Enterprises Are Early Adopters as Mobile Data Services Grow

Ubiquitous wireless broadband data services with seamless roaming capability will not materialize anytime soon, according to panelists at the third Tech@Tuck event April 24. But there will be plenty of innovative high-speed data services accessible in enough places to enhance productivity and save big money for enterprises, and to attract many consumers.

The panelists, representing software producers, device makers, network organizers and industry analysts, agreed that the expansion of Wi-Fi hotspots and other kinds of local area networks will provide more and more access points for high-speed data transfer from wireless devices to carriers operating wide area networks. Wi-Fi may be technically unsophisticated, or "trashy," but it is so cheap and flexible that installations and applications will proliferate. Many, if not most, of the best applications probably haven't even been imagined.

On the device front, meanwhile, people will keep their cell phones. With a few exceptions, cell phones don't combine well with other kinds of devices. And much of the near-term action will be in services, such as voice-controlled automated directory information, that appear to be voice services but are actually data. PDAs will bulk up, at least in terms of what they can do, and laptops will slim down.

Stephen Wellman, Editor of FierceWireless and moderator of the panel, first asked whether enterprises will be using wireless data in the next year or two, and if so, which kinds of companies would lead the trend.

"Many companies already have moved over to Wi-Fi, though a lot of CIOs are concerned about security issues," answered Joseph M. Gensheimer, Chief Operating Officer of Cometa Networks, a startup wholesale provider of Wi-Fi services to national carriers and ISPs. "I think they should not be as worried as they are. There are ways around it, and with some of the newer upgrades, it's going to be even less of a problem.

"Wi-Fi saves a huge amount of money in the enterprise. You don't have to re-cable things when someone comes in. Any time you have to wire something, it is a pain in the neck, especially in New York City, where you have to move 24 people to get one piece of wire in. And a lot of companies use consultants. Well, you don't have to reconfigure anything. You can partition off a virtual LAN and allow consultants access through the Internet and through VPNs to their own systems. I see a lot of people doing that.

"It's on a very quick ramp," Gensheimer concluded. "When people started using cell phones, a lot of them got disconnected. Wi-Fi is a little bit like that. The cellular phone is not always connected, but it is connected enough to make it work. Wi-Fi has issues and interference. But it works almost all the time, it's quick, and it's cheap. It morphs quickly. You get a million variations, you get them cheaply, and you get them fast. That's what will make it take off."

Jim DeBelina of Motorola, Director of Enterprise Solutions, Global Software Group, recalled that IBM "bought the first nationwide wireless data system in 1982. They rolled out a $100 million infrastructure to improve the field service organization, and it had a payback period of only five months. And you still can't pry the devices out of the hands of their field service people. The same thing is true for Federal Express and UPS. It transformed the way they do business."

Until now, DeBelina said, many mobile wireless data applications have been invisible to consumers, because the technology has been largely a blue collar productivity tool, industriously cutting costs everywhere from police cars to field repair kits. But as inexpensive chips become available that can determine location, including the environment of that location, mobile data will make the leap from cars to bicycles, electronic games and other products.

Asked to name real examples of wireless data saving money for enterprises, Jim Slaby pointed to machine-to-machine systems using short messaging service. "A classic ROI example is a large grocery chain in Europe," said Slaby, Senior Industry Analyst with Giga Research at Forrester Research Incorporated. "They moved to wireless mobile for tagging of pallets in their warehouses as an inventory control mechanism, as well as to monitor cooler temperatures. Inventory handling in the warehouse was reduced to about two hours from a matter of days. There is less stock sitting on the floor, and fewer shortages on the shelves. The return on investment was about nine months."

What, Wellman asked, will be the next killer device?

"It depends on the data," Gensheimer replied. "I suppose you could look at it as a slimmed-down version of the notebook. PDA prices will drop. The problem with Wi-Fi access built into cell phones is that it is power-hungry. It is great for laptops and other things with a long battery life, but it kills cell phones. I think we are going to see more people walking around with little hand-held devices, especially somebody older like me who can't see the little tiny phone."

