow.com, a site that sells the mood stabilizer Serenity, with 1,3 million visitors, and Speakwithageek.com, a one-stop shop for handling computer problems, with 506 000 visitors.

Top 50 sites in the US

The Jupiter Media Metrix' ranking of the top 50 US sites includes the top Web and digital media properties according to combined, unduplicated at-home and at-work usage in the United States (http://www.jmm.com/xp/jmm/press/mediaMetrixTop50.xml). The top 10

sites, as based on the number of unique visitors (in 000s) during March 2002 were:

1	AOL Time Warner Network – proprietary and WWW	91899
2	MSN-Microsoft sites	83010
3	Yahoo! sites	78647
4	Terra Lycos	40954
5	About/Primedia	36016
6	Google sites	33000
7	Gator network	32154
8	eBay	29334
9	Amazon sites	29259
10	CNET networks	26232

Relative search engine statistics

Data from a search engine analysis, run between 4 and 6 March 2002, compared 10 search engines with MSN Search, HotBot and iWon, representing the Inktomi partners. The analysis used 25 single word queries. Google found more total hits than any other search engine. In addition, it came first in 23 out of the 25 searches. WiseNut displaced Fast for second place and found more hits than Google on two of the searches. Fast's database, represented by All the Web, came in third. Northern Light remained fourth despite being generally considered unavailable. AltaVista moved up to fifth followed by HotBot in sixth. MSN, Teoma, iWon and Direct Hit filled out the bottom four. Get the full figures at Greg Notess' Search Engine Showdown site at
http://searchengineshowdown.com/stats/size.shtml.

If you want to know how large the search engines were between 4 and 6 March 2002, visit the Search Engine Showdown site. The site contains estimates and recent claims of how many Web pages have been indexed and included in the various search engines' databases. The statistics are as follows:

Google	968 (1500)
WiseNut	579 (1500)
AllTheWeb	580 (507)
Northern Light	417 (358)
AltaVista	397 (500)
Hotbot	332 (500)
MSN Search	292 (500)

Details on the methodology on how the estimates for each search engine were obtained can be found at http://searchengineshowdown.com/stats/sizeest.shtml.

Another interesting fact is the overlap between the search engines. You still need to use several to be sure of comprehensive coverage, if that is what you want. There is little

overlap despite database growth. In an analysis on 6 March 2002 that compared the results of four small searches run on 10 different search engines, the four searches found a total of 334 hits, 141 of which represented specific Web pages. Of those 141 hits, 71 were found by only one of the 10 search engines, while another 30 were found by only two. Several of the largest search engines have shown significant growth since February 2000, when the overlap comparison was last run. Even so, almost half of all pages were only found by one of the search engines and not always the same one. Over 78% were found by three search engines at most. Visit http://searchengineshowdown.com/stats/overlap.shtml. for the statistics.

From free to fee – content revenues

Should you pay for on-line content? Would you pay for on-line content? If you reply no, then you are not alone. According to a report from Jupiter Media Matrix, (http://www.jmm.com/xp/jmm/press/2002/pr_031802.xml)
70% of on-line adult respondents revealed they do not understand why anyone would pay for on-line content.

Jupiter Media Metrix reports that revenues from paid on-line content will only grow from $1.4 billion in 2002 to $5,8 billion in 2006. According to Jupiter's new market forecast for paid content, revenues for general content will reach $2,3 billion in 2006 (up from $700 million in 2001), while revenues from on-line games and digital music will amount to $1,8 billion and $1,7 billion respectively by 2006 (up from $260 million and $30 million respectively in 2001). Jupiter also unveiled findings of a March 2002 consumer survey, revealing that almost three quarters of on-line adults (70%) do not understand why anyone would pay for on-line content.

'While there is money to be made in the on-line content business, Jupiter's latest survey and market forecast indicate that 'the mass market still largely shuns anything that smells like a subscription on-line', said David Card, Jupiter vice president and senior analyst. 'However, in the near term, media companies will create subscription services via packaging, exclusivity and added interactive features. Over time, the companies must use the gradual US broadband transition to reset industry ground rules and recondition consumers' expectations.'

