

## Features

# Mobilizing Knowledge Workers with Wireless Solutions

by Madanmohan Rao  
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While PCs and workstations have come under some criticism for "tethering" knowledge workers to their desks, wireless technologies may be the perfect answer to "mobilizing" the workforce by letting them capture and harness key information and knowledge attributes wherever they are, whenever they want, and however they want.

Strategies focused on knowledge mobilization via handheld devices and wireless networks -- ranging from Pocket PCs and cellphones to WLANs and RFID tags - can take knowledge management to an entirely new plane of performance, putting road warriors and field workers in the center of the information and communications world via mobile portals and on-demand expert services.

"Wireless connectivity at the LAN level lets employees work creatively outside of office cubicles if they so desire. They can roam around and stay connected at the same time," observed Jeanne Holm, chief knowledge architect at NASA in the U.S., who spoke at the recent KM Asia 2002 conference in Singapore hosted by the Ark Group.

"However, too much wireless interruption can be distracting at meetings as well," she warned. Overall, wireless technologies improve employee productivity. "Knowledge anywhere, anytime and on any device is critical in this day and age," Holm said.

"Wireless solutions can help employees communicate easily in real time and function across boundaries of space and time," said Robert Buckman, former chairman of Buckman Laboratories and one of the pioneering champions of KM.

Such solutions must be integrated well with business culture; it is important to create a climate of continuity and trust so that employees may have proactive knowledge sharing across an organization's evolution, he advised.

"In addition to wireless connectivity, ubiquitous bandwidth is key. Otherwise, information and applications will have to be designed for too many different bandwidths and devices," Buckman cautioned.

Asia is way ahead in wireless adoption, especially Korea, and the U.S. market has much to learn from Asian countries in this regard.

"Mobility-enabling technologies are emerging as drivers for the importance of knowledge," said Manuella Mueller, director of knowledge sharing at Siemens Medical Solutions in Germany.

Siemens' KM deploys a knowledge mobilization function called "Med2Go" on Compaq's iPaq, which is used by hundreds of Siemens employees worldwide. As an incentive for employees who perform well in the company's "Share and Succeed" KM initiative, the KM program officers award prizes like the Siemens SL45 dual-band mobile phone with integrated MP-3 player.

"Wireless will certainly bring great innovation to organizations, once stumbling blocks like inadequate standardization are resolved," said Paul Hearn, project officer at the European Commission's Information Society Technologies Programme.

It is key, however, for mobile content and applications to be workflow oriented, and aligned with core business processes in order to take electronic networking and collaboration to a higher level of efficiency. Current challenges for KM practitioners include devising effective metrics to measure RoI (return on investment) in wireless KM solutions.

"Knowledge is the capability to take effective action. Learning is the process of turning information into knowledge," said Hubert Saint-Onge, CEO of Konverge Digital Solutions in Ontario, Canada.

And a rather innovative uses of wireless technologies to conduct workforce research and leverage the learnings instantly comes from an insect and rodent control company called Origin Exterminators, headquartered in Singapore.

"Eighty percent of our workforce is out in the field. Wireless technologies help us gather timely data which we can then harvest for information nuggets," said Carl Baptista, head of R&D at Origin Exterminators.

"Wireless also helps us act on this knowledge immediately by contacting our field workforce in realtime via SMS alerts -- for instance, about unusually large rodent activity," said Baptista. The company also uses wireless networks to schedule dispatch times and route planning in an optimized manner.

Automatic wireless sensors and handheld devices operated by field technicians help the company sharpen its research on key issues: Which rat baits are working best? Is the population of roaches increasing? What traps are working best this week? What patterns can be detected in different seasons? How quickly can new extermination services be offered? Which chemicals are the most effective?

"It almost puts a new twist to the acronym CMS (content management system): cockroach management system," joked Baptista.

Origin Exterminator's field force uses PDAs with applications built for the Symbol OS on Palm handhelds. "Our rodent traps have bar coded tags, and our backend solution leverages GPS technology to coordinate communication with our field force," said

Baptista. The company also deploys password-protected Web gateways for customers to access their data in realtime.

"The knowledge mobilization opportunity using wireless technologies is so huge that no company can afford not to grab it fast and hard," according to Peter Keen and Ron Mackintosh, authors of [The Freedom Economy: Gaining the mCommerce Edge in the Era of the Wireless Internet](#). This applies to external competitive/regulatory intelligence, structured internal knowledge, and especially informal internal knowledge.

For instance, Sun's field engineers are equipped with handhelds so that they have the collective knowledge of the company at easy disposal. Hotel giant Carlson's managers use iPaq handhelds with up-to-date information on room status and yield management. Boeing's engineers use laptops and WLANs to better access complex multimedia documents on the move. Bell Canada technicians use wearable computers and miniature cameras so that they can instantly tap office expertise even while they are on top of a pole.

"Mobile accessible information puts knowledge to work right at the demand points. Mobile technologies enhance communication, information and collaboration, the three cornerstones of knowledge building and usage," according to Keen and Mackintosh.

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