Enterprise Findability Without the Complexity

Google

With the clutter of information inside enterprises today, effective findability[1] is fast becoming a necessity. Users are asking for it and executives are demanding it as "instant information" becomes increasingly critical to business productivity. In fact, a recent AIIM survey revealed that 62% of respondents saw findability as "imperative or significant" to their overall business goals and success. Only 5% reported that it wasn't a factor.

The increasing importance of data findability has left IT departments working to find the "right" solution for findability within their multiple information and content architectures. While some IT leaders continue to use embedded search tools inside their content repositories, others have pursued "enterprise search" solutions intended to search multiple content repositories. However, nearly all IT departments face the same reality: complexity. Most find themselves still seeking ways to bring instant-access data findability to their organizations and the people within them.

Why Findability Matters

For many companies today, "knowledge workers" constitute the majority of employees. These workers can be financial analysts, IT programmers, marketing managers, or any other employee charged with understanding and working with data. But even the act of finding the right data strips productivity out of many knowledge workers' time. A breakdown appears below:

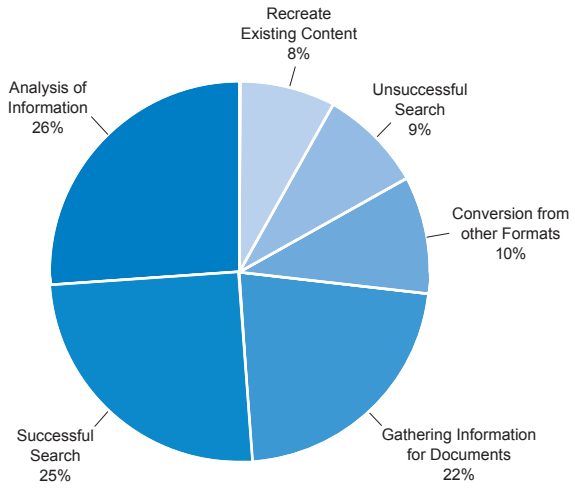

Figure 1 Breakdown of a knowledge worker's time. Source: IDC

As depicted above, nearly half of a knowledge worker's time is non-productive, spent gathering information, converting formats, unsuccessfully searching, or recreating content that already exists. Even the 25% of time spent on successful searching, while productive, represents an inefficiency that can be dramatically reduced. Ineffective access to data leaves knowledge workers spending only 26% of their time on their core task: analysis of information.

[1] The ability to quickly find the right information inside the enterprise, across formats and repositories

In industries such as financial services, pharmaceuticals, or professional services, where nearly all workers are knowledge workers, the above chart demonstrates dramatic room for improvement through effective findability. Even in industries such as manufacturing or transportation where knowledge workers might be in the minority, growing information needs put findability at the core of organization-wide productivity enhancements. For instance, a field delivery person in a logistics company might need to use a handheld device to tap the company's order system and search for the right shipment information. It's key that this search yield results, or the opportunity to build business might be lost.

The Traditional Approach: Complexity

While the need for effective findability continues to grow, approaches to implementing findability solutions have been anything but consistent. Most large enterprises have multiple repositories: according to a recent Gartner study, 66% of enterprises have more than six. Some companies have chosen to build custom systems that integrate with each of their back end repositories; however, this approach requires expensive systems integration. Other companies have chosen to adopt "enterprise search" solutions. Many of these solutions involve highly complex architectures, especially as the volume of documents grows.

A traditional enterprise search architecture might look like this diagram, below:

