

# WIRELESS INFORMATION DELIVERY

## WHO'S GETTING THE MESSAGE?

**W**ireless communication has come a long way in a short time, as worldwide interest in the technology fuels rapid innovation. Increasingly, personal digital assistants (PDAs) and wireless handsets can connect to corporate information systems, and the power and finesse of these devices is making them look more and more like mini-PCs. Many industry experts believe these mobile communicators represent not only the next generation of mobile phones, but the next generation of the Internet as well.

The Yankee Group speculates that by the end of 2001, 25 million data subscribers on Internet-enabled wireless devices in the U.S. will generate \$3 billion a year in subscription revenue to content providers. And that's just the start. Market research firm Ovum predicts that in 2005, about 484 million people worldwide will make wireless connections. Penetration is highest in Japan and many parts of Europe. There is a seemingly insatiable demand for new mobile Internet services in Scandinavia, for example, where most people over the age of 15 carry wireless phones. The wireless wave is sweeping over Japan like a tsunami, with more than 20,000 people signing up for Internet access through their phones each day.



### Hesitating on the Threshold

Of course, wireless communication isn't new. Since the first half of the 20th century, radio and television have delivered content into homes, tying populations and cultures together in new and exciting ways. As short-wave and ham radios gained popularity, wireless communication became two-way, though mostly for hobbyists. It wasn't until the debut of cellular telephone networks in the 1980s and 1990s that personal wireless communication began to explode.

Business users are the early adopters of personal wireless communication services, as it becomes more and more valu-

able to be able to send and receive e-mail, check inventory, or communicate with corporate information systems from remote locations. But despite all the enthusiasm about mobile networking, there remains a dearth of working applications in the business world. This is partly due to confusion about what is possible, and also due to conflicting standards for wireless information delivery. Particularly in the U.S., there is a lack of standardization among device types, like phones and PDAs, as well as among the wireless networks and transmission services available from service providers.

field operations. WebFOCUS summarizes and integrates the data across the city's database systems, putting real-time intelligence in the hands of anyone in the city, including users of wireless devices (see related story, page 14 in this issue).

By using WebFOCUS with AvantGo Enterprise™, customers such as the City of Richmond are able to download corporate information, directly to their PDA device for viewing and analysis away from the office. Thanks to a partnership between Information Builders and AvantGo, Inc., AvantGo Enterprise can be used with the WebFOCUS Mini Browser option to establish centralized administration and automatic reformatting of customized WebFOCUS reports for delivery.



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### In the Vanguard

Information Builders has pioneered several important technologies to insulate users from these conflicting devices, standards and delivery networks. It doesn't matter if your organization has Palm Pilots or RIM devices or Pocket PCs, we have the technology you need to build cohesive mobile applications.

For example, the City of Richmond in British Columbia, Canada is using handheld devices to monitor its water and sewage systems. For the city of 180,000 people, which is on an island, it's a critical application – you might say Information Builders is helping them stay afloat.

Along with software from AvantGo, Inc. the City of Richmond is using WebFOCUS to monitor and analyze

### Two-Way Email Reporting

To simplify wireless communication even further, Information Builders developed WebFOCUS Two-Way Email. This unique software technology enables communication between people and information systems, automatically exchanging messages among dissimilar devices and networks. Based on any standard e-mail system and powered by WebFOCUS, Two-Way Email enables organizations to provide cost-effective, reliable, and secure access to existing information sources through any handheld device without having to build custom interfaces. With Two-Way Email, WebFOCUS not only 'pushes' critical information to managers, employees, partners, and customers, it allows them to 'pull' any information from enterprise systems via e-mail.

For example, a scheduled message might be sent to sales executives each morning that sums up the previous day's sales. Or an alert might be sent to notify a retail manager that a particular product is out of stock. The alert could be triggered by a pre-defined database event, such as when a certain threshold is reached in the inventory system.

