

PUSH TECHNOLOGY FOR LEVERAGING CURRENT AWARENESS SERVICES ON WORLD WIDE WEB: OPPORTUNITIES FOR CYBER LIBRARIAN

by

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ABSTRACT

With growing interest in the Internet, more specifically, the World Wide Web, over the past few years and rapid growth in the number of users, the volume of information carried by the Internet has increased dramatically both in sheer size and diversity. In addition, vast amount of information on the Web is publicly available to users with uncontrolled, unstructured, and drastically changing nature. Internet search engines, meta-search engines and subject directories have contributed, to a certain extent, in finding information required by the user. However, it is a time consuming task because the user has to actively search relevant information. In the context of Internet and World Wide Web, keeping completely current with all latest information available is an impossible task. But, majority of services such as the Current Awareness Services, alert service table of contents of journals, new books, standards, patents, Web page monitors, E-Newsletter & daily news digests, etc. are based on the concept called push technology for delivering latest literature right to the end-user's desktop through e-mail as soon as published. When full-fledged features of the push technology are utilized for providing current awareness service using Web resources, it will not only open new opportunities to the librarians but also to the end-users to keep up-to-date with latest literature. The article describes the opportunities open for the Cyber Librarian, advantages and down sides of push technology, push models, types of notifications and user interfaces, and active current awareness services on World Wide Web that are relevant to the library profession.

Keywords: CAS - Web based, Push Technology - CAS

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0 Introduction

Current awareness service makes the users aware of the availability of recent publications. It can be defined as a device of information system through which the users are informed promptly, as soon as possible after publications but before absorption into the comprehensive secondary source, of current literature on a broad field or on an area in which a group of persons are interested. In the context of library, the time limit for such a service should be after the receipt of the publications but well before the receipt of secondary publications containing them.

Traditionally, based on print publications, librarians were announcing the list of new additions of books, list of current periodicals, and current contents of periodicals to provide current awareness service to the users of their library. This service facilitates drawing the attention of users about the latest information and also maximizes the utilization of library resources. In the electronic information world, current awareness services were pushing new bibliographic references from online databases to people by paper mail or e-mail.

How to provide such a service using the dynamically changing Web resources? What are the tools to be utilized? What are the technologies that leverage current awareness service? These are the questions faced by the Cyber Librarian or similar information professional to effectively deliver his services. In settings like the Internet and World Wide Web, there is wide range of information sources located in many different places and in various formats. Information can be found in Bulletin Boards, Usenet Newsgroups or within Gopher space. In order to more effectively locate the information, which is most useful, there are a number of tools and centralized resources that might be helpful. To reduce confusion when searching for information, a person should know what tools are available and how to use them. This article discusses push technology, major driving force, and various tools available on World Wide Web to provide Current Awareness Service (CAS).

1 Internet Information Overload

From the early days of Internet until now, information pull has been the most dominant force in information market and users got the information by casual browsing of the Web, because it was recommended by someone else, advertised by some agency, or known by some other way. As the number of sites and services on Web increased drastically, information pull began to lose its appeal and power, as it is too laborious to search for relevant information. Until recently the only way to find relevant information on the Web was to use Internet search engines such as Alta Vista, Infoseek, and Google, subject directories such as Yahoo! or online database services such as Lexis-Nexis and Dialog. These services, however, are time consuming because they require active searching, filtering, understanding and organization of information by the Cyber Librarian or information professional. As a result, pull effect is gradually wearing off due to information overload and low Internet bandwidth especially while making aware of latest information.

Information overload makes it more and more difficult to get the right information at the right time. Information overload is the inability to extract needed knowledge from an immense quantity of information. Information overload can occur when a person:

- ?? Does not understand available information
- ?? Feels overwhelmed by the amount of information to be understood
- ?? Does not know if certain information exists
- ?? Does not know where to find information

?? Knows where to find information, but does not have the key to access it.
(Wurman, 1989)

Push technology with the integration of other retrieval, filtering technologies enables providing latest information at right time to the right user from the Web.

2 Evolution of Push Technology: From Librarian's Service to Software's Service

Librarians have been providing or pushing information out to their patrons for years using print-based publications. In the field of library science delivery of information updates, in anticipation, has been referred to as current awareness service. But, based on users' information profiles and demand, delivery of information updates has been referred to as Selective Dissemination of Information or SDI. Prior to the availability of large volumes of electronic information, librarians have accomplished SDI service by manually reviewing information sources and pushing relevant information out to people who needed it. SDI service has been in many instances become automated, allowing the user to create a user profile directly with the information provider or publisher. Many database vendors, such as Dialog, Nexis-Lexis, Ovid, etc. offer SDI service that allow users to create a specific search strategy, which is saved and run at regular intervals, say daily, weekly, or monthly basis. Although push and SDI services are similar in concept, push technology is more sophisticated in its ability to offer and support a variety of user-defined options for information access, deliver, and presentation (Guenther, 1998).