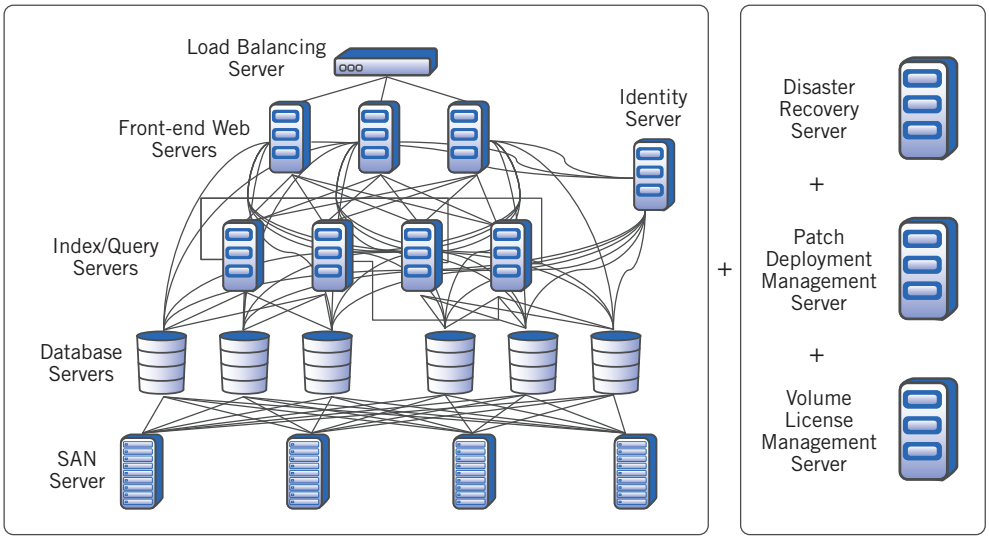

Figure 2 Traditional enterprise search architecture

As the figure above shows, implementing a traditional search platform can be a daunting task. The IT team would first need to understand how many front-end servers, index servers, query servers, and database servers are required. They would then need to configure the hardware and operating software for each of these units, prior to even installing any search software. And as the volume of content grows, the architecture becomes even more complex. No wonder so many IT leaders wonder how to begin.

The Google Approach

In contrast, Google's approach to findability is radically different. The Google architecture for searching enterprise content – even across ten million documents – looks like this:

Figure 3 The Google Search Appliance – one box, many millions of documents

The Google Search Appliance is an integrated hardware and software appliance that has all of the necessary search algorithms built into it. All that a customer needs to do is plug in the appliance behind their firewall, insert an Ethernet cable, and specify which repositories the appliance should search. The appliance does the rest, completing a one-time crawl, creating a master index, and performing periodic incremental crawls on a managed schedule to refresh its listings.

Additionally, the appliance allows advanced customization options to fine tune search results. For complex installations with numerous repositories, Google's vast partner ecosystem provides deployment and additional services.

The standard Google Search Appliance can search as many as ten million documents and occupies a single 2U rack-mountable server. For larger needs, Google offers an array of licensing points that allow up to 30 million documents to be searched. Custom configurations for unlimited documents are also available.

With its unique architecture, the Google Search Appliance enables IT organizations to grow their organization's content without worrying about the underlying search architecture. As content grows, a simple licensing point change is the only upgrade needed.

Universal Search for Business

From an end-user perspective, the Google Search Appliance provides a comprehensive search experience known as "Universal Search for Business." This lets all information inside the enterprise be accessed through a single search box. Additionally, the search appliance can integrate with a wide range of network, desktop, and public information sources.

The diagram on the following page depicts integration with Google Desktop and Google.com to aggregate information from both the desktop and the web.

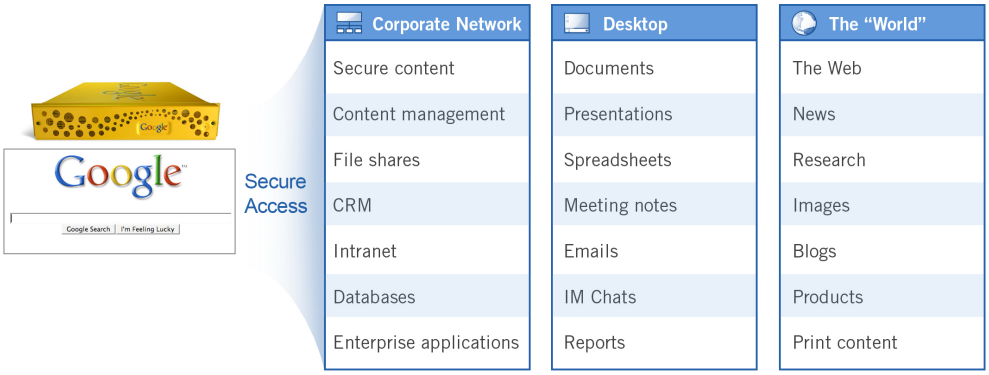

Figure 4 Universal Search for Business – all content, one search box

The Google Search Appliance can search the content of a website or any information in an enterprise, including:

File Shares: more than 220 different file formats, including HTML, PDF, Microsoft Office, Open Office, and hundreds of others

Intranets: all files on Intranets and other web servers

Databases: content in IBM DB2, Microsoft SQL Server, MySQL, Oracle, and Sybase relational database system

Content Management Systems: most popular content management systems, including EMC Documentum, IBM FileNet, Open Text Livelink, and Microsoft SharePoint. Additionally, the appliance's Content Connector Framework includes a robust API for building custom connectors to other content systems.

