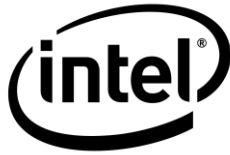


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# Fact Sheet

## **INTEL AND WiMAX: THE FUTURE OF BROADBAND ON-THE-GO**

**Feb. 11, 2008** -- Intel Corporation has played a key role in bringing together some of the leading players in the wireless communications industry to participate in standardization activities and the deployment of WiMAX which promises high speed, reliable and low-cost broadband Internet access on-the-go.

Based on the IEEE 802.16\* standard endorsed by several government and industry bodies, WiMAX is supported by a wide range of international service providers, telecom equipment and handset manufacturers. Mobile WiMAX is ideally suited to data-intensive applications such as Internet audio and video, high-definition video, voice over internet (VoIP) telephone and Internet television (IPTV). In developed market segments, WiMAX has the opportunity to make high-speed mobile Internet access more ubiquitous. In other parts of the world, WiMAX could be used to create vital communications links where none exist today, resulting in low-cost Internet access in developing nations where it is available.

Deployments of WiMAX networks and trials are already underway in more than 300 locations – from U.S. cities such as Chicago, to rural parts of Vietnam and wide areas of Mexico. Later this year, commercial deployment of mobile WiMAX networks in the U.S. from Sprint and Clearwire are expected to begin, and Intel plans to offer WiMAX modules for use in certain laptop PCs, ultra mobile PCs and other mobile and CE devices.

Take a look back at the momentum behind WiMAX technology and how Intel has helped drive its progress for more than 5 years.

## **WiMAX MILESTONES**

**May 2002:** “Seed” business starts within Intel to pursue IEEE 802.16, an emerging wireless standard to provide high-speed broadband connectivity across long distances, also known as “WiMAX.” At the time, only half a dozen companies were exploring this developing technology.

**February - April 2003:** Intel participates in re-launch of what is now called the “WiMAX Forum” formed to promote and certify compatibility and interoperability of broadband wireless products.

**July 2003:** Intel announces for the first time its intentions to produce WiMAX silicon products for modems and chipsets.

**August 2004 - November 2004:** The Telecommunications Technology Association (TTA) of Korea introduces WiBro, (Wireless Broadband) in six Korean provinces. Intel and LG Electronics agree to ensure compatibility between WiBro and WiMAX technology so that people could someday access both networks from the same devices when traveling between Korea and other countries where WiMAX would exist.

**October 2004:** Intel and Clearwire accelerate deployment of WiMAX networks through joint technology development and investments.

**January 2005:** The Sundance Film Festival in Park City, Utah is the scene of the first movie ever to be delivered to an audience over WiMAX. At the festival, David LaChapelle premieres his highly anticipated 86-minute film “Rize” by wirelessly transmitting it from a computer more than 800 miles away in Hillsboro, Ore. to screens at the Empire Lodge in Deer Valley, Utah.

**April 2005:** Intel announces volume shipments of its first WiMAX product, the Intel® PRO/Wireless 5116. The 5116 targets interoperable, customer premise equipment used by telecommunications service providers to deploy fixed broadband wireless based upon the IEEE 802.16-2004 standard.

**June 2005:** Intel and Nokia announce plans to accelerate the development, adoption and deployment of WiMAX technology, helping to bring new capabilities to mobile users over high-speed networks. Separately, Intel and ArrayComm develop and propose key requirements for the IEEE 802.16 standard to bring the benefits of smart antenna technology to WiMAX.

**September 2005:** Intel spurs WiMAX deployments with the Asian Broadband Campaign to provide broadband wireless consulting, expertise and services in Southeast Asia.

**October 2005:** Intel and Motorola promote adoption of mobile WiMAX technology based on the proposed IEEE 802.16e-2005 standard for both fixed and mobile wireless broadband applications.

**December 2005:** The IEEE approves the mobile WiMAX standard designated IEEE 802.16e-2005, adding support for mobility, meaning it supports handovers between base stations as a user moves from one location to another -- for example when driving in a car from point A to point B.

**March 2006:** Intel discloses first details of a single chip Wi-Fi/WiMAX radio, which will be the world’s first dual-radio chip to be embedded in certain future laptops, enabling people to access both networks depending on where they are located.

**May 2006:** As part of its \$1 billion World Ahead Program, Intel expands wireless Internet access in developing regions by encouraging the promotion of WiMAX trials and deployments.

**May 2006:** Intel Capital, the venture capital investment arm of Intel, announces the signing of two agreements to invest in companies to deploy WiMAX. The first is an investment in Orascom Telecom WiMAX Limited, a joint venture with Orascom Telecom of Egypt, and the second is an investment in Worldmax, a joint venture with Enertel Holding of the Netherlands.