The evolution of the push technology had its origins when professional groups delivering information and opinions on specific topics in a timely manner using Listservs. In addition, Usenet newsgroups have emerged on Internet, which have some characteristics of push technology because news servers communicate with each other and push news back and forth (Inside the Internet). The push technology has rapidly gained considerable popularity since its emergence in April 1996, when PointCast announced PointCast Network. Since then, a number of similar solutions have been proposed and deployed on the Internet. There are various push technologies becoming available, called variously as streaming, channeling, broadcasting, webcasting, pointcasting or narrowcasting. The push technology is a data distribution technology in which selected (customized or personalized) data, in the form of a HTML page or a series of advertising images in the form of animated screen savers, automatically delivered to the user's computer at prescribed intervals or based on some event to occur. The particular stream of content is called a channel, and many of push products have both a means of creating user's own channels and becoming a subscriber to other people's channels. This technology has been around for a while under the names of Current Awareness Service or Selective Dissemination Service and used fax or e-mail as its delivery medium. But the Web browser interface has proved more convenient for many companies (Streeter, 1997).

Online databases such as Dialog, Dow Jones, ERIC, and Lexis-Nexis have been available for more than 15 years, but only recently have they been available on the Internet. They are excellent sources of a wide variety of information such as court & criminal records, Ph D. dissertations, biographies and articles from thousands of magazines and newspapers. Databases are good sources of background research, but are not the best sources of latest literature and fresh news. These database sources are likely to incorporate push technologies in the near future. DialogWeb, a product from Knight-Ridder's Dialog service, is one of the services that has transformed to Web-platform. It allows users to set up updates on topics of interest and have the latest records automatically delivered to their e-mail addresses.

However, in the context of Internet and World Wide Web, keeping completely current with all the changes is an impossible task. But there are several services that can help by providing a CAS for alerting changes in specific Internet information resources, from Web pages to News sites to Usenet news. The fundamental reason why knowledge workers find push technology irresistible is that they receive digestible information at regular intervals without having to request them, and especially without having to do any work to generate them (Raden, 1997).

3 How Push Technology Works?

Automated content delivery to user's desktop is what most people consider is push. But more often than not what's thought of as push is really pull, with user's computer doing the checking for new information. Basically, there are two computer software that facilitate push/pull technologies to work.

3.1 Push Clients

The software receiving and displaying information on user's computer is a push client. Like other client software such as Netscape Navigator and Microsoft Internet Explorer, push clients are only one side of client/server process. On the other side of the process, push servers are responsible for sending channels of information to clients. The various channels usually contain different types of content. By subscribing to the channels that a user wants to see, he can tune the content to his own personal preferences. Examples of most popular push clients are AirMedia Live, Marimba Castanet, and PointCast.

3.2 Push Servers

Delivering the content to user's desktop is the job of push server. The biggest names in intranet and Internet content delivery solutions are Marimba, BackWeb Technologies and PointCast I-Server.

3.3 Push Desktops

Microsoft Internet Explorer 4.0 and Netscape Netcaster are bringing push technology to the desktop in a big way. With these two products, the latest advances in push technology

will be integrated into Web browser on users' desktops. Instead of having to go through several different proprietary clients, users can access channels from several different push services right through Internet Explorer or Netcaster (Stanek, 1997).

4 Opportunities for Cyber Librarians/ Information Professionals and Content Providers with the Push Technology

Librarians have traditionally concerned with certain functions in the print era i.e. collection development and acquisition, classification and cataloguing, circulation, reference service, preservation, conservation, and archiving. Most of these services have their parallel roles in the internetted information era. For example, in the traditional library, acquisition of documents involved a decision between either buying a physical item, or not buying it. For the electronic information available on the Web, "acquisition" offers a spectrum of choices such as: download, print or store on disks and facilitation to make electronic information available on a local area network. In addition, several improvements have been taken place in the normal work of librarian and opened new opportunities as a result of digitization of information and advances in Web-based technologies in providing information services. For example, opportunities for librarian in the Internet and World Wide Web environment are: Universal Accessibility of Material, Book and Reading Lists, Patron Initiated Inter-Library Services, Online Catalogs, Virtual Reference Desks, Virtual Tours, Library related Web Forms, Cooperative Cataloguing, Distance Education Support, and E-Newsletters.(Nagesawra Rao, 2001). Apart from passive services on Web, push technology has offered several active current awareness services such as list and table of contents of journals, new books list, etc. to deliver right content to the right user's desktop through e-mail. With the adaptation of push technology, not only the Cyber librarian/information professional but also the content provider has gained several advantages. These are:

