



Wateen Telecom Launches WiMAX to 17 Cities in Pakistan in Nine Months:

Becoming a World Leader in Advanced Wireless Broadband Networks



To provide a level of user experience unmatched by any other carrier in Pakistan, Wateen Telecom chose Motorola's WiMAX and IMS Core technology to provide wireless broadband voice and data services for residential and corporate use. With Motorola's global experience and support, Wateen installed its WiMAX network in 17 major cities within just nine months and continue to deploy a network placing Wateen as the premier service provider in Pakistan. Motorola complemented the deployment utilizing its managed services capability to drive the required network to Pakistan's extensive underserved community.



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Shahid Miah, CTO Wateen Telecom, March, 2007.

It all starts with a vision

In 1993, several commercial business companies came together and formed the Abu Dhabi Group, which today consists of 10 companies, two of which provide fixed and mobile communications services to users throughout Pakistan.

One of those companies is Warid Telecom, which was founded in 2005 when the Abu Dhabi Group saw an opportunity to accelerate the growing penetration of mobile phones in Pakistan and submitted a bid for GSM license. With license in hand, the Group tasked Warid Telecom with differentiating itself in the marketplace by offering high quality, enhanced security and reliable service. Within six weeks of launching its new network, Warid was providing service to 1 million subscribers and today, the provider is the third largest and fastest growing mobile GSM company in Pakistan.

On the heels of that extraordinary success, the Abu Dhabi Group then spun off Wateen Telecom from Warid in 2005 to leverage the growing demand for broadband services and to further evolve Pakistan into the 21st century digital revolution. Again, the goal was to differentiate the company from its competitors by offering high quality and reliable voice and data broadband service offered through next generation technology.



Next generation technology, cutting edge communications infrastructure

Existing broadband infrastructure in Pakistan at that time was sparse and often unreliable. With approximately 169 million people in the country but only 30,000 broadband connections, Wateen quickly recognized that the market opportunity for broadband in Pakistan was enormous, but they had their work cut out for them.

“There are fewer than five million fixed line connections in Pakistan,” says Shahid Miah, CTO, Wateen Telecom. “There are also just over two million Internet users and only a limited number are connected to broadband. We saw this as a huge, untapped market with a lot of potential.”

When the Abu Dhabi Group created Wateen Telecom, they gave the company a difficult but exciting challenge—to become the premier carrier in the region by building a world class, reliable, cost effective network that would provide wireless and fixed voice and broadband data services to both residential and corporate users. Wateen was not only up to the challenge, they increased the stakes and set their own goal of deploying the network with virtually unprecedented speed.

With a very aggressive timeline to meet, Wateen began to research emerging technologies and chose WiMAX wireless broadband technology because they felt it would not only enable a high quality network, it would also facilitate extreme speed of deployment. Now they needed a partner to help them achieve the vision.

Motorola supports Wateen to realize its vision

Knowing Motorola’s reputation in the industry for uncompromising quality and next generation technology, Wateen Telecom Pakistan approached Motorola and asked for recommendation on the best possible approach. Motorola immediately pulled together its team of subject matter experts, engineers, market analysts, and services professionals and began a series of discussions and workshops with Wateen’s dedicated team and leaders to understand exactly how to deliver the vision and how best to deliver it quickly and with the highest quality.

“When we chose Motorola, we not only focused on the technology and the technical expertise of Motorola, we looked at their capability to deliver an end-to-end service,” says Shahid Miah. “From day one, they engaged with us at all levels, whether we were talking about the design, the deployment, or managed services. They knew exactly what questions to ask, what information was required to ensure that the delivery was as painless as possible, and that the operation would be as smooth as possible once we started offering service.”

Because Wateen Telecom’s vision was to provide wireless fixed broadband data services for residential and corporate use, Motorola recommended its next generation wi4 WiMAX technology, based on the IEEE 802.16e-2005 standard. That solution would not only enable Wateen to offer both fixed and mobile broadband data and voice services on a single platform, it would also integrate a seamless mobility vision allowing interoperability across GSM, WiMAX and WiFi.

Aggressive deployment with flawless execution

The dedicated Motorola team kicked off the implementation by first developing a proof of concept that would analyze the core IMS infrastructure and help them understand how it would interact with the access component. Once the foundation was validated, they focused on getting it out into the environment. While conventional cellular infrastructure requires air-lifting heavy cabinets, air conditioners, and other equipment onto available rooftops, wi4 WiMAX is designed to deploy very quickly. With “zero footprint” and little extraneous equipment, wi4 WiMAX is significantly lighter and easy to deploy, and can be installed onto poles, roofs, and inside buildings, which enabled Motorola to complete the installation at the rate of one site per day.

“In choosing Motorola, Wateen did not only focus on the technology and technical expertise of Motorola, we looked at their capability to deliver an end to end service. Wateen believes that WiMAX 802.16e has a bright future. If we didn’t believe that, we wouldn’t have invested in the technology.

Shahid Miah, CTO Wateen Telecom, March, 2007.

In just nine months Motorola deployed its wi4 WiMAX infrastructure in 17 major cities throughout the region. With the speed and cost effectiveness of the deployment, Wateen has demonstrated how an emerging country can leapfrog directly to innovative, next generation technology to offer voice, data, Internet and next generation multimedia services to business users as well as consumers.