Although most people do not want to pay, it seems that consumers are resigned to paying in the future. According to the March 2002 Jupiter Consumer Survey, 42% of on-line adults expected that over time people will have to pay for content on the Internet. Consumers' attitudes toward paying for content have, if anything, worsened since August 2000, when 45% of respondents said that they would not pay for on-line content. Despite consumers' reluctance, Jupiter analysts believe that major media properties are in a better position than they were four or five years ago because they no longer face well-financed startups that give away quality programming in an effort to lure new users.

'The on-line future is beginning to look a lot like cable TV. Established portals will emerge as networks that aggregate premium content and services in packages – both those that portals determine and those that users customize. This will pave the way for content providers to resell premium content through numerous partners', Card said.

Although Jupiter forecasts that general content revenues will hit $2,3 billion by 2006, the market will stay relatively fragmented. Within the general content category, the highest revenue generating genres in 2006 will be audio-video entertainment ($600 million), adult entertainment ($400 million) and financial and business news content ($350 million). Genres expected to generate the least revenue in 2006 include consumer or shopping aids

($85 million), content for children ($95 million) and sports content ($95 million). According to the recent survey, fewer than 6% of on-line consumers would be willing to pay for content for children, sports, video or shopping aids.

The survey indicates that among those on-line users who would pay for content, nearly one third (29%) said they would be likely to pay their Internet service provider (ISP). Digging deeper into survey responses, however, shows a good sign for mainstream media companies. Jupiter analysts have found that experienced on-line users – those who have an on-line tenure of five years or more – are more likely to pay publishers than they are to pay ISPs or portals. Time and again, Jupiter has seen on-line tenure to be the surest predictor of on-line behavior. Jupiter analysts contend that on-line cross-genre, cross-brand packages will lead the way to a tiered-services future much like that of cable TV.

Top ten guidelines for homepage usability

Jakob Nielsen's Alertbox for 12 May 2002 notes that a company's homepage is its face to the world and the starting point for most user visits. Improving your homepage multiplies the entire Web site's business value, so following key guidelines for homepage usability is well worth the investment.

Homepages are the most valuable real estate in the world. Each year, companies and individuals funnel millions of rands through a space that is not even a square foot in size. And for good reason – the impact of a homepage on a company's bottom line is far greater than simple measures of e-commerce revenues. The homepage is your company's face to the world. Increasingly, potential customers will look at your company's on-line presence before doing business with you – regardless of whether they plan to close the actual sale on-line.

The homepage is the most important page on most Web sites and gets more page views than any other page. Of course, users do not always enter a Web site from the homepage. People can follow links from search engines and other Web sites that reach deep inside your site. However, one of the first things these users do after arriving at a new site is to go to the homepage. Deep linking is very useful, but it does not give users the site overview a homepage offers – that is if the homepage design follows strong usability guidelines. Jakob Nielsen's column (http://www.useit.com/alertbox/20020512.html) gives 10 things you can do to increase the usability of your homepage and thus enhance your Web site's business value.

Cyber-geography research bulletin

There are lots of interesting things in the latest Cyber-Geography Research Bulletin (volume 2, number 11, 30 April 2002), which can be found on the Web at http://www.cybergeography.org/bulletin-2-11.html. There are new entries in the Geography of Cyberspace Directory, new information for the statistics and reference sections, as well as information on mapping and visualizing the Internet, additions to the Atlas of Cyberspaces and more.

One of the entries is about the Wireless Network Visualization Project (http://www.ittc.ku.edu/wlan/index.shtml). While computer networks and geography may not appear to have much in common, a collaborative effort was launched between the University of Kansas' Information and Telecommunications Technology Center and the Kansas Applied Remote Sensing Programme to create a more advanced wireless 802.11b mapping and network visualization method. This new procedure uses wireless network data collected from walking and/or driving scans, aerial photography and interpolation

techniques to create highly detailed network coverage and signal strength maps. Have a look at the image that represents the signal emitted from a single wireless access point located in downtown Lawrence, Kansas. The signal strength degrades from the stronger values in blue to weaker values in orange.