- a) **Targeting the Right User:** Special librarian/information provider can target information more accurately, i.e., it will go to those persons that are genuinely interested in the information that is sent to them.
- b) **Quality of Information:** Users can rely on qualified push sources such as CNN or Wired Magazine to get their content. The authority of such content provider will make it possible for users to get high quality information.
- c) **Automatic Notification:** Users no longer have to visit their favorite or popular sites to check if the information on them has changed; they will automatically receive a notification whenever a change occurs.
- d) **Easy to Use:** Many push applications are easy to use, as they are very similar to television operation.
- e) **Software Upgrades:** Push technology enables faster, automatic downloading of software upgrades, at the same time reducing the costs associated with traditional packaging and selling.
- f) **Time to Download:** Push technology involves sending only new and changed information to user's computer, so access to Internet and download time is reduced.

- g) **Response Time:** Because the information is downloaded on to a local computer, response time is generally quicker to view the contents compared to directly accessing information on Internet.
- h) **Security and Privacy:** As push applications run mostly at the client side, users can more easily protect their privacy. In many push applications the user's profile and the log information about the user's behavior are stored in the user's computer.
- i) **Personalized User Profiles:** Push technology enables intelligent information filtering based on personalized user profiles describing required information needs.

5 Downsides of Push Technology

- a) **Huge Bandwidth:** Push applications require a great deal of bandwidth because push servers continuously send large volumes of information to each user's desktop.
- b) **Weak Keywords in User Profiles:** Push servers deliver content based on user's profiles. However, to create such a profile the user will have to find out what the right keywords are to describe his information needs, a task, which most people are not very good at. This problem can be alleviated through careful monitoring of information specifications, and continual editing and refining of user's profiles.
- c) **No Real Standards:** Push had no real standard to build up on – every vendor had his own scheme for notification and delivery of pushed content. This is especially true for Microsoft and Netscape, which developed their own incompatible software protocols and systems. Some of the push vendors depended on the Web and HTML. Some worked at lower-level TCP/IP protocols. The wide variety of push differences continues to bedevil the push players. Even the applications developed for one company's early software versions are not compatible with later ones.
- d) **Big Demands on Infrastructure:** Push technology makes rather big demands at both the client as well as the server side. On the client side a fast and preferably permanent Internet connection is needed, as well as a computer, which preferably has a fast processor and quite a lot of storage space. On the server side the investments in server and other resources are high. Push technology server does not come cheap; it usually requires a powerful server, a lot of storage and a fast Internet connection.
- e) **Poor Support to Background Research:** The push technology is not good for the typical knowledge worker who mines information from a variety of sources and then draws conclusions by digesting that information. Generally push servers deliver latest information that is added to the database.

6 Models of Push Technology

Depending on the level of filtering technology used at push server side, there are four types of information push models, viz. Broadcast or Webcast Push, Selective Push/Pull,

Customized Push/Pull, and Intelligent Push/Pull which evolved from the mere basic level of broadcasting to intelligently pushing information to users on the Internet.

6.1 Broadcast Push

The most elementary form of push is broadcasting/webcasting, similar to television broadcasting in which data is delivered to the clients continuously in the form of electronic news services, live streaming and event reproduction. For example, CNN Interactive and ABC News are online news services that deliver latest news to subscribers.

6.2 Selective Push/Pull

In selective push/pull, the user subscribes to certain types of information or channels and specifies when that information is to be delivered. Selective push has its limitations, but the data delivered is more specific and more useful compared to the volumes of data delivered through simple webcasting. Examples of selective push/pull model are magazines and newspaper digests, commonly delivered weekly via e-mail; company or industry newsletters, delivered on a regular publication schedule; and services such as Farcast in which user subscribes to certain news sources and specifies how often user wants them delivered.

6.3 Customized Push/Pull

This service offers a dynamic construction of personal start pages to individual end-users based on user's profile and subscription choices. The customization used by Yahoo!, Excite, Infoseek, and Lycos to construct personal startpages is still very limited. Innovative products such as Wayfarer and BackWeb are oriented towards corporate world to include tracking corporate resources, data warehouses, financial applications, and report generators while monitoring both internal and external Web pages for new information. The objective of customized push/pull model is not only automating information gathering, but ultimately steer the user in the direction it thinks the user needs to go.