Business Applications (real-time): business applications, such as CRM, ERP, or business intelligence systems, through Google OneBox for Enterprise.

Because of the high value of real-time search for business systems, Google has partnered with Oracle, Cognos, SAS, and many others to provide connectivity to key business systems.

For example, a query on "east coast sales" would tap the business intelligence system and display the information in a desired format, such as a graph of sales:

Figure 5 Real-time lookup of business information

Integrated Results

A key benefit of Google universal search is the ability to integrate results across a variety of sources, according to the user's needs. A simple example is shown below:

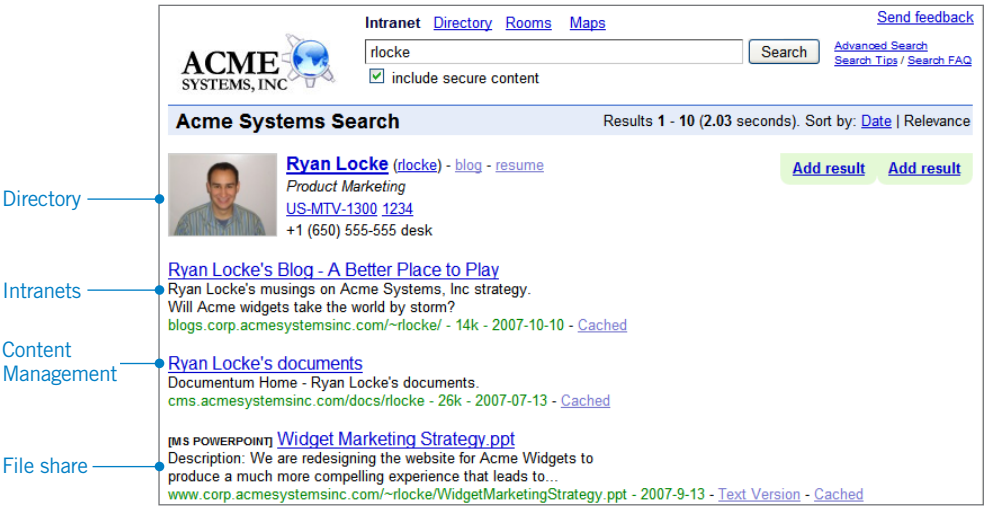

Figure 6 Integrated search results across multiple content sources

The diagram above shows the results of searching on the keyword "rlocke." The search box understands that "rlocke" is most likely an e-mail handle, and first taps into the company directory to return Ryan Locke's information. In this case, the Google Onebox connection with the directory enables the real-time connection and custom display of results.

Similarly, the other search results tie into the company's intranets, searching documents in content management systems and file shares. Results are displayed based on relevance, and all results are returned in the sub-second response time displayed in the upper right.

Personalized Search Experience

Additionally, the Google Search Appliance enables users to set policy for their specific search priorities. Engineers might choose to weigh code or design documents higher, while marketers might prefer to emphasize product specifications or related documents, as shown in the diagram on page seven.

Furthermore, with Google's "Alerts" feature, employees can subscribe to email alerts for topics and documents of interest, receiving updates on content entering file shares or content management systems on the schedule that best meets their needs.

"It now takes our sales executives 15 seconds to find something that they used to burn 30 minutes looking for… many of them have told us this is the best thing we have ever done for them. We are extremely pleased with the results and relevancy of the Google Search Appliance."

