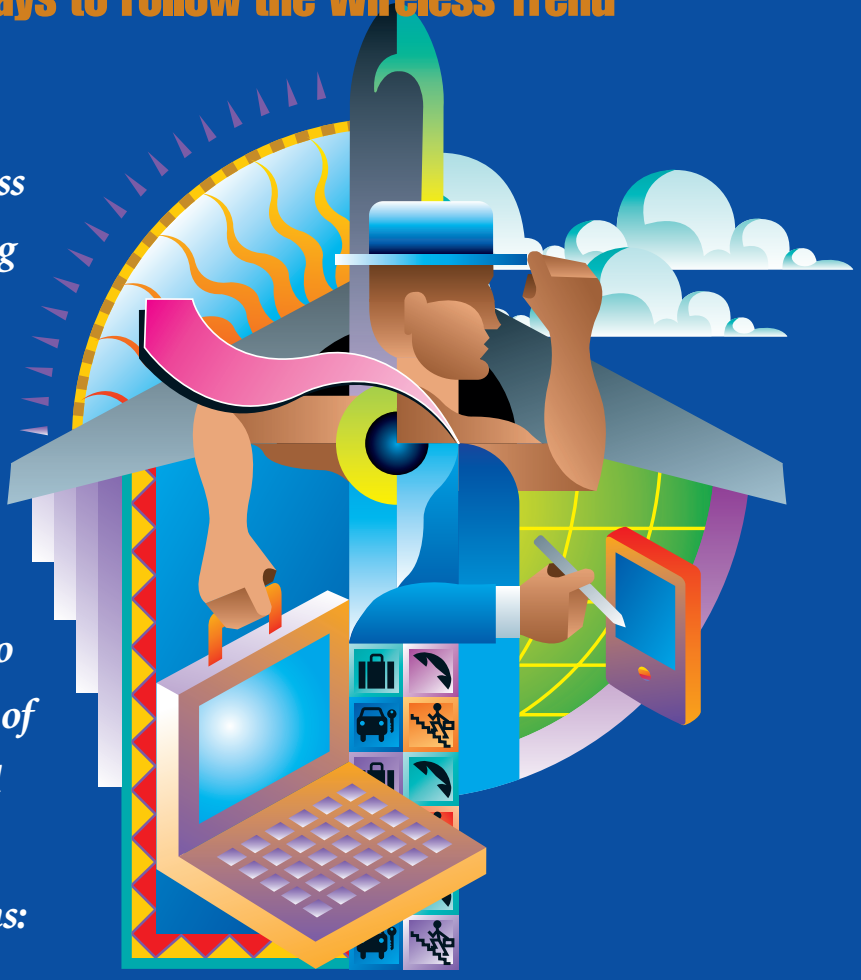
Mobile Computing:

Smart Companies Devise Ways to Follow the Wireless Trend

By Tony Stevenson



Undoubtedly, mobile and wireless computing represents an exciting and fast-growing area of the IT and communications industries. To learn more about the technology's present status and future prospects, we submitted a series of questions to the following leading executives of three companies closely involved with the development of mobile and wireless computing solutions:

Mark Ellwood,
Channels Manager, Solagem (http://www.solagem.com). Solagem is a Finnish software company that develops mobile and e-business solutions.

Mark Guibert,
Vice President, Brand Management, Research In Motion (RIM) (http://www.rim.net). RIM is the developer of BlackBerry, a leading wireless email solution.

Rick Fricchione,
Vice President, Enterprise Ready Microsoft, Compaq Global Services, Rainier Technology (http://www.rainier.com). Rainier Technology is a leading technology consulting firm specializing in the innovation and integration of Web solutions.

To remain successful, or to break into new markets, how important is it today to have a mobile and wireless computing strategy in place?

Mark Ellwood: Very important, if an enterprise wants to remain competitive and improve its customer services. META Group Inc. (a leading research and consultancy group) estimates that 40 to 50 percent of companies will wireless-enable their applications within two to three years. Gartner predicts that by the end of 2003, 1 billion mobile phones will be in use worldwide and that effective wireless technology makes mobile workers up to 30 percent more productive. No company can afford to be left behind.

Mark Guibert: Mobile and wireless computing should be an integral part of an organization's IT strategy. Companies that embrace wireless computing solutions and that properly integrate those solutions within their enterprise workflow are enjoying a compelling Return on Investment (ROI) and a competitive advantage, with benefits such as greater personal productivity, easier collaboration with workgroups, decreased costs, and faster decision-making.