6.4 Intelligent Push/Pull

The push provider, also known as intelligent push agent, examines the behavior of the user, what the user reads, saves, and utilizes in decision making to further fine tune the information that should be pushed to him. This type of push/pull is different from other models. For example, Amazon.com, the large online bookseller, uses bots to track customer's preferences (Kendall, Julie E & Kendall, Kenneth E., 1999).

7 Notification and User Interfaces Utilized in Push Technology

Push vendors generally offer one of the three different options such as notification, delivery, and notification & delivery, for pushing information to the client's desktop. In notification, vendors alert the subscriber that new content relevant to the user's information profile has been found. The notification usually is in the form of an e-mail message. In delivery, content is delivered directly to the desktop with no notification. Data is downloaded to the client's computer and can be browsed off-line. But in notification & delivery, most of the push vendors offer options for both notification and delivery of content.

The information delivered to a user's workstation is usually a summary of a large document that the user can access by requesting additional details. Most push client software display the information in a small window at the bottom of end-user desktop called as news ticker. A ticker is a movable, resizable, bar-shaped window that appears on the screen that scrolls time sensitive information from channels the user has subscribed to. The ticker can even display news while the user works on other application. A ticker bar embeds and scrolls in the title bar of any active application. It can even automatically follow the user from one active application to the other. Examples of such tickers are IBM NewsTicker and MyYahoo! NewsTicker.

Some of the push client software could present the information, such as news headlines, in the form of a screen saver. A screen saver is an animation application that scrolls across a monitor when user computer is temporarily inactive. In addition, personalized screen savers keep the user informed of the latest news with headlines that scroll across the screen. Examples of such tickers are AfterDark Online and PointCast.

Other push client software display the information in an application window that end-user can check periodically. The widely used push delivery format is e-mail, the most popular communication medium on the Internet, because broad range of content such as complete Web pages, including graphics can be delivered through it.

8 Active Current Awareness Services on World Wide Web

Keeping up to date with the latest information to support research, teaching and studies can be a daunting prospect in the information intensive Internet age. Fortunately, there is a wide range of CASs available to highlight potential, relevant new information. Current awareness services can be divided into two groups: active and passive. Active services deliver current information to end-user's desktop – through e-mail or a personalized Web page, which only the user has access to. An e-mail alerts service delivering table of contents of journals to e-mail box is one example of an active service. Passive services contain current information, but the user has to visit the information resources in order to access it. A CD-ROM or Web-based database containing recent journal article information is an example of a passive service. The active current awareness service has been considered for discussion in this paper as it automatically pushes the latest content to the end-user's system mainly through e-mail. The range of CASs include Table of Contents of Journals and Articles Alerts, New Books Alerts, Standards Alerts, Patents Alerts, Web Page Monitors or Notifiers, and E-Newsletters & News Alerting Services.

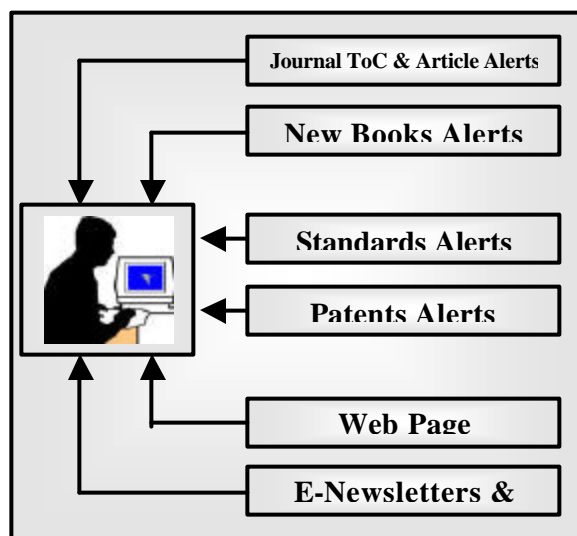


Fig 1: Types of Current Awareness Services relevant to library profession

8.1 Table of Contents (ToC) Services

Journal articles are excellent sources of recent, peer-reviewed, good quality research and as such represent one of the most important resources to keep up to date with. Traditionally, librarians are providing printed contents pages of latest issues of relevant journals to their clients. While doing so, there is a chance of missing a particular issue, and some journals may not be accessible at a particular library. Several journal publishers and commercial database vendors have developed a system to deliver automatically contents pages of latest journals to end-user e-mail addresses directly. Appendix I shows some of the publishers/database vendors with a brief description of the ToC services that they provide as an active CAS through e-mail alerts.

