

## **The Internet in Your Pocket: Mobile Internet Devices (MIDs) & WiMAX**

Talk by Rama Shukla, Director of WiMAX Program Office, Intel Corp.  
Meeting Summary by Alan J Weissberger, Principal of DCT Advisors

### **Abstract:**

Our local ComSoc chapter was privileged to have Rama Shukla of Intel speak at our January 16, 2008 meeting. Rama shared with us Intel's initiative's to create a new market for MIDs. With built in WiFi and WiMAX capability, MIDs would offer the user a much better mobile broadband experience than is possible today with smart cell phones.

### **Here are the highlights of Rama's talk:**

Notebook PCs shipments will exceed desk top PC shipments by 2009. Almost all notebooks have built in WiFi adaptors. In fact, Apple's new thin notebook ONLY supports WiFi and not Ethernet! This creates a need for better broadband wireless communications for mobile users.

In the 2<sup>nd</sup> half of 2008, Intel will provide a platform for notebook PC and MID manufacturers. Known internally as "Menlow," it will include a combo WiFi/WiMAX chip (that will not be sold separately).

Cellular subscribers have increased rapidly, but not nearly as much as Internet usage. People want mobility and Internet access "on the go".

Intel's vision for mobility is called, "Personal Mobile Broadband." MIDs together with broadband wireless access network will make this vision realizable.

There is tremendous pent up demand in India and other developing countries for broadband wireless access (BWA). Those countries are lacking in wire-line broadband infrastructure. WiMAX is a very good fit for BWA in those countries.

We haven't dreamed of some of the uses and applications of MIDs. Those could bring on the biggest revolution in PCs in the last 20 years.

Users will need the same or better user experience with MIDs than they get with desktop PCs. This includes: full web and media access, always on and always connected, consistent mobile performance (responsiveness and visualization). Software compatibility is also desirable.

Intel's Menlow platform, to be introduced 1H08, is a giant step forward in enabling that MID user experience. It will provide a 10X improvement in graphics and video experience, while being more power efficient than previous chip sets.

MIDs will be designed "from the ground up" to fit into extremely small, pocket size packages.

MIDs most hit consumer price points and support the following requirements:

- Small form factor
- Good battery life
- PC-like performance
- PC-like internet experience
- Affordable: PC OS/Internet/Communications ecosystem
- AND: Anytime/Anywhere BROADBAND (**MOBILE WiMAX**)

3G will not make for a great mobile Internet user experience, but mobile WiMAX will.

Carriers know that there will be huge growth in **mobile BWA** and are considering WiMAX for that reason. True mobile WiMAX will happen in mature markets where wire-line broadband penetration is high, e.g. Korea, Europe, U.S. [This implies that “mobile WiMax or IEEE 802.16e” will mostly be used for fixed BWA in developing countries.]

As multiple frequencies will be used, mobile WiMAX will be a multi-band wireless access technology (which has implications for roaming, i.e. frequency translation).

WiMAX global deployments (see Figure below) will accelerate through 2012:

	<u>2006</u>	<u>2008</u>	<u>2010</u>	<u>2012</u>
WiMAX Trials & Deployments	250	400		
Population Covered		150M	650M	1.3B
Large WiMAX Carriers		3	12	20

Countries with potentially large WiMAX deployments include: US, Mexico, Canada, China, India, Japan, Russia Australia, UK, Germany, France, Italy, Brazil