Rick Fricchione: In all businesses, customers demand continuous improvement in service speed and product quality. Improving speed and quality requires a reduction in decision latency-decreasing the amount of time it takes people to share information and make critical decisions, all along a value chain of suppliers, partners, and customers. A wireless and mobility strategy provides a significant strategic advantage to making and executing the decisions required

to exceed customer expectations in existing markets, and to create standards for new markets.

What are the advantages of developing a mobile and wireless computing strategy?

Ellwood: Gaining a competitive edge and new channels to customers. That is, enhancing your customers' experience when dealing with your company, improvements in productivity, faster access to information that leads to better-informed decisions and reduced risks.

Guibert: A wireless computing strategy should really be an extension of your wired strategy. All your enterprise information and databases already exist in a secure, scalable, wired network. The trick is to provide a secure, two-way, wireless connection that lets you access those databases and push time-sensitive information to mobile employees and lets employees pull relevant information when they need it. The advantages include lower operational costs, improved personal and organizational productivity, better client service, faster responsiveness, improved communication, and easier collaboration.

Fricchione: A mobile and wireless business strategy helps to ensure that the technical directions are aligned with the business imperatives. Essentially, the effect is to employ emerging technologies when they can bring the most business benefit.

What are the challenges involved in developing a mobile and wireless computing strategy?

Ellwood: Making sure that your wireless strategy complements your corporate strategy and business goals. It [your wireless strategy] shouldn't be treated as some kind of standalone technical problem. Make sure your solution is future-proof. Mobile technology is moving so fast that it must be a prerequisite of any solution that the device does not matter-now or in the future. An executive should be able to get the latest corporate financial figures using his Global System for Mobile Communication (GSM) phone on Monday, email on Tuesday, Wireless Application Protocol (WAP) phone on Wednesday, smart phone on Thursday, PDA device on Friday, and whatever new device he is testing at the store on Saturday. If he can do all that without any software modifications, he can be confident he has the right solution.

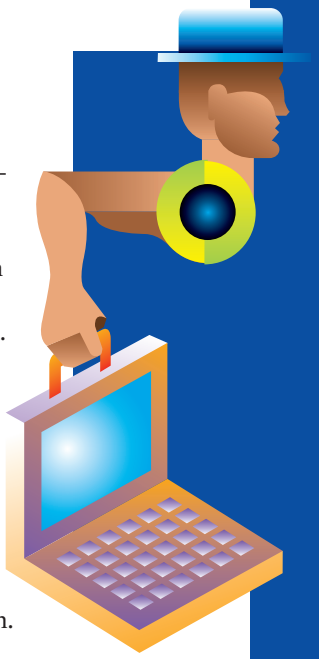
Guibert: One obvious challenge is sorting through the noise in the market and finding a proven solution that meets the needs of your company. You can't derive tangible organizational benefits from a press release or a slide presentation or a white paper. I would insist on demonstrable and proven solutions.

Once you get past the noise, integration is the most important consideration. Integration is twofold. First, the device, wireless network, and enterprise server software need to be tightly integrated. It's difficult to buy these elements piecemeal without compromise. Second, the solution needs to fit within your existing IT architecture. The solution needs to seamlessly integrate with Microsoft Exchange while also providing an open platform for broader application support.

Fricchione: The challenges are mostly organizational-getting the business and technical folks together so they can understand each other's opportunities and concerns. The real goal of the strategy is to connect people and information where and when they both have the greatest value. To do that, the technical folks must understand the time and location value of the business information, and business folks must understand what the new technologies can enable them to do.

How does a company implement a mobile and wireless computing strategy?

Ellwood: The choice of equipment depends on who uses it and how it is used. Company representatives on the road might prefer a single smart phone; internal staff might prefer a PDA. A lot also hinges on how much use the device gets and the environment in which it is used. Mobile does not always have to mean an online connection, either; a company's mobile solution depends on how often the data needs to be updated. An adequate solution might be a PDA in a remote location that is put in a docking station, connected, and synchronized once a day with the headquarters system.

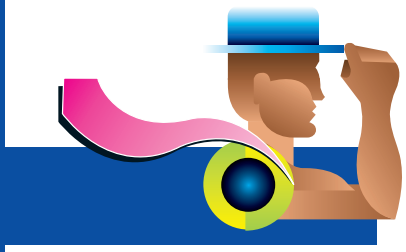


Guibert: Mobile and wireless computing strategies vary from company to company, but there are a few necessary components. For the equipment, you need a complete solution with end-to-end security to ensure the integrity of your data, wireless handhelds with built-in modems and long battery life, push technology where messages are automatically sent to the handheld, and seamless integration with existing corporate email and enterprise data. For end users, the solution must be easy to use and require minimal training. Consider the multitude of users and the variety of mobile environments. If the application is complex from a usability perspective, you've probably missed the point of mobile computing. It's about enabling greater productivity on the go.