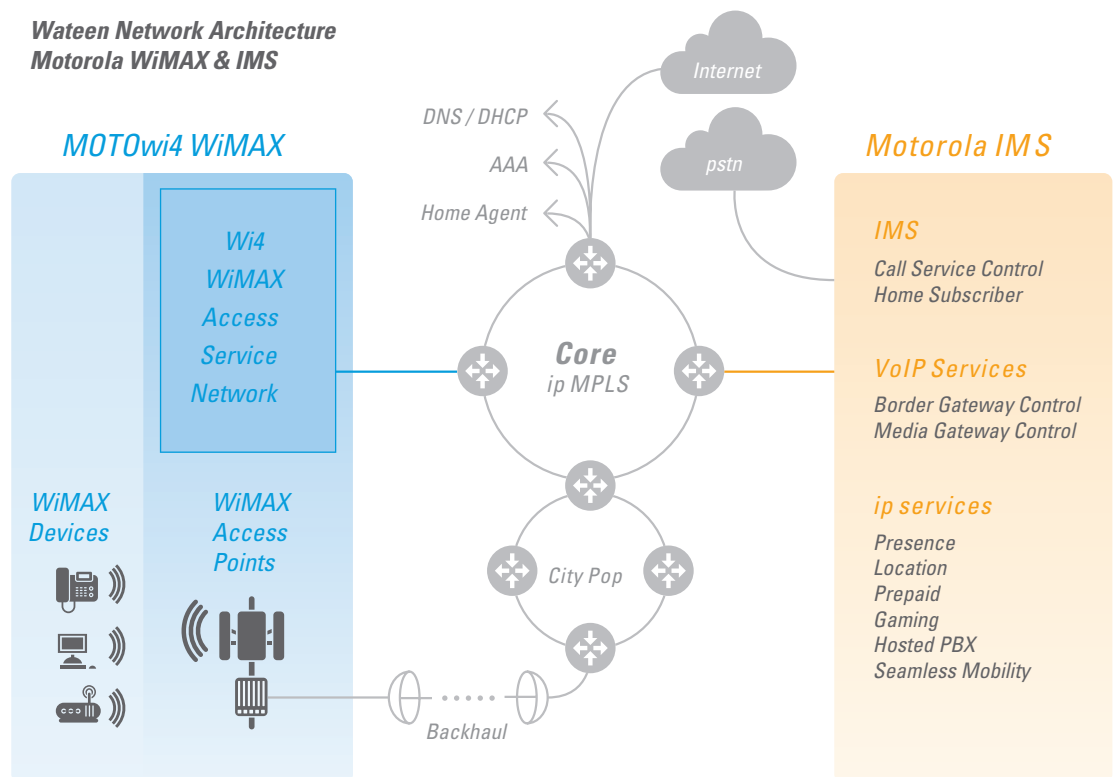
The Motorola wi4 WiMAX solution was designed to support fixed, portable, nomadic and mobile applications and is the first technology that delivers true broadband mobility at speeds that enable power applications such as VoIP, online gaming, mobile TV and personalized info-tainment. Because WiMAX doesn't depend on scattered hot spots, once its network is completely built out, Wateen

will be able to provide subscribers throughout Pakistan with one big, never-ending broadband Internet hot-spot.

New services, new revenue, new users

The WiMAX network is a critical component of Wateen’s vision to create a world class communications network in Pakistan and provides a cost effective and fast-to-deploy broadband solution. With its cutting edge last-mile access network that includes both wireless and fixed access, the company offers a complete range of carrier-class, telecom and multimedia services to the delight of both its business and consumer users.

**Wateen Network Architecture
Motorola WiMAX & IMS**



"Bank Alfalah is a growing organization," says Mudassar Aqil, assistant executive of quality for Bank Alfalah, one of Wateen's enterprise customers. "We are setting up new locations and one of the major problems is to secure communications links, whether for data, telephony or ATM connectivity. Wateen came along and said they could provide us with Web access, data access, and telephony through just this one comprehensive solution. It seemed too good to be true, but it turned out to be true!"

Through its new WiMAX network, Wateen now offers services that include triple play offerings such as local and long distance telephony, video conferencing, broadband Internet and data connectivity, high-quality TV, video security/surveillance and high speed, high quality interactive gaming.

"Wateen installed a small CPE on my rooftop in just a half an hour," says one of Wateen's residential consumers. "WiMAX has provided me with telephony service and we are connected wirelessly with my computer. I use it at home for work, my wife uses it for shopping and entertainment, and my kids use it for homework and playing games online. WiMAX has really changed our lifestyle."

Additional benefits realized by Wateen include the following:

- Rapid deployment: Wateen deployed in 17 cities within nine months
- Increased revenue: Content-focused services increase ARPU and attract new users
- Decreased CAPEX: Voice and data broadband services through a single infrastructure
- Decreased OPEX: Ease of management through an all-IP architecture
- Enhanced coverage and capacity: Access to MIMO and smart antenna solutions
- Improved network efficiency: End-to-end services and support portfolio
- Ability to evolve: Designed to seamlessly migrate to next generation technology

Wateen and Motorola win NMEI awards for technology innovation

At the third annual Network Middle East Innovation Awards held in Dubai on April 2, 2007, Wateen was presented an award for best Wireless Access Network (WAN) implementation as the best example of a successful wide-area networking project in the Middle East. In addition, Motorola was honored in the Best Telco/Service Provider category for its MOTOwi4 WiMAX technology.

"What we needed in a partner and what we found in Motorola was the ability to come in and take over the complexities and the day-to-day operational matters so that pain was taken away from us," says Shahid Miah. "We could rest assured that Motorola was looking after the network and providing us with the right level of support so we could focus on our core business, which was to deliver service to our customers. I feel very proud that Pakistan is the first to deploy WiMAX on such a large scale."



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