"The market for phone devices is much broader than for PDAs," countered Bob Maher, Director of Strategic Planning for the Mobile Device Division at Microsoft. "The PDA as defined today is a niche product.

"It's hard to tell what will be the next killer device, but it will have characteristics we can be pretty sure of. No particular thing is perfect for every person. If you have a PDA or a phone, you make some trade-offs. Pretty soon those technology and form factor issues will start to sort themselves out. Access to wireless networks will start to become more ubiquitous.

"And the next killer thing will be defined by what the next individual person wants. It will locate you where you are and where your children are, and will provide information that is personal to you. And it will have contextual awareness—what environment you are in and what you are doing at that time."

Slaby saw a bright future for both hand-held devices and handsets. “The ubiquity of Wi-Fi will make the Wi-Fi equipped PDA more popular,” he predicted. “A lot of people who didn’t own Palms and pocket PCs before will be buying them, because suddenly they can get hot spot access, and get all kinds of useful information. And I agree with Joe when he talks about prices dropping. A lot of people who would never have considered such a geek accessory will suddenly find it indispensable.

“Combining lots of features on a single handset—making it an MP3 player, a PDA, a voice phone and a gaming platform—doesn’t make a whole lot of sense. I think the concept will be multiple small optimized devices that connect over some invisible short range radio, maybe in your shoe heel or on your belt, that can do Wi-Fi when you can get it, and 3G when you can’t. That gives you a lot more flexibility.”

“There is no one device that everything will converge to, though there will be some degree of convergence,” DeBelina agreed. “It’s all about choice. If you say, ‘I want MP3, I want to IM, and I want to make phone calls,’ you can get that combination. And the form factor will conform to the applications you want.”

“You wonder whether some of these applications will take off,” Gensheimer observed. “I was with Sprint PCS. We had picture phones. The first week people got the phones, they took pictures. They loved it. Second week, they never used it. The question is, what will people use?

“We’re looking at the Allstate Insurance person who goes out, takes 25 pictures at a megabyte each, and uploads them. They’re not doing that over a 3G network. They’ll do that over a local Wi-Fi spot—they pop in, they eat, they’re done, move on. At least, that’s what we’re hoping (at Cometa).

“Location is a perfect example. I have a GPS phone. I have the location (feature) turned off. I don’t want people to know where I am. But I do want to be able to find directions. That’s something I select. People want to use wireless data to manage *their* lives.”

Slaby pointed out that though Wi-Fi is proliferating, it isn’t everywhere, and it probably never will be installed in the wide open spaces “of the cornfields here in the US. It’s really not about ubiquity, but about location in a handful of useful places.”

“Wi-Fi is portable, it’s not mobile,” Wellman agreed. “Or at least, not yet.”

In the question and answer period, a member of the audience wanted to know whether Wi-Fi and 3G will compete or complement each other. “They clearly are complementary technologies,” Slaby said. “They will both win, but Wi-Fi will force 3G to focus on services they can successfully deliver (at lower data speeds).”

3G is just very expensive right now,” Gensheimer agreed. “I use 3G, but I use Wi-Fi where I can find it.”

Responding to another audience question, panelists agreed that business users will be the early adopters of most wireless data applications. “Clearly, the early opportunity that we see is an additional means of VPN access for remote enterprise users,” Slaby said. “I’ve got my windshield warriors that need to download PowerPoint presentations before they visit a customer, or who want to access the sales force automation system after a customer call, or check the status of a contract, or synchronize their email. These folks are willing and will get a lot of value out of paying an additional $10 a month.”

In addition, he said, “There is a kind of Trojan horse strategy afoot among the providers, where you have data features disguised as voice features, like voice commands to enable three-way calling, or ‘Forward all my calls to voicemail except for Judy.’ These are cool features, but they’re basically data-centric, relying on basic SMS functionality.” Eventually mobile data operators will routinely supply information like airline schedules, Slaby said. “But in the short term, they’re banking their hopes on plain old voice services and some kinds of shadow data services.”