Appendix I: Table of Contents & Article Alerting Services and Publishers/Database Vendors

<p>AGU's E-Alert E-Alert delivers ToC of 12 journals published by American Geophysical Union.</p> <p>AJ-TOC AJ-TOC e-mails ToC of 'The Astronomical Journal', University of Chicago Press.</p> <p>AMS E-Mail Alert Provides issue and article alerts from 8 journals published by American Mathematical Society.</p> <p>ASAP Alerts ASAP Alerts deliver newly available A.S.A.P (As Soon As Publishable) articles from over 30 Web editions published by American Chemical Society.</p> <p>BioMedNet MyE-Mail Alerts Delivers ToC from more than 200 Elsevier Science's life science journals from BioMedNet.com.</p>

Blackwell Synergy

Synergy delivers ToC from 290 Blackwell Science & Munksgaard journals

CiteTrack

Alerts by e-mail whenever new content in Proceedings of the National Academy of Sciences or participating journal is published.

CoB E-mail Alerting Service

The service delivers ToC of 3 journals published by Company of Biologists Ltd.

Contents Alert Economics

ECONBase database alerts newly published articles from 67 journals of Elsevier/North-Holland.

ContentsDirect

ContentsDirect service delivers ToC from the journals published by Elsevier Science.

CSIRO Early Alert Service

Early Alert Service provides ToC from 16 journals published by CSIRO Publishing.

EBSCO Alert

EBSCO Online provides ToC from approximately 13,000 journal titles.

Emerald Alert

Provides ToC from over 100 electronic journals published by MCB University.

EurekaAlert!

It is a service of [American Association for the Advancement of Science](#) and alerts the latest research advances in science, medicine, health, and technology and posts material from scientific journals.

IDEALAlert

IDEAL provides ToC from 180 journals published by Academic Press.

Infotrieve Table of Content Alert Service

Table of Contents browsing and alert service for over 20,000 periodicals.

Ingenta ToC Alerts

The Ingenta database provides ToC from over 26,000 journals.

IoP Alerts

IoP Alerts service is designed to deliver ToC and abstracts within selected subject area of journals published by Institute of Physics.

JAMA and Archives Journals E-Mail Alert Service

The service offers ToC from JAMA, the Archives Journals of American Medical Association.

Journals E-mail Alerting

Alerts ToC from 24 chemistry journals published by Royal Society of Chemistry.

KARGER ToC Alerts

KARGER provides ToC from the approximately 75 journals.

Kluwer Alert

Delivers ToC from over 700 journals published by Kluwer Academic Publishers.

LiebertAlert

LiebertAlert delivers ToC from 54 journals published by Mary Ann Liebert, Inc. Publishers.

LINK ALERT

LINK ALERT provides TOC and abstracts from over 200 Springer journals.

List Server for INSPEC & IEE Publishing & Information Services

The service delivers announcements of new publications: books, conference proceedings, journals and distance learning courses of IEE Publishing.

MedFetch

MedFetch is a web based software program for querying the world's greatest medical database covering MEDLINE and pre-MEDLINE databases.

Nature's E-alert

Alerts ToC from 30 journals published by Nature Publishing Group.

PubALERT

PubALERT alerts research articles & scientific events from The Scientific World.

QuestAlert

QuestAlert is Boston College Libraries' Catalog for books, journals, CD-ROM, etc. and it automatically sends out an e-mail list of new publications.

Sage Contents Alerting

This service has over 70 social science journals to deliver ToC from Sage Publications.

Scan First Alert

Scan First Alert provides the latest journal ToC published by Gordon & Breach.

Scholarly Articles Research Alerting (SARA)

The service delivers ToC for Carfax, Martin Dunitz, Psychology Press, Routledge, Spon Press, Taylor & Francis journals and covers 540 journals.

Search Alert

ScienceDirect database's Search Alert feature notifies by e-mail when new articles of interest are added to the database.

SPIN Web

SPIN provides ToC and abstracts from over 80 scientific journals published American Institute of Physics.

Table of Contents Alerting Service

CatchWord currently hosts over 1100 journals for 65 publisher clients and provides ToC when a new issue of any journal is available on CatchWord.

Table of Contents E-mailing Service

E-mailing Service provides ToC from 170 journals published by Oxford University Press.

Table of Contents Updates

Updates service provides ToC from 80 journals published by World Scientific Publishing.

What is New@IEEE

It is an electronic newsletter service of new publications, news, quick products reviews, updates on journal pricing studies, etc. from IEEE.

