

TELECOMMUNICATIONS

THE WIDE, WIDE WORLD OF WIMAX

NOT MUCH HAPPENS IN DROWSY SAN Miguel del Monte, 70 miles south of Buenos Aires. So a ripple of radio waves across the town's outlying fields and farms this spring—an early test of a new wireless broadband technology called WiMax—turned this Argentine enclave of 10,000 upside down.

Ruben Fernandez, who manages a chemical plant outside San Miguel, saved money on his phone bill by using the test-model WiMax, a precursor to the real thing, to connect to the Internet and make voice calls. Luciano Coulomme, the IT manager at city hall, used it for a videoconference. "The quality was fantastic," Coulomme says.

What happened in San Miguel was just a trial. But Millicom Argentina, the telecom operator running the pilot, says it plans to roll out a WiMax-like service late this year that will cover nearly one-fifth of Argentina's population by the end of 2005. The service will give businesses and residents high-speed Internet access for everything from Web browsing to videoconferencing to telephone calls.

WiMax is the latest buzzword in the telecom industry. Early backers say its greater reliability, capacity, and range relative to Wi-fi and other technologies, including cellular—up to 30 miles in rural areas—will

be particularly important to developing countries where little phone or Internet service is available. Instead of installing wires or cell sites, they can leap straight to WiMax. Half the more than 50 trials planned worldwide will be held in developing countries such as China, Tanzania, Bangladesh, and Bulgaria. If all goes well, service should go live sometime in 2005.

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WiMax is evolving from an existing radio technology called BWA, or broadband wireless access. Although the industry hasn't certified products yet and spectrum-license issues still loom, the interest of heavyweights such as Intel, Deutsche

Telekom, Cisco, Samsung, Nortel, and Motorola in developing the technology seems to ensure that it will be deployed commercially and eventually at lower cost than competing alternatives. "If WiMax follows Wi-fi's curve," says John Yunker, an analyst at Byte Level Research in Escondido, Calif., "it will be the cheapest source of Internet access, bar none."

That's got developing countries salivating. In Yaounde, Cameroon, for instance, doctors are exploring using WiMax to receive X-rays and other visuals from field hospitals over the web for help in diagnosis. Egypt has opened a "smart village" outside Cairo that will offer WiMax service to businesses and individuals. Reliance

Infocomm, an Indian cellular operator, says it plans field trials when agreement is reached about which radio frequencies will be licensed. VSNL, a telecom company owned by India's Tata Group, plans to use WiMax to extend service to rural areas where it's not economical to build cell sites, even in places where there's no electricity today. Currently, less than 5% of India's one billion people are cellphone subscribers, and half of its 600,000 villages have no phone service at all, making WiMax particularly enticing.

WiMax still has wrinkles to iron out. They range from anticipated fights over frequency allocation to the initial high cost of equipment to whether Intel will keep on schedule with its plan to market a WiMax chip by next year. But with millions of people living without telecommunications service of any kind, WiMax looks to be the best alternative for bringing them into the Information Age. — Carolyn Whelan

DEALS

MALONE MANEUVERS A LIMPING LIBERTY

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