Effective management of Internet and intranet technologies

The Internet has opened up tremendous opportunities for businesses in the form of e-commerce and marketing efforts. Local intranets are simplifying business processes and connecting employees, but effective management of these important technologies is key to an organization's success with them. In his new book entitled Managing Internet and intranet technologies in organizations, Subhasish Dasgupta discusses the management of Internet and intranet technologies. The author is Assistant Professor of Information Systems at the School of Business and Public Management, George Washington University. He holds BS and MBA degrees from the University of Calcutta and a PhD from Baruch College, The City University of New York. His research interests include e-commerce, information technology adoption and diffusion, the effects of information technology investment on firm performance, group decision making and global information systems. This timely new book, which addresses the important issues of effective use and development of external and internal Web sites, provides practical guidance and useful case studies for business people, academics and practitioners alike.

Subhasish Dasgupta, a world-renowned expert in the field of Internet and intranet technologies, shares his insights in the following interview.

Q. What are some of the ways in which Internet and intranet technologies are used in organizations?
A. There is intranet technology and its use within an organization. Inter-organizational uses of Internet technology includes business-to-business and business-to-consumer electronic commerce.

Q. What are extranets?
A. An extranet is a private network that uses Internet protocol and the public telecommunication system to securely share a part of business information or operations with suppliers, vendors, partners, customers or other businesses. An extranet is a type of intranet that is extended to stakeholders outside the organization. It can be used to ensure service quality, interface issues and Web usability to service quality in the virtual world.

Q. How can intranets be used in education?
A. They can be used in the implementation of Web-based instruction in organizations. It is important to evaluate the perceived advantages and disadvantages for key stakeholders, such as institutions, students and faculties. Some authors report that 'expected disadvantages [of Web-based instruction] are in most cases lower than forecasted, except for the cases in which the Web is used as a substitute tool for instruction' and 'faculty are interested and eager to use Web-based instruction in all its forms'.

Q. What role should information play in the digital economy?
A. There are many roles of information in the digital economy. I believe that the focus should not be on the management of information technology but on the manner in which different types of information can be used to create value. A classification scheme for information types and how to use these types for analyses is an important first step.

Q. How are other countries using these important technologies?
A. The efforts of nine cities in eight European countries to develop a 'service infrastructure' for organizations to efficiently deliver electronic services was evaluated by Åke Grönlund.

Dr Grönlund found that the overall process was largely unstructured and improvised. He concluded that the there was a lack of strategic leadership in the field of electronic services in local European governments.

Q. What is the future of e-commerce?
A. In the future, Internet shopping will have a significant role to play in the economy because more and more people will shop on-line. The next frontier of e-commerce is mobile e-commerce. Significant improvements in wireless technology led to small handheld access devices and personal digital assistants, which constitute a major portion of mobile e-commerce.

Q. How is the Enterprise Resource Planning Model keeping up with the ever-changing technological world?
A. The Enterprise Resource Planning (ERP) model, which connects organizational processes with one end-to-end application, may not be sufficient for today's fast moving interconnected enterprises. I believe it is possible to extend the ERP model to electronic business (or e-business) and provide a new model that integrates the ERP model with tight business-to-business connections.

Q. What are some of the risks for businesses venturing out into the electronic commerce world?
A. There are many different attacks that hackers may attempt against companies, but also methods to combat each attack, for example the 'denial-of-service' methods and security mechanisms that include firewalls and authentication,. It is important to evaluate the potential risks from lawsuits, should a company experience a security breach.

Q. What methods can be used to build a reliable Web site?
A. There are a number of different approaches to build reliable and high-performance Web sites. Some methods include load distribution and load balancing. These methods can be effectively used to enhance Web site performance and reliability.

Q. How can data warehousing be used to improve a company's use of its Web site?
A. Data warehousing is an emerging technology that extends capabilities of relational databases. A large number of companies analyse their Web server's Web log. This log provides information regarding visitors to a specific page or site. Web logs are time-oriented data that can provide valuable information about Web traffic. A simple data set from the Web log can be enhanced in a step-wise fashion into a full-fledged market data warehouse.

The book is available from Idea Group Publishing, Hershey, PA, USA (232 pages, copyright 2001, ISBN: 1-878289-95-0). Visit their Web site at http://www.idea-group.com or phone 1-800-345-4335.