Managing Information Overload with INFOTAP™ Software
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Abstract
The amount of information available to your business today is staggering and increasing on a daily basis. More and more information is available online from both external and internal sources. Numerous electronic news wires and databases are now available to provide real-time or historical information related to your business. The typical business generates large amounts of reports, memos, E-mail and other electronic documents. These documents represent valuable corporate intellectual property.

It has been estimated that over 90 percent of this online information is in textual form. Almost all businesses maintain databases of key information, but the traditional database management systems used in most cases are not suited to textual data. The vast majority of this online data is not readily accessible. Accessing the information hidden in this mass of textual data requires specialized tools.

InfoTap software uses a simple, graphical interface to access the textual data available to your business. InfoTap provides the searching and filtering tools to find the information you need in a timely manner.

Introduction
Businesses generate huge volumes of textual data containing valuable information. The traditional database management systems used for business databases are a poor match for this textual data. Search capabilities are limited and the database management systems are optimized for highly structured data. Accessing the hidden information in this data requires tools specialized for textual data.

The Solution
InfoTap software is a product of SAS Institute Inc. designed to address the problem of accessing textual data. InfoTap software has an easy-to-use graphical interface that makes it simple to organize information in much the same way that you organize your office. Individual pieces of information such as news stories, mail messages, memos and other documents are collected in books and folders. Related books and folders are grouped into desks. The example InfoTap WorkSpace Window shown in Figure 1 graphically displays the objects in the InfoTap system. Desks can be opened and closed by double-clicking on the desk icon to show or hide the contents. Double-clicking on a book or folder icon will open the book or folder in a separate Browse Window.

The desks shown in the WorkSpace Window can represent private areas for a single user, shared areas for a department or group, or public areas accessible to anyone on the InfoTap system. A wide variety of information can be made available through a single application. The example WorkSpace Window shows a Personal desk containing private data; a News Wires desk containing data received from external news feeds; a Corporate News desk containing internal news such as newsletters and corporate business reports; a Marketing desk containing information used by the marketing group such as contact reports, evaluation reports and competitive information; and a Policies desk containing company policies and procedures information.

A Brief Example
Suppose that you wish to look at recent news about 3D graphics technology and products. Select the book that you wish to search (in this case, Comtex 95 Feb) using the mouse and click on the Search button. The selected book is opened to the Index Page in a Browse Window as shown in Figure 2. You can search the contents of the book by entering a query in the query field and clicking on the
Search All Docs button. In Figure 2, the query 3D graphics has already been entered and the search performed. The status area of the display shows that 18 of 35675 documents were matched and the search is completed. You can now view the matched documents by clicking on the View Selected button.

Figure 2: Browse Window, Index Page

The View Selected button takes you to the Table of Contents Page of the book as shown in Figure 3. You can now see a short summary of each of the matched news stories. You can view the full text of a news story by double-clicking on the story summary.

Figure 3: Browse window, Table of Contents

The above example shows only a small amount of the functionality of InfoTap software. Many of the features of the system are easier to demonstrate on a live system than to describe in this paper. The interface is designed to simplify the system for the casual user. For example, dropsites are provided for many common functions. Documents can be printed, mailed or filed by simply dragging the document icon to the appropriate dropsite. The dog-ears on pages and the bookmarks on selected pages allow simple point-and-click navigation through books and folders. Most common functions can be performed without ever accessing the extensive set of pull-down menus.

InfoTap software includes a powerful query language for performing searches. Searches may consist of simple words or phrases or may include more complex constructs such as Boolean keywords or proximity relationships. Numerous wildcard options are supported, as well as a numeric ranging capability. The query language allows simple word or phrase searches for the casual user while providing a full set of text retrieval functions for the sophisticated user.

Profiles

The search capability addresses the need to find old information stored in the InfoTap system. InfoTap software also provides the ability to access new information in real-time. Profiles are powerful tools for monitoring new or changing data. A user can be notified immediately of any information received by the system that matches the user’s interest profile. In the search example in the previous section, you were interested in 3D graphics technology and products. In addition to the search of existing news stories, you can set up a profile to watch incoming news wires for any story referring to 3D graphics. Any story matching the profile will be copied to a folder for review. Options are provided for visible or audible alerts for profile matches.

Profiles provide a powerful tool for keeping you informed about your business. Profiles can watch external sources for news that may affect you, your customers or your competitors. Profiles can also watch internal data for information or events. For example, a sales representative might use a profile to watch both external news wires and internal databases for any mention of his or her customers. The profile can keep the sales representative informed about public news affecting the customer as well as internal information such as contacts with other sales representatives or product support.

