

Perfect transmission with SkyMAX

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Siemens Communications recently succeeded in completing the first live data transfer with SkyMAX, a new end-to-end [WiMAX](#) (Worldwide Interoperability for Microwave Access) solution based on the IEEE 802.16-2004 standard, in its test lab in Milan, Italy . During the live link between a modem and a base station in the 3.5 GHz frequency spectrum, data was transmitted at a top speed of up to 12 megabits per second in 3.5 MHz bandwidth. Transmission rates as high as this had only previously been achieved with early proprietary systems.

Siemens will be one of the world's first companies to offer standard-compliant WiMAX radio networks, including end devices, to fixed and mobile network operators.

“This successful test demonstrates that we have met our ambitious target of being ready for the commercial deployment of WiMAX in the second half of 2005,” said Christoph Caselitz, President of Mobile Networks at Siemens Communications. “We will now make SkyMAX available to our customer for trials.”

The SkyMAX solution includes a base station that uses orthogonal frequency division multiplexing (OFDM) technology and modems as end devices. OFDM technology protects wireless broadband transmissions against most interference from echoes and multipathing. The SkyMAX modems use Intel’s PRO/Wireless 5116 chip, the first on-chip system for WiMAX that is based on the IEEE 802.16-2004 standard.

"We are all the more pleased about the first live data transmission from Siemens since it uses the PRO/Wireless 5116 Chip that we officially presented in April of this year", says Christian Morales, Vice President of the Sales and Marketing Group and General Manager of Intel EMEA. "This brings us a huge step closer to the joint vision of wireless broadband networks and services. Users will find these new communication options as indispensable as they do DSL or wireless LAN today."

The connection between the SkyMAX base stations and a number of modems was tested in a non-line-of-sight setup. The results demonstrated that SkyMAX is able to deliver services such as Web browsing, video streaming, VoIP and file transfers with a guaranteed level of quality even when the radio link between sender and receiver includes obstacles like trees or buildings.

About WiMAX

WiMAX is a standards-based wireless technology for providing high-speed, last-mile broadband connectivity to homes and businesses and for mobile wireless networks. WiMAX is based on the IEEE 802.16-2004 specification for wireless high-speed internet access developed by the WiMAX Forum. WiMAX offers a wireless alternative to cable and DSL broadband access. It can be deployed as a wireless 'last mile' solution for fixed and mobile operators planning to deliver wireless DSL services to rural and remote areas where providing services by cable or fibre is difficult or uneconomic.

About SkyMAX

SkyMAX is the Siemens WiMAX solution that provides cost-effective last-mile broadband wireless access for residential users, small

office/home-office (SOHO) and small-to-medium sizes enterprises (SMEs). SkyMAX is already prepared for an upgrade to IEEE 802.16e, an extension of the standard for mobile use. SkyMAX flexibly adapts to diverse frequency channels (from 1.75 to 14 GHz) with adaptive modulation up to 64 levels, thus delivering higher capacity than any other available product. The SkyMAX family includes a choice of modems for different user groups: The plug-and-play modem for indoor usage is optimized for high-speed internet access and VoIP provisioning in small companies and private households, while the modem for business users with its outdoor transmit/receive unit is optimized for maximum coverage and carrier-class services.

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