### Early Adopters

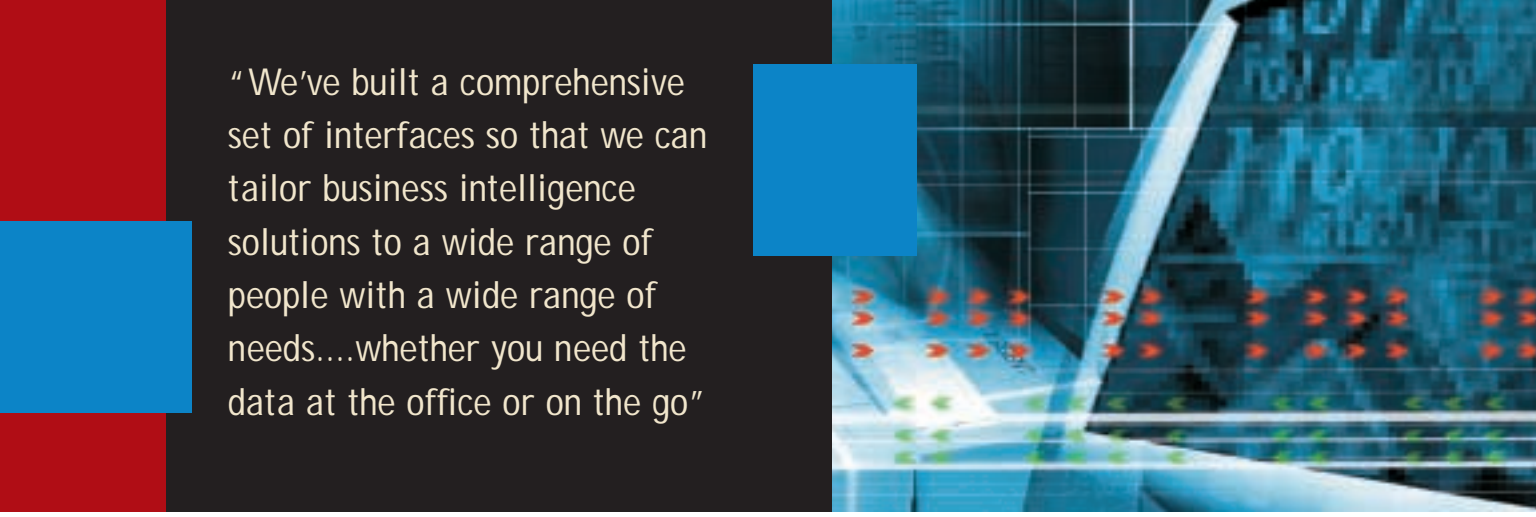
Rich content is what makes wireless data services valuable, and much of the same material that makes the Web popular is already available to mobile communicators. In a

growing number of locations, doctors can get immediate access to patients' lab results on their cell phones – days earlier than they did before. And many leading brokerage firms are giving their customers the ability to make stock trades online from wireless devices.

To casual business users, this type of mobility is enviable. But to people who follow the wireless industry, it's just the start. Many industry watchers believe wireless data transmission will mushroom in the next three or four years as mobile networks migrate to third-generation (3G) communication standards, which will be capable of moving wireless data at broadband speeds. When the 3G mobile Internet devices do make the scene, they may not even be perceived as phones but as mobile communicators or mobile terminals. Voice conversations will be just one of

capabilities to specific databases and reports to make them even more useful.

The rule of thumb with synchronization is simple: not every communication has to be immediate. For example, an individual reading gas meters could collect data on a handheld device and upload it to the corporate LAN every hour, or at the end of the shift. A real estate appraiser might compile site maps, title information, and data about property listings while sitting in his office, then later gather detailed information about room sizes on his PDA while visiting an actual property. Once back at the office, the data he has collected on his PDA can be synchronized with the information on the server, where complete real estate appraisals are stored. Synchronization technologies make this scenario possible.



"We've built a comprehensive set of interfaces so that we can tailor business intelligence solutions to a wide range of people with a wide range of needs....whether you need the data at the office or on the go"

their many qualities. Eventually they may replace cell phones altogether, allowing users to access a movable feast of personal services – anytime, anywhere.

The user interfaces on these devices are improving, but we still have a ways to go. People who are accustomed to browsing the Web on a big colorful computer screen over a high-speed link will find the capabilities of a micro browser to be a bit slow and cumbersome. Most wireless devices have a clumsy, thumb-controlled user interface and a display that is suitable for only a few lines of text or a small, simplistic graphic. Internet sites designed for phones are also hard to navigate.

#### Getting in Sync

In many cases, the solution involves regular synchronization with a PC or server. For example, if a sales person wants to update the corporate database with new account information gathered while on-site with a customer, rather than sending wireless updates after each sales call she can set up simple procedures that exchange the data automatically when she returns to the office. Each time she connects her mobile device to the network, she will upload pertinent data from the field and also automatically gather information about new leads that have come in during her absence. Information Builders has extended these synchronization

The lesson mobile users can learn is simple: save the actual wireless transmissions for times when you really need data on the go. And rely on synchronization with a PC or network server for bulk downloads or to gather additional information.

Whatever wireless devices and architecture are chosen, Information Builders customers have plenty of options for rolling out wireless applications. We've built a comprehensive set of interfaces so that we can tailor business intelligence solutions to a wide range of people with a wide range of needs. Whether you need data at the office or on the go, we maintain a high level of consistency in how we gather, aggregate and deliver information throughout the extended enterprise. ●

Michael Corcoran is vice president of Marketing at Information Builders.