Wiley Content Alerts

The service provides ToC and abstracts from 300 Wiley InterScience journals.

ZETOC Alerts

ZETOC service provides access to the British Library's Electronic ToC from over 20,000 journals and 16,000 conference proceedings published yearly.

8.2 New Book Alerts

Books are important sources for study, reference and research. Traditionally, book publishers deliver hard copies of book catalogs to the librarian for recommendations. But with the evolution of Web-based services, publishers are able to alert through e-mail the latest publications and also help to select latest publications in a particular subject or based on user specified keywords. Appendix II shows new book alert services and associated publishers or service providers.

Appendix II: New Book Alerting Services and Publishers/Service Providers

Ashgate E-mail Updates & Mailing List

The service updates periodically new forthcoming books from Ashgate Online.

Association of American University Presses

Notifies weekly by e-mail of new releases from AAUP University Presses.

Automatic notification of new publications

Delivers monthly listing of all new books in all subject areas published by Cambridge University Press.

Bookmarkphysics

Alerts whenever new titles are published by Institute of Physics Publishing.

Cambridge Advance Information Service

It is a monthly new titles information service provided by Cambridge University Press.

CCPL Book Alert!

It is a monthly alerting service of new books from Carmel Clay Public Library.

ContentsDirect

Provides latest book contents published by Elsevier Science.

EAlert

eAlert a monthly service to alert new titles published by Harcourt International.

e-mail alerting service

It is an e-mail alert service of new books and journals published by Paul Chapman Publishing.

Eyes

Eyes service delivers as and when new books are added to Amazon.com.

Greenwood Mailing List

Monthly e-mail update of new titles published by Greenwood Publishing Group.

Jenny's Desk

The service alerts whenever new books are added to Internet Bookshop and allows to select books by author or subject wise.

KLUWER ALERT

The service allows selection based on subject and provides updates and new books published by Kluwer Academic Publishers, Kluwer Law International and Kluwer Academic/Plenum Publishers.

McGraw Hill New Book Alert

New Book Alert is monthly service provided by McGraw-Hill.

Merlin's Book Alert Service

It is an alerting service to deliver new books, tapes and videos as soon as available on Willow Books.

MyOECD/OECDdirect

Alerting services for new OECD publications available from the Online Bookshop via

SourceOECD (books/CDs, periodicals), plus free OECD newsletters.

Netsurfer Books

It delivers by e-mail with short book reviews, notes and recommendations quarterly from Netsurfer Communications, Inc.

New Releases Notification

Weekly service notifies the latest books published by The University of Chicago Press.

New Title Alerting Service

DA Information Services.

NHBS Alert

It is a monthly e-mail catalogue featuring books from a range of publishers and allows to select specific topic areas and is offered by Natural History Book Service.

OUP E-Mail Notification Service

New Oxford University Press notifies books in chosen areas of interest by e-mail.

Prentice Hall Mailing Lists

Prentice Hall periodically e-mails information about new titles through electronic mailing lists.

Professional eMailing Lists

Provides monthly list of new books published by Addison-Wesley.

Psychology E-mail Alerting Service

Monthly alert service of new books in psychology from Psychology Press.

PTR Mailing Lists

Printice Hall Professional Technical Reference provides monthly E-newsletters about their publications.

SCAN First Alert

The service alerts periodically book titles published by Gordon & Breach and Harwood Academic Publishers.

Select E-Mail Updates

Delivers Updates by subject from Blackwell Publishers and allows to specify regularity of updates.

SPIE INFO-BOOKS

Monthly/fortnightly e-mail alerting service to announce new publications from SPIE such as books, proceedings, and collected papers on CD-ROM.

Springer Alert

Delivers by e-mail a list of new books each month published by Springer-Verlag and allows selection based on different areas.

TSO update service

Update service delivers new books published by The Stationary Office.

Wiley E-mail Alerting Service

The service notifies by e-mail of new and best-selling books from Wiley Group.

Wiley-VCH newsletter

This service notifies the latest publications of Wiley-VCH publisher.

8.3 Standards Alerts

The major benefits of the standards alert services are automatic and fast updating on standards, monitor the latest development of standards to facilitate trade, keep up with

new technologies and manufacturing techniques, and ensure customer's satisfaction by complying with relevant standards. Appendix III shows the standards alerting services and service providers.

Appendix III: Standards Alerting Services and Service Providers

BSI E-mail Update Service

E-mail Update Service of British Standards Institute supplies the user with standards information in user-selected areas.