Jim Cahill
Marketing Communications, Manager, Emerson Process Management

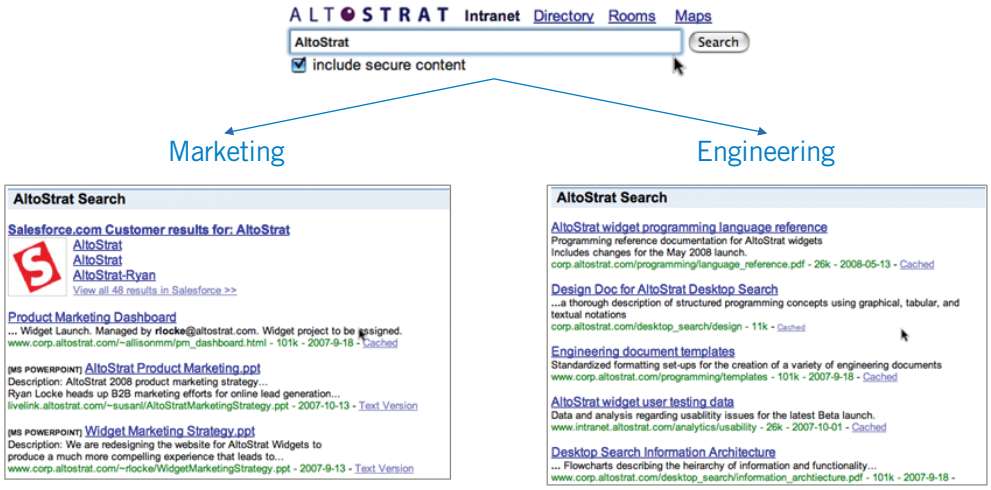

Figure 7 Personalized search results

The Benefits of Effective Findability

Companies from all industries have benefited greatly from the Google Search Appliance. Key benefits include:

Improving customer service: Reduce the time that Sales and other customer-facing professionals spend searching for information and free them to spend time in front of customers. Enable customer service representatives to assist customers efficiently and accurately by improving their access to knowledgebases and other information sources.

Speeding innovation: Enable engineers and R&D professionals to collaborate better by finding and leveraging each other's work.

Supporting better decisions: Enable managers and decision makers to obtain the right information at the right time.

Reducing IT costs: Enable the IT department to minimize expensive systems integration and maintenance by providing a simple, cost-effective search solution without the complexity of traditional search solutions.

Accelerating adoption: Ensure instant productivity and eliminate training costs with the familiar Google interface.

Conclusion

The Google Search Appliance provides your organization with a simple, powerful way to let users access business information across systems. Whether it supports your public website visitors as they search for product information or helps your employees increase productivity as they seek internal information, users and IT leaders alike are increasingly choosing the "search box" as an essential source of business information.

"The Google Search Appliance scales effortlessly as our content grows."

Sean Powell
Project and Technical Lead

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Solutions for your business
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To learn more about the Google Search Appliance for your business, email
appliance1@google.com

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Google Search in Action: Kimberly-Clark

Business

Kimberly-Clark is a leading global health and hygiene company employing more than 55,000 people worldwide and posting sales of $18.3 billion in 2007. With operations in more than 37 countries and brands sold in more than 150 countries, 1.3 billion people trust Kimberly-Clark products each day.

Challenge

With a workforce that needs ready access to information and documents of all kinds, Kimberly-Clark relies heavily on enterprise search. "In the United States alone, our users search through about 22 million documents every day on our intranet and associated corporate file servers," says Reneé Nocker, Director of Enterprise Business Intelligence. With these high-volume requirements, the previous search solution fell short. It couldn't search corporate file servers and could only crawl 500,000 documents.

"Users complained that they could not find what they were looking for, so many of them simply gave up and stopped using our search functionality. Accuracy and usability were poor, and we couldn't add more content because the tool couldn't handle any additional capacity," says Project and Technical Lead Sean Powell.

Solution

Powell needed a more robust alternative – one that could be deployed quickly and managed at a reasonable cost. Capacity, however, was the primarly goal. Google's capabilities, ease, and accuracy led the team to choose the Google Search Appliance.

"We have the same .2 employee supporting search as we did before, but we've gone from searching 500,000 documents to searching 22 million."

Results

Kimberly-Clark's employees integrated Google search into their workflow with literally no training. Today, the Google Search Appliance at Kimberly-Clark searches more than 22 million documents across a variety of sources and formats. The corporate intranet, web applications, homegrown document management systems, web file servers, corporate file servers, and the company's public internet site are now all included in easy, intuitive search.

The appliance also offers the potential to scale as needed on an ongoing basis. All Powell has to do is call Google to add more capacity. "The Google Search Appliance scales effortlessly as our content grows," he says.

Further, Powell and his team are "excited about the fact that the Google Search Appliance can store up to 10 million documents in a single box. The architecture also provides fast performance – a plus because crawl rates are a big deal for us."

Finally, the Google Search Appliance offers a lower total cost of ownership because it doesn't require any servers to be deployed or managed. "We have the same .2 full-time employee supporting search as we did before, but we've gone from searching at best 500,000 documents to searching 22 million documents," says Powell. "I'd call that minimal administration."

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