

WCA Leadership Briefing Highlights Interoperability From Mobile WiMAX PlugFest and SPRINT's NG Wireless Network

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Introduction

WCA's one-day *Carrier & Enterprise Leadership Briefing* was co-located with WCA's Fall 2006 Board of Directors meeting. It was held on October 4, 2005 in Reston, VA. The purpose of the one-day conference was for industry leaders most active within the WCA to share insights with one another following a summer of momentous developments in the broadband wireless industry. Selected members of the trade press were also invited to attend this important one-day conference. The agenda can be viewed from:

http://www.wcai.com/event/06/b_agenda.htm

The Plug Fest

Insights from the first WiMAX Forum™ Plugfest demonstrating interoperability of Mobile WiMAX products were discussed at WCA Leadership Briefing in Reston, VA on October 4, 2005. **WiMAX Forum Interoperability Testing At Bechtel Labs: Summary and Path Forward** was the title of the joint presentation by Bechtel Principal Vice President & CTO Jake MacLeod and Intel Mobility Group Director of Technology Standards Kamran Etemad.

Bechtel Telecom hosted the first public Mobile WiMAX Forum PlugFest from Sept. 24 to Oct. 1, 2006 at Bechtel's Training and Research Laboratory in Frederick, MD. Intel is the most vocal evangelist and cheerleader for all things related to WiMAX. The WiMAX Forum has described its PlugFest as providing Mobile WiMAX (IEEE 802.16-2005) equipment suppliers an open environment in which to test compatibility and interoperability of equipment in preparation for certification. Participating companies in this PlugFest included: Accton Technologies, Adaptix, Airspan, Alcatel, Altair Semiconductor, Alvarion, Beceem Communications, CETECOM-Aeroflex, GCT Semiconductor, Intel, M/A-Com, Motorola, Navini Networks, picoChip, POSDATA, Runcom, Samsung, SEQUANS Communications, SOMA Networks, TTA Labs, Wintegra, and test equipment vendors: CETECOM, Invenova, and Rohde and Schwarz. Airspan Networks, M/A-COM, Picochip and Sequans announced the successful completion of 4.9GHz ETG Interoperability testing at this Mobile WiMAX Plugfest.

Plugfest Postscript: Aperto Networks, subject of a previous WiMAX article by this author, has announced a Mobile WiMAX product strategy. Please refer to:

http://www.marketwire.com/mw/release_html_b1?release_id=170491&tsource=3

WiMAX Forum Activity

Interoperability is the foundation of standardization and key objective of the WiMAX Forum. The WiMAX Forum Certification Test Lab is located at CETECOM in Malaga, Spain. It has

been certifying Fixed WiMAX (IEEE 802.16-2004) products since 2006. TTA Labs of Korea (home of WiBro) will commence initial certification of Mobile WiMAX products by the end of 2006, with market availability of certified products beginning in early 2007, according to the WiMAX Forum.

Separate from the PlugFest and WCA Briefing, the WiMAX Forum's leadership has voted to organize its own tradeshow with exhibits beginning next October in order to realize the financial benefits from such events, which are increasingly dominated by start-up for-profit companies seeking to capitalize on industry momentum. The WiMAX Forum plans three events per year with exhibits in conjunction with its internal face-to-face meetings, with one in the U.S., one in Asia and one in Europe. WiMAX leadership companies, who heavily overlap with WCA member companies, foresee significant cost increases in such operational costs as certification and regulatory efforts on a global, and as a result are limiting the extent of endorsing others' conventions unless the benefit to the WiMAX Forum is more tangible.

Sprint's Next Generation Wireless Network

Ali Tabassi, Vice President for Technology Development for Sprint- Nextel, previewed his company's Next Generation Network at this WCA 1 day conference. He described Sprint-Nextel's wireless broadband strategy as destined to make "Digital Life" simple, instant and enriching. He also drew distinctions between 3G and 4G wireless technology, saying OFDM technology for high-powered wireless data networks marks a significant shift from 3G, and so ought to be called 4G. Tabassi stated that OFDM technology used for advanced broadband wireless data networks marks a significant technology shift and so ought to be referred to and even regulated as 4G.

Regarding regulation of services and wireless networks, Tabassi urged that each generation¹ of wireless services be defined by technology and not by which spectrum band the technology operates on. In particular, he is very glad that the FCC bases "generation" designation on the technology used, rather than which spectrum the technology is deployed over, as is the case in Europe and Asia.

Sprint- Nextel plans to enable visually-rich content and bandwidth-intensive applications on a diverse array of portable and consumer electronic devices. Business, governments and consumers will be able to access multi-media content on innovative devices using Sprint's forthcoming Mobile WiMAX network, which SPRINT refers to as "4G."

Sprint-Nextel plans to spend at least \$2.5 billion to deploy IEEE 802.16e compliant- Mobile WiMAX base stations, which will cover 100,000 points of presence. The deployment will start in late 2007 and be completed by the end of 2008. It will deliver 1M to 3Mbps service to subscribers. Sprint's plan is to have 100,000 points of presence enabled with WiMAX service by the end of 2008. The network will be an overlay on the company's existing CDMA EV-DO 1x cellular network. Subscribers will be able to access either network, depending on coverage and services, through network cards and eventually through integrated wireless interfaces.

¹ **The transition from Analog to Digital wireless became 2G. When faster speeds and more efficiency improved on that digital capacity, the nomenclature became 2.5G. CDMA2000/WCDMA marked a paradigm shift to 3G for SPRINT-Nextel.**

In closing, Tabassi said his company has a 12-18-month lead over its competitors' through its superior spectrum position for broadband wireless, especially because the **AWS**² spectrum acquired by bidders during a recent auction won't be available nationally for at least three months. Tabassi stated that the amount of spectrum auctioned would not have the capability of the 2.5 GHz spectrum, which Sprint owns and uses.

² **Advanced Wireless Services (AWS) Spectrum is being defined by the FCC**

http://wireless.fcc.gov/services/index.htm?job=service_home&id=aws