

Pipeline

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Out of Thin Air: A Conversation with the WiMAX Forum

by Tim Young with Dr. Mohammad Shakouri

In exploring emerging access technologies for this month's issue, we thought we'd take some time to speak to one industry forum on the cutting edge of emerging access technologies, worldwide: The WiMAX Forum. Pipeline had a chance to speak to Dr. Mohammad Shakouri, corporate VP of Strategy at Alvarion and VP of Marketing for the WiMAX Forum.

Pipeline: Why is WiMAX an important access technology?

Shakouri: I think there are two main drivers behind the interest in and growth of the WiMAX industry. The first exists in countries that do not have broadband infrastructure. Normally the broadband infrastructure means DSL and cable. There's a big correlation between GDP growth and broadband access. Since the wired infrastructure was generally designed for telephony and the region is poor, the number of broadband connections is very little, so wireless is the only way to quickly give access. Everybody wants a standards-based and an equal system that is very wide. That's why in a lot of these emerging economies, as well as in rural parts of Australia or Europe or others, WiMAX is an actual choice. That's one main driver of WiMAX.

The second is that in countries in which the population is already using broadband, they're looking at ways of allowing that broadband to move from the house to the person. The person is going to go to work, stay at home, drive around, etc. When you look at the average person, around 40% of their time is at work, 30% is at home, and 30% is in the field. People were looking at this and trying to see how to get broadband to the person in the same way that cellular has made voice personalized. WiMAX has been an early adopter of open industry structure for broadband. You see Korea Telecom in Korea, KDDI in Japan, Sprint in the US, and the whole country of Taiwan, in terms of allocation of spectrum, all starting to build this mobile broadband infrastructure that is very complementary to cellular, but enables a different breed of gadgets and high-tech devices that are WiMAX enabled.

The two applications are very distinct and the needs are very different.

PL: Where is WiMAX finding the most market traction?

Shakouri: Actually, it's being deployed by more than 500 operators in, I believe, 67 countries. We have interest in Africa, South America, the US, Japan, etc. If you ask where the mobile WiMAX is being pushed, I would say that the leaders are Japan, Korea, Taiwan, and the US. Western Europe still has not moved, and the big question there is spectrum availability. In terms of WiMAX as a broadband access technology, it's everywhere. The need for broadband is growing faster than the wired networks.

What are some factors that have inhibited widespread adoption of WiMAX, and how are those being overcome?

The WiMAX industry is serving the broadband wireless access market, which last year alone was worth one billion dollars. The main reason for the change has been that the industry was fragmented, and in the last few years has found a standard. The need and the deployment is not a technology that is looking for a home. It's got it already. It's a matter of getting the ecosystem, getting the multi-vendor interoperability, and all the rest has been more of an innovation than any market force. It's taken time for all of that to happen.

PL: How is the WiMAX forum guiding the growth of the technology?

Shakouri: As an industry body, the WiMAX forum has put together an umbrella under which we have operators, content and application players, device people, and systems vendors. We have developed a very open application process in which the systems people can innovate building device components and new applications. We are learning lessons and building an open organization that tries work under the fundamental philosophy of building tools with which our operators can go make money and then build from that. People are saying that this year there will be 30 billion dollars in WiMAX investment. For a technology that didn't exist five years ago. WiMAX is a central location and a mechanism by which everyone can get together to better understand how do build the special tools that can help drive the industry.

PL: Do you view WiMAX as a competitor or a complement to other access projects like FTTH or advanced cable?

Shakouri: Of course we think that our value proposition is to be a complement to those technologies. It would be best to put fiber to every human being because fiber's capacity is much higher. The value of WiMAX is mobility and complementing these technologies. In very few places do we see a debate between fiber and WiMAX. The question is how fast you need to do deployment and what you need to build. If there's no time for fiber, you can use WiMAX. The additional value of WiMAX is that the consumer can leave the house. If you can give that customer broadband experiences and deliver some of the technology, that's very complementary. Also, with fiber and other technology, you're putting hundreds of video channels into the home. You're not going to go on your trusty wireless network and get hundreds of video channels, because it would be very expensive. So I think we see different uses for both technologies.

PL: How do you expect the view of WiMAX by Service Providers to change

in the next 5 years?

Shakouri: I think the biggest thing you see right now is WiMAX moving into the mainstream of helping mobile operators. Today you see 2G or 3G. I believe they will look at adding more broadband capabilities. I believe WiMAX has an opportunity to penetrate and potentially take a good percentage of the future of mobile broadband infrastructure. Today cellular mobile infrastructure spending is in the billions of dollars. We hope that in the next 3-5 years, 20-30% of that investment will be in WiMAX. We think that it's very complementary, and there's an opportunity for WiMAX to become very mainstream.

The other thing I see happening is that telecommunications and the whole industry is undergoing a radical shift. I don't believe you'll have a mobile operator doing cellular activity only, or a telco doing just DSL or voice, or a satellite company just doing satellite. Multimedia and content is going to be an important element, and I think that doing broadband wireless technology is going to be an important tool. My feeling is that this major shift in the industry means WiMAX has the potential to become a real force. I think this is just a small step. The growth of WiMAX is amazing, but what lies ahead is much more powerful.

PL: Are Content and Device companies an active part of the forum?

Shakouri: The second biggest group in the forum is equipment players. In addition, companies like Sony and Disney are involved, and I think more content players will continue to get involved. I think this is a very important element in terms of having them be a strong partner of ours. For example, we have a large number of application players from Taiwan becoming a part of the forum. That's happening in Japan and Korea, too. I think that this is a growth opportunity for the forum. We've seen very positive traction on that level. Most of the content and payment comes much later in the cycle of technology, as you know. It's very nice to see these companies engaging with us sooner and helping to engage with us in developing solutions.

PL: Any other factors concerning the growth of WiMAX you'd like to share?

Shakouri: *There are issues about WiMAX growth in the US, and you can hear about it with regards to Sprint. WiMAX forum has a certain frequency in the spectrum, (2.5ghz). That frequency has already been allocated. One of the biggest challenges in the US is the number of operators who have spectrum for broadband. People are looking a lot into 700mHZ and 3.65, and other new bands that are opening. With that, new operators could get engaged. Internationally there's a large number of operators that should be active in the US, where there's a great potential for WiMAX. We need to get spectrum.*

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