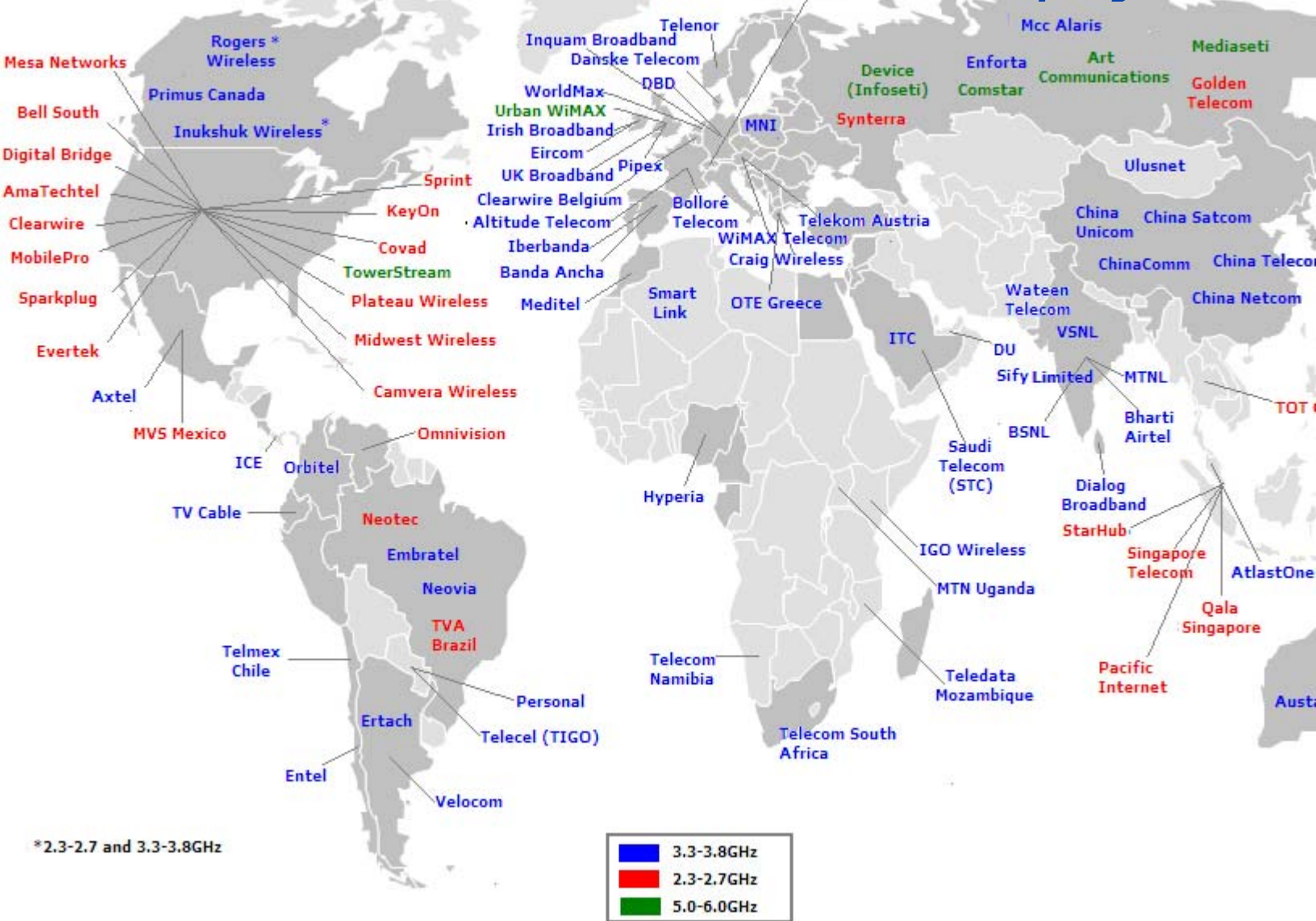
There were quite a few WiMAX demos at CES: Jan 7-10, 2008 in Las Vegas.

Intel is committed to embed WiMAX into next-generation Centrino® Processor based notebooks. They will have the industries first WiFi/WiMAX Combo Card later this year. It will be offered as mini card and half mini card (very small form factor).

### **Summary**

- Mobile, Personalized Internet-in-your-pocket is a revolution in making
- Moore’s law driving new MID category
- Communication/Computing convergence 2.0
- Mobile WiMax Broadband is THE Open Mobile Internet enabler
- 2008 is the year of Mobile WiMax/MID deployment!!

# WiMax: > 300 Trials , > 95 Commercial Deployments



## References

For more information, please refer to the pdf of Rama's presentation, available on ComSoc SCV web site: <http://www.ewh.ieee.org/r6/scv/comsoc/index.php>

Is WiMAX Market success dependent on new Consumer Electronic (CE) devices? Alan J Weissberger writing in Viodi View: <http://www.viodi.tv/2007/04/24/wimax-2/>

Will the Real Mobile WiMAX Please Stand Up! Alan J Weissberger writing in Viodi View: <http://www.viodi.com/newsletter/061000/article2.pdf>