Data Sources

InfoTap software can provide access to a wide variety of data. Data may come from external or internal sources. News wires and online databases can supply valuable information about all aspects of your business including customers, competitors, regulatory information and public relations. InfoTap software can interface to many external data sources including:

- American Banker
- Associated Press
- Bay City News
- Company Profiles
- Computer Periodicals
- Comtex Abstracts
- CNN
- Deutsche Press
- Dow Jones Broadtape
- Dow Jones Prof Investor Report
- Investext Abstracts
- Knight Ridder
- Kyodo News International
- Middle East News Network
- National Newspaper Index
- Newsletter Database
- Pacific Rim News
- Popular Magazine Abstracts
- PR Newswire
- Reuters Financial
Real-time news wires combined with InfoTap profiles can be a powerful tool for your business. For example, a corporate banking firm uses profiles to watch for news related to large commercial construction projects. When one of their profiles matched a news story about the last minute collapse of financing for construction of an oil tanker, the firm was able to respond immediately with a proposal for alternate financing. The combination of real-time news and profiling allowed them to respond before any of their competitors. In another example, a pharmaceutical company uses InfoTap profiles to watch for news about competing products. When a profile matched a story about the recall of a competitor’s drug in several western states, the company was able to immediately ship additional amounts of its own product to the affected area.

InfoTap software can also access internal data generated by your organization. Almost any textual information generated electronically can be loaded into the InfoTap system. InfoTap software can provide a common access method for keeping your organization informed. The search capability can be used to find existing information that may be hidden in the mass of online data. The profile capability can be used to keep you up-to-date on the information you need to know, without overloading you with information you don’t need to know. Some of the documents that can be accessed with the InfoTap system include:

- business plans
- competitive intelligence
- employee relations information
- internal memos
- ISO-9000 business process information
- mail list archives
- marketing plans and programs
- newsletters
- policies and procedures
- product usage notes
- quality assurance information
- safety information
- sales contact reports
- research and development documentation, and
- technical support reports.

InfoTap software is widely used at SAS Institute as a tool to access textual information. Many of the reports and memos generated during the development, product support, sales and marketing processes are loaded into InfoTap databases. The combination of searching and profiling allows SAS Institute employees to access past history and monitor current events related to their area of interest. For example, a developer working on a product enhancement can use InfoTap software to search for customer requests for similar product enhancements, relevant product support calls and other development in related areas.

The developer can also use profiles to stay informed about new customer requests, new development activities that may affect his or her project, and other relevant information.

One of the most popular applications of InfoTap software at SAS Institute is internal newsgroups. There are over 200 internal newsgroups covering all aspects of the institute’s business. Commonly used newsgroups include news reader programs for very limited searching capabilities. InfoTap software allows users to search or profile any combination of newsgroups using the full power of the InfoTap query language. For example, the InfoTap marketing manager uses profiles to watch for any mention of InfoTap in any of the sales or marketing related newsgroups. The profile allows her to stay informed about InfoTap related activities without manually sifting through all of the sales and marketing reports.

InfoTap software works as a personal productivity tool. InfoTap software can be a repository for E-mail archives, internal memos and reports. All incoming or outgoing E-mail can be automatically loaded into InfoTap books. E-mail can then be accessed using the search capability without using the time-consuming and error-prone filing schemes commonly used in mail systems.

**Corporate Solution**

InfoTap software is a true client/server application. InfoTap users can access data on multiple servers spread across multiple physical locations. InfoTap searches and profiles can be performed against data in remote locations as easily as for local data. The location of data in the InfoTap system is generally transparent to the user.

The client/server architecture allows InfoTap software to function in large or distributed organizations. Individual departments can maintain local InfoTap servers with minimal coordination from other sites. New servers can be added to the network without modifying existing servers. Servers can be configured to meet local needs while allowing access from other departments or sites.

**Other Features**

InfoTap software includes a complete online hypertext help system. The help system includes Help on Getting Started as well as a complete Reference Guide for the application. The InfoTap Administrator’s Guide is also available online in the help system.

InfoTap software provides numerous security features required in a corporate networking environment. Access controls are provided to limit access to specified users or groups of users. Audit trails can be enabled to track any access or modification of InfoTap databases.

InfoTap software includes a set of tools to automate common tasks. These tasks include backup of databases, importing data from and exporting data to other systems, purging old data, replicating data and monitoring operation of the system. For more extensive customization, an optional Extension Toolkit is available to allow direct access to InfoTap databases.
Summary

Businesses are generating huge volumes of textual data documenting the business process. The intellectual property hidden in this data is largely untapped. Businesses that provide the tools and organization to access this data in a timely and useful fashion will reap the benefits of more productive employees and higher quality products. InfoTap software provides a tool to easily search and filter a wide variety of textual data. InfoTap software can improve the productivity of your business by keeping you informed and managing the information overload.

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