

# Intranets

## Searching for Mobile Access

ENTERPRISE STRATEGIES AND SOLUTIONS

JEROME PESENTI

Today's workers are no longer tied to a desk. They are constantly on the move—meeting with clients, providing on-site customer training, attending conferences, and more. Yet when they're away from their desks, the responsibilities they have while in the office don't change. They are still expected to answer customer support emails, follow up with sales prospects, and respond to colleagues in a timely manner.

Forrester Research reports that 71% of American companies currently support web-based email to help address this challenge. Many organizations have also invested in web-based solutions for their sales force and field services applications. As employees become accustomed to accessing email remotely via a web browser, there will be an increase in demand to have the same services available via mobile devices.

To further increase mobile workers' productivity, more organizations are investing in smartphones (mobile phones with PC-like functionality) for their employees. In 2006, the number of smartphones sold worldwide reached 90 million units according to IDC. The research firm also predicts that by 2011, cumulative sales of smartphones will reach more than one billion units. IT departments have begun to develop comprehensive strategies to support the increase in adoption of these and other mobile devices.

People are already using their mobile devices as a way to access and search the internet. Opinion Research Corporation issued a study that found that 30% of mobile users access the internet on their mobile devices, and out of this group, 75% conduct web searches. The study also showed that smartphone users, typically businesspeople, are nearly four times as likely to search on their devices as users of other mobile devices. Smartphone users

are beginning to demand the same search capabilities on their mobile devices for internal data as they have for the web.

### CLOSE, YET NOT CLOSE ENOUGH

Six months ago, I was one of those guys who never carried around his cell phone, let alone any other mobile device. A few times in the past I tried to use PDAs, but they always ended back in their boxes after a few days of fiddling with them. Today, my office staff is calling me a smartphone addict because I now keep in touch even while vacationing in a tropical paradise. What made a difference this time?

Three big improvements in technology convinced me to change from a mobile Luddite to a power user. First, I now have a mobile multipurpose device; in fact, my Motorola Q is even lighter and slimmer than my previous voice-only phone. Second was a faster, more reliable connection, and third was a usable web browser. I quickly realized that I could use my smartphone for 90% of the tasks previously done on my laptop, while carrying less than 5% of the weight.

While becoming a heavy smartphone user, I also quickly became a frustrated user. With a smartphone, you are so close to—but still not quite up to—full office productivity. For example, finding an old email is either impossible (if older than a few weeks) or requires scrolling down a huge list. Reading Microsoft Office documents attachments is a zooming-and-panning thumb workout. Accessing our CRM system by the self-proclaimed “no-software” king, Salesforce.com, required downloading additional software. Finally, accessing most office resources such as fileshares, knowledgebases, intranets, and wikis was just impossible.

As low-power devices with great always-on connectivity, smartphones are the perfect thin client. However, many mobile



Mobile search with unstructured navigation. Information is clustered by topic area.

applications still use the old synchronization model designed for the poor connectivity that PDAs possessed. As a result, emails, contacts, and attachments need to be downloaded to the device rather than dynamically fetched from a server on demand.

### SEARCHING FOR SOLUTIONS

That's when it hit me that the simplest, easiest, and fastest solution to all my grievances was just under my nose: search. As you would expect from a search company (Vivísimo), our enterprise search allows us to securely search our emails, the employee directory, fileshares, CRM data, knowledgebases, wikis, and more. By adding a mobile template on top of our search engine, I'm now able to search through thousands of emails, quickly find up-to-date contact information, and access all our office resources with the web browser—all on my smartphone.

In addition to its main functionality of search, mobile search takes care of three important factors that make it an ideal mobile gateway: connectivity, security, and presentation. The search engine takes care of connecting to each repository, grabbing the data and the security frame-

work, and converting the data to a text format (HTML/XML) that can be viewed on simple devices. Now, instead of having to build a mobile application on top of each repository, you can just leverage the search infrastructure to make all of these repositories securely accessible through the search application.

Does it sound too good to be true? Well, there is a catch. Search only provides a universal “read” gateway. It does not reproduce all the functionality of the underlying applications, just the “access” part. This limitation is a necessary trade-off as it limits the complexity of the integration, makes the search workflow very simple, and allows search to be ubiquitous. On a smartphone, given the limited input capabilities, the ability to “write” is often not critical.

### THINK BEFORE YOU SEARCH

Here are some things to think about when choosing and implementing a mobile search application for accessing internal data and applications:

- *Size Matters:* Mobile devices offer limited screen space only averaging around 1” width and 2” in length. With such limited real estate, delivering relevant results is critical to developing a good mobile search experience. This means that the text “snippets” describing the search results need to be shorter with more precise titles to

Mobile search makes it easy to search multiple repositories or applications for information from a single screen, such as email, employee directories, and CRM systems.



eliminate the need for scrolling through endless results. On the road, workers are often searching for short pieces of pertinent information such as a contact’s phone number or a purchase order number. To help these workers, look for an application that can be configured to crawl and index special collections (customer data, support logs, contract databases, etc.) and that will provide the ability to call out these types of results above the main result set, allowing users to quickly get the information they need.

- *The Right Tools:* Equally as important as delivering relevant results are search navigation tools specific to the mobile worker. For example, the ability to automatically categorize or cluster all search results into topical categories is helpful for narrowing down search results produced from content sources such as fileshares. And the ability to create categories based on structured data from CRM or email applications helps users quickly drill down to the right piece of information. Offering related queries to help refine searches based on the original query or a related theme is useful too. All three of these navigational methods are perfect for use on mobile devices, where it is more challenging to refine queries on a tiny keyboard than to click on a category or related query.
- *Personalization:* Because mobile devices are personal devices, a mobile search solution should also be personalized for the end user. Look for a solution that supports role-based search, which means that the user experience can be customized to an individual’s specific job function. Relevancy ranking of search results should be able to be adjusted so that the purchasing officer has all contracts and proposals weighted and ranked higher than the product manager, who has product launch plans ranked higher. By personalizing the search on mobile devices, employees will be able to access the information that is specific to their roles, ultimately making them more productive.
- *Facilitate Administration:* While it is



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important to provide a great mobile search experience to the end user, make sure that whatever you select can be easily administered by IT. Things to look for are a downloadable design template that will allow an administrator to customize your organization’s deployment and a secure solution that requires workers to VPN into the mobile search, which eliminates the need to keep sensitive data downloaded on the mobile device or restrict access to nonsecure applications only.

By leveraging your enterprise search infrastructure for mobile access, you will quickly be on your way toward creating a fully mobile-compatible IT organization that empowers users at a fraction of the time and cost of deploying mobile versions of all your organization’s applications. Just don’t be surprised when your vacationing boss wants to know why you haven’t updated the internal wiki lately. **1**

**JEROME PESENTI** is chief scientist and co-founder of Vivisimo, a provider of enterprise search software and expertise, driving development and delivery of the company’s products. Prior to founding Vivisimo, Pesenti was a visiting scientist at Carnegie Mellon University’s computer science department, carrying out research on document clustering, data mining, and artificial intelligence.