IEEE News and Alerts

The service notifies the standards approved for publication and dissemination by IEEE Standards Association.

Standards Alert Service

This service conducts a daily search and contacts the user via e-mail when there have been reviewed, revised or approved standards from NSSN.

Standards Tracker

Standards Tracker actively tracks customer-selected and downloaded standards from 'American Society for Testing Materials' and sends customers an e-mail whenever that particular standard changes.

8.4 Patents Alerts

A patent is an exclusive right granted to the inventor by the government, giving the inventor the right for a limited period to stop others from making, using or selling the invention without the permission of the inventor. When a patent is granted, the invention becomes the property of the inventor, which - like any other form of property or business asset - can be bought, sold, rented or hired.

Patents alert service allows users to stay abreast of current technical developments that represent potential business threats and opportunities; evaluate new product, process, or collaboration prospects in time to permit appropriate responses; and anticipate and understand science and technology-related shifts or trends in the environment as preparation for organizational planning and strategy development. Appendix IV shows the patents alert services and service providers.

Appendix IV: Patent Alert Services and Service Providers

Derwent WPI Alerts

Derwent WPI Alerts are a current awareness capability for Derwent WPI on Dialog, which allow companies to keep up-to-date with the latest patenting activity of competitors, and closely monitor patent applications in their particular area of interest.

MicroPatent@lerts!

MicroPatent@lerts! allows user-specific searches to be run on a regular and timely schedule, to retrieve newly published patent information, with results delivered in a convenient report format via e-mail. The service offers search criteria, including descriptive terms, company or inventory names, classifications, etc. and frequency of delivers ranges from weekly to monthly.

Patent Alert!/Trade-mark Alert!

It is a monthly electronic mail notice service containing links to all newly registered patents and/or trade-marks that match the user's profile and provided by Strategis.com of Industry Canada.

PatentAlert

It is an e-mail publication and delivers periodical (daily, weekly, bi-weekly or monthly) updates in selected field of interest about inventions recently patented in the United States provided by PatentAlert.com.

9.4 Web Page Monitors or Notifiers

Web sites have become an increasingly important source of information. Therefore, it is worth to track useful Web sites when new content is added to them. There are a number of packages available which allow the user to track changes in the Web site and alert through e-mail notification ranging from desktop software to server-side software. Appendix V shows Web page monitors or notifiers.

Appendix V: Web Page Monitors or Notifiers

BullsEye

BullsEye, metasearch tool, is an intelligent research assistant developed by Intelliseek Inc. BullsEye utilizes 700 search engines & databases and delivers relevant, targeted and personalized information right to the user. The tracker utility automatically performs scheduled searches and sends results and reports via e-mail.

C4U

C4U is based on easy-to-use technology that enables the C4U software to swiftly scan Web pages and detect changes and new information since the last time the user checked a specific page. Periodicity of the notification can be set by the options provided. The 'Keywords' feature can be used for locating specific topics in a site as soon as they appear on it.

Copernic 2001 Pro

Copernic 2001 Pro is an indispensable tool for competitive intelligence, as well as for researchers and professionals who need to keep informed about the latest developments in their respective fields. It automatically performs queries at user specified intervals, searches Internet and notifies new results by e-mail.

Karnak

Karnak searches the Web for user defined topics and delivers changes on weekly basis through e-mail.

Mind-It

NetMind offers its free Mind-It service for monitoring changes to specific Web pages. Mind-It sends e-mail when the registered Web page changes. The service offers a number of options, including the ability to set the frequency, the part of the page to monitor, and kind of notification to deliver. Mind-It can also be configured to send a message when the Web page moves or when it ceases to exist.

Spyonit

Spyonit monitors Web page changes in any way i.e. it notifies through e-mail when a phrase on a particular Web page is added or removed.

TracerLock

Every day TracerLock monitors hundreds of the most significant news sites around the globe and e-mails an alert of the publication of new articles that match search items. It provides free monitoring of general Web search, stock market information, Usenet newsgroups, auction sites, employment listing.

TrackEngine

TrackEngine is a tool to help users manage information on the Internet better. It detects new content in the specified Web page and notifies the user via e-mail.

URLy Warning

URLy Warning (pronounced as “early warning”) is a set of tools that watch individual Web pages, or URLs once a day, and sends an e-mail when a change occurs to the specified page. The service shows exactly what has changed on the Web page.

Webspector

Webspector from Illumix Software is an internet research and navigation tools that tracks an unlimited number of Web pages for content changes and automatically e-mails detailed reports.

Yahoo! Alerts

Yahoo! Alerts is a personalized notification service, including almost fifteen types, alerts the user of relevant content via e-mail, instant message, pager, or cell phone.