**July 2006:** Intel, USAID and Vietnam Data Communication Company collaborate to install fixed WiMAX technology in the remote northern Vietnamese village of Ta Van, near Sapa in the Lao Cai province. The project is intended to connect rural villagers to 21st century Internet knowledge opportunities.

**July 2006:** Intel Capital invests \$600 million in Clearwire to accelerate the development and deployment of mobile WiMAX networks in the U.S.

**August 2006:** Sprint announces plans for U.S. WiMAX networks, making it the first major U.S. carrier to work on the national deployment of the mobile broadband technology.

**September 2006:** The WiMAX Forum hosts the first Plugfest of mobile WiMAX equipment. Intel and about 20 equipment manufacturers successfully demonstrate interoperability of WiMAX equipment and devices, showing further progress toward readiness for commercial deployment of the technology.

**October 2006:** Intel launches the Intel® WiMAX Connection 2250, the industry's first dual-mode baseband system-on-chip supporting both mobile and fixed modems.

**December 2006:** Intel demonstrates its first baseband chip supporting mobile WiMAX combined with the company's previously announced single-chip, multi-band WiMAX/Wi-Fi radio, creating a complete chipset called the Intel® WiMAX Connection 2300.

**July 2007:** Clearwire and Sprint sign letter of intent to build a U.S. WiMAX network expected to reach 100 million people by the end of 2008.

**September 2007:** Intel Capital, KDDI Corporation, East Japan Railway Company, Kyocera Corporation, Daiwa Securities Group and the Bank of Tokyo-Mitsubishi UFJ agree to invest in a joint venture, Wireless Broadband Planning K.K. (WBPK) to bid for spectrum licenses and develop and operate a wireless broadband network based on mobile WiMAX technology.

**September 2007:** Intel announces that leading laptop OEMs, including Acer, Asus, Lenovo, Panasonic and Toshiba plan to embed WiMAX into their next-generation Intel® Centrino® processor technology-based notebook PCs in mid-2008. Intel also demonstrates the world's first integrated Wi-Fi / WiMAX module for notebooks, codenamed "Echo Peak," planned for mid-2008.

**September 2007:** Intel, Nokia and Nokia Siemens Networks announce they are testing interoperability across Intel's forthcoming WiMAX silicon for laptops and mobile Internet devices, Nokia WiMAX devices and Nokia Siemens Networks WiMAX infrastructure equipment. Nokia also announces that it will use Intel's WiMAX silicon product designed specifically for mobile Internet and consumer electronic devices ("Baxter Peak"), in its forthcoming Nokia Nseries\* Internet Tablets, expected to ship in 2008.

**October 2007:** Freedom4 (a joint venture between England's Pipex and Intel) announces first citywide WiMAX deployment in Manchester, England, to be followed by WiMAX rollouts in 50 cities in the United Kingdom.

**October 2007:** The International Telecommunications Union officially approves WiMAX as a 3G wireless standard, adding WiMAX to the IMT-2000-compliant portfolio of approved 3G technologies. The approval will enable WiMAX to complement existing 3G technologies in market segments where only IMT-2000 products can be deployed and pave the way for broader WiMAX deployments around the world.

**November 2007:** Sprint and Clearwire announce they had terminated their LOI to work together to build a U.S. WiMAX network. Both companies will separately reiterate their commitments to the deployment of WiMAX networks in the days that followed. Sprint confirms that its soft launch in the Chicago and Baltimore/Washington, D.C. areas at the end of the year would proceed as planned.

**December 2007:** Comstar, Russia's leading telecomm provider and Intel announce a collaboration to develop mobile WiMAX in Russia. The joint effort will initially focus on building a citywide mobile WiMAX network in Moscow.

**December 2007:** The Japanese Ministry of Internal Affairs and Communications announces that WBPK, a joint venture formed in September with investments from Intel Capital, KDDI, and other companies, is one of the recipients of two 2.5 GHz frequency licenses in Japan. WBPK aims to offer a wide range services over the mobile WiMAX network it intends to build, with its initial offering expected in 2009.

### **What's ahead?**

WiMAX is increasingly recognized as a cost-effective technology for delivering carrier-class, standards-based interoperable high-speed mobile Internet access. Intel continues to work with industry parties to deploy WiMAX networks around the world. Already, approximately 300 trials and deployments are underway around the world, about 120 of which are for mobile WiMAX.

In mature market segments, such as the U.S. where earlier technologies such as Wi-Fi are widely available, the rollout of mobile WiMAX services is expected to occur gradually beginning in 2008 as service providers create new infrastructure to support next-generation mobile wireless connectivity. In developing market segments, the impact of WiMAX may be more dramatic as unserved or underserved regions are equipped with wireless mobile and fixed-location broadband wireless communications.

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