Fricchione: To be successful, the strategy must motivate IT groups to change their mindset to become enterprise service providers. IT groups' mission now is to manage a combination of internal and external resources to enable dynamic business needs. Implementing the strategy is much easier when those who might otherwise regard themselves as victims of change have been included in the strategy creation and implementation planning.

What trends are emerging in the world of mobile and wireless computing?

Ellwood: Communication trends: the mobile Internet, as understood by the man on the street, is really on its way.



Technical trends: messaging, XML, Extensible Style Language Transformations (XSLT). The concept of users and systems being separate entities is increasingly irrelevant. Messaging doesn't care if it is a person or a computer it is communicating with. XML is becoming the standard data-transfer format to use, and XSLT simply translates the data into whatever format the end device needs-Short Message Service (SMS) text message, email, HTML, Wireless Markup Language (WML), and so on.

Guibert: The wireless industry is embracing Java, specifically Java 2 Micro Edition (J2ME), for wireless devices. Java abstracts the OS from the equation and provides an open application-development environment. Java is optimized for wireless, it's platform independent, and it's secure. And there are about 3 million Java developers out there today.

Fricchione: The physics and politics of our planet aren't conducive to easy creation of a global wireless network. Instead, roaming through a confederation of public-access wireless LANs will approximate the effect of being always connected. The creation of those networks, and their potential as an alternate content channel and enterprise tunnel, provides many interesting opportunities for businesses of all types to become franchised information service providers.

What sort of infrastructure does a company need to support a mobile and wireless computing program?

Ellwood: All a company needs is open data-access standards, using HTTP or ODBC or XML. API interfaces make it more difficult but not impossible. Depending on the types of mobile services a company wishes to offer and to whom, integrated end-to-end business processes might be necessary; for example, to place an order. Of course, a company also needs a suitable messaging and integration platform such as Solagem's Messenger to make its wireless services available.

Guibert: Wireless technology has matured and the focus is on integration with existing infrastructure (not the other way around). So we put the question to ourselves and said, "What sort of standards and infrastructure do we need to support to ensure customers will adopt our wireless products?" BlackBerry Enterprise Server runs on a Windows NT box without any special infrastructure requirements. Again, we've focused on abstracting the unique complexities of wireless data and providing a robust and extensible solution.

Fricchione: None-a company can outsource such a program. However, the ideal situation is to take a solution architecture approach to determine the ideal infrastructure to support the business needs for mobility and wireless, and then to use that architecture to leverage the infrastructure investments that have already been made. We see that most enterprise infrastructures to support wireless and mobility will be a combination of owned resources, the Internet, and resources from external services providers. The art is in architecting the right combination of those ingredients to achieve the greatest business benefit for the least cost.

What are some examples of how mobile and wireless computing technology is being successfully deployed?

Ellwood: In the corporate world, mobile business intelligence provides up-to-the-minute management information to executives wherever they might be. In retail chains, staff at hundreds of local stores control their own ordering and inventory with handheld devices that wirelessly communicate with corporate systems. In the consumer world, using Finnish SMS examples, you can handle car-park fees, video rentals, pizza ordering, and bus and train timetables. Mobile banking in Finland can be carried out on a WAP phone.

Guibert: BlackBerry has been successfully deployed in more than 12,000 companies across North America (with deployment beginning across Europe), ranging in a variety of industries from financial to legal to government.

How does a company prepare itself for entry into the mobile and wireless computing market?

Ellwood: Identify what time-critical or location-independent information customers, suppliers, and employees need. What do these people do during an average day, and what extra information or functionality while they are mobile would help them? Don't be too ambitious to begin with-it is not a question of making your complete applications and databases mobile. Think big, but start small. If the solution is as scalable and adaptable as the vendor says, this approach shouldn't cause any difficulties later. Consider push, pull, and update kinds of services as different phases, and implement them separately, if necessary. Of course, you need to consider the device types. Consumers and suppliers could be using any device type; thus, a company might need to offer the same services through a variety of methods.

Fricchione: First, it is not about the products, it's about what you accomplish with them. The critical preparation is to get the business and IT folks together, to synchronize the business opportunities and the technical directions. It is important to establish an ideal future state, assess the current state, and then create a path backward from an assumption of success in reaching the desired future state. That definition of business success will guide the selection of appropriate products. As you proceed along the path, the products will continually evolve as customers and vendor partners better understand the opportunities. ■

About the Author

Tony Stevenson is a director of MKD Software Consulting, a company that specializes in communicating information technology to both business people and the wider community. Tony contributes regularly to a range of newspapers, journals, magazines, and Web sites.