

Wireless World: Standards of the future

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The future of wireless network standards -- conventions that will gird the next generation of technologies for business mobility -- is being debated by industry leaders, and new mobile communications devices may be available as soon as next year, experts told UPI's Wireless World.

"The market for wireless access technologies is crowding with WLANs (Wireless Local Area Networks) going metro-scale and WiMax (Worldwide Interoperability for Microwave Access) gunning for cellular's top-dog spot," said Steve Wylie, the chairman of next month's Mobile Business Expo 2005 conference in San Francisco. There is a big question in the industry currently as to "which fast evolving wireless standards will be left standing in 2006 and beyond," Wylie added.

One of the standards, WiMax, has a major supporter in Korea's Samsung. WiMax is the certification mark for all technologies that are pass interoperability tests for the IEEE's 802.16 standards. Samsung is in negotiations with a number of U.S. mobile carriers about launching the nation's first broadband services, based on WiMax, next year. The company has already tested WiMax in South Korea. Also overseas, in the United Kingdom, two companies, Pipex and Airspan Networks, recently announced a WiMax networking in the Midlands. The trial will utilize Pipex's business broadband technologies and Airspan's network access products.

Leading companies like Nortel, Microsoft, Disney, Logitech, Cisco, AT&T and others this summer also demonstrated an array of WiMax technologies at a forum in Vancouver, British Columbia. The

technologies spanned from an Xbox wireless console gaming product, which runs over WiMax, as well as WiMax-based streaming media. The demonstrations were termed "successful" by John Hoadley, vice president of Nortel, the telecom company, and are part of the "evolution of wireless broadband networks."

The Yankee Group, the research consultancy, recently published a report called, "The Role of WIMAX in a World of Ubiquitous, Personal Broadband Services." The report showed WiMax should be viewed "in the context of" existing broadband and mobile trends.

Other technologies -- such as ultra-wideband -- are in the pipeline as well. "A product is being ready to be announced in the coming weeks," said Brian Bianco, a spokesman for Alereon Inc., a developer of chipsets for ultra-wideband applications in Austin, Texas.

Some technologies -- under consideration for the last several years -- have not changed all that much, however. "The emerging standards for WLAN (Wireless Local Area Networks) security have not changed," said an analyst with the Gartner Group. "The industry is still struggling."

The deployment of these networks can be deceptively simple -- find a place to plug in the technology and turn them on, experts said. But there are also environmental, networking, coverage and connectivity issues to consider.

"If you do not consider and plan for all of the operational and environmental factors which impact each installation, the network will not have the necessary coverage and capacity to provide the quality of service expected by users," said Roger Skidmore, chief product officer of Austin, Texas-based wireless technology developer, Wireless Valley. "In many cases, this renders the network useless for many of the intended applications. This is especially detrimental if public safety or

emergency medical teams hope to communicate using the network."

For example, even the best wireless technologies in the world still will fail if buildings and foliage obstructions block or degrade signals. The traditional way to design these networks is through what is called a site survey, but computer-based designs may have to take the place of these surveys in the coming years, Skidmore said.

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