

Excitement about WiMAX

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With excitement building about WiMAX, you might be surprised that, technically, no real WiMAX products are available yet. That is, none that meet the 802.16 profile as defined by the WiMAX Forum and certified compatible by the Forum's appointed lab in Spain.

But prestandard gear is out there and demonstrable, with the Forum's July conference in Vancouver featuring demos from Nortel, Microsoft, Cisco, AT&T and others.

What's more, there are said to be four or five important field trials of the high-speed, wide-area wireless technology under way around the world and the Forum says certified products should ship by year-end.

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Mobility, Motorola believes, is the Holy Grail, so instead of building to the 802.16d WiMAX spec, which only supports fixed point-to-point links, Motorola is building to the 802.16e revision that supports both fixed and mobile links. Equipment built to 802.16e is not compatible with 802.16d.

The 802.16e standard is expected to be finalized this month but it will take Motorola and other vendors many more months to tweak their products and ensure they are compliant. Sergeant says Motorola will ship its first products in the second quarter of 2006. Customers that buy prestandard gear will be able to upgrade with a fix delivered over the air.

The basic appeals of WiMAX are performance and cost, Sergeant says. The technology supports data speeds from 1 to 5 Mbps, depending on the distance to the wireless tower, with a peak of 20 Mbps. Compare that with cell technologies such as GPRS that support 114 Kbps (more typically 20 to 30 Kbps) and EV-DO, which supports 2.4 Mbps (more typically 200 to 400 Kbps).

And it costs less than competing cell technologies because it requires far fewer network elements -- they are built in to the basic WiMAX device -- and the shoe box-sized antennas can be mounted to existing poles or buildings.

Sergeant says Motorola will build cell phones that support WiMAX and possibly Wi-Fi. Intel, one of the earliest WiMAX proponents, is building WiMAX chips for use in laptops and other devices.

Could WiMAX eventually supercede Wi-Fi? "If the costs came down enough WiMAX could be a super-Wi-Fi," Sergeant says, but he doesn't really expect to see that.