8.6 E-Newsletters and News Alerting Services

An E-newsletter is a special timely presentation on a newsworthy subject. Their primary distinguishing characteristic is their agility in responding to trends. They are published by experts thoroughly conversant with a specialized field. The specialized information in newsletters is normally current, and usually can't be found anywhere else. An E-newsletter might be a news digest, an alert to content at a Web site, or description of products and services of a particular organization. There are thousands of E-newsletters from various industries and companies. In addition, several Internet services actively e-mail with links to online news items from general to subject-specific news. Appendix VI shows some of the E-newsletters and e-mail deliverable news services especially in the field of aerospace industry.

Appendix VI: Aerospace Industry Related E-Newsletter and News Alerting Services

ADBC Newsletter!

The Aerospace & Defense Benchmarking Council (ADBC™), an association of aerospace and defense professionals within major corporations or governmental agencies, is dedicated to providing members with an opportunity to identify, document and establish best practices through benchmarking to increase value, efficiencies, and profits. It offers a free newsletter from The Benchmarking Network, Inc.

Aerospace and Aviation Newsletter

The Aerospace and Aviation newsletter contains news and product information related to the Aviation and Aeronautics industries.

Aerospace Market News

It is a priced monthly newsletter sent by e-mail. The newsletter provides latest available market information relating to aircraft and engine production rates, orders, unfilled orders/backlog, together with military and commercial programme updates and

published by Industry Research Group.

Aerospace Online Newsletter

It is a free e-mail newsletter written by the editors and staff of Aerospace Online to bring the latest news, product information, and special announcements to keep you up to date the professional community.

Aerospace Outlook Magazine

EyeforAerospace brings daily and weekly industry news, a multimedia library of past presentations, information on upcoming conferences, industry research and reports, interviews with the leading thinkers and in depth analysis of the latest industry trends.

Alberta Aerospace Association Newsletter

Schreiner Target Services Canada Ltd. is a subsidiary of Schreiner Aviation Group of the Netherlands. Schreiner Target Services has been established to support target operations for the Canadian and U.S. Forces in North America and to expand product lines into the global marketplace and brings new in the form of a newsletter.

Daily Recon

It is a free military e-Newsletter that is e-mailed during the mornings on Monday thru Friday to the subscribers. Service for soldiers, military and civilian personnel, and anyone else interested in the military simply because it fits into the framework of ModernCadence™ vision of educating and training military leaders. It is product of The JML Ventures Company.

Defence Systems Daily

Service provides free daily defence and aerospace newsletter from around the world and also offers a free daily e-mail headline service to any subscriber.

DefenseLINK News

It comes from a variety of sources and includes news releases, memos for correspondents, contract announcements, press advisories, briefing transcripts and news photos produced by the Directorate for Defense Information in the Office of the Assistant Secretary of Defense for Public Affairs.

Global Engineering Documents

The newsletters from Global Engineering Documents and provides industry news and related product offerings, free of charge.

Government/Military Newsletter

The Government/Military Newsletter contains news and information related to the Government and Military-related industries.

Military & Aerospace Electronics Newsletter

The newsletter supplements Military & Aerospace Electronics magazine by delivering the highlights of the latest defense, aviation, and space electronics business events. The newsletter updates engineers with some of the most important design innovations, contract wins, product announcements and contract opportunities. It is a product of PennWell Corporation.

MilitaryWorld Newsletter

A newsletter from militaryworld.com

NASA's Aerospace Technology Newsletter

It is a bimonthly newsletter which highlights selected items from NASA aerospace industry, government agencies, and universities. Each issue contains articles about upcoming events, research and technologies, announcements and updates on current events

within the Office of Aerospace Technology.

National Aerospace Training Newsletter

It is a monthly newsletter of National Aerospace Training (NAT). NAT is a college with a well-established reputation for providing professional training courses that are designed for those who aspire to become first class airline pilots.

U.S Military Newsletter

It is the service from About.com

Weekly Defense Monitor

It is a free electronic publication by the Center for Defense Information and it will bring readers a few short articles on various military and foreign affairs issues each week.

9 Conclusion

Push technology has the potential to increase awareness within groups, projects and organizations. The primary advantage of push technology is that it minimizes the effort users must invest in becoming aware of the latest information in their field of interest. In the profession of librarianship, push technology based current awareness services using Web resources would greatly facilitate enhance the abilities of the Cyber Librarian or information professional to provide right information to right user in a timely manner as well as meeting the latest information requirements of the end-user.

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