



# Managed Voice and Data Services with Aperto and Allot

Partner Solution Brief

## The WiMAX Opportunity

Advanced techniques, including Orthogonal Frequency Division Multiplexing (OFDM), service classes, and prioritized scheduling, combine to make WiMAX an effective delivery medium for voice and data over unpredictable RF links. However, network operators rolling out WiMAX only as a wireless “bit pipe” run the risk of missing out on a significant part of the value chain—managed voice and data services.

While some consumers will be content with free or low cost peer-to-peer services for voice, it is clear that enterprises and small and medium businesses will demand premium services with delivery guarantees. Consumers may settle for unpredictable bandwidth availability but business need the assurance of guaranteed bandwidth for mission critical applications. The wired network experience has taught us that customers are willing to pay higher service rates in return for premium service delivery and Service Level Agreements. The same is true over WiMAX.

## Managed Voice and Data Services with Aperto-Allot

PacketMAX leverages inherent WiMAX features and extends the benefits of WiMAX with Aperto's industry-leading ServiceQ<sup>®</sup> and OptimaLink<sup>®</sup> technologies. Deploying PacketMAX Superior Quality of Service (QoS) and link management techniques gives service differentiation and prioritization while ensuring spectral efficient use of the wireless channel. However, the wired IP infrastructure is inherently a “best effort” delivery system treating all applications and subscribers equal. Aperto has teamed with Allot Communications to extend the benefits of PacketMAX to the IP core.

The Aperto-Allot solution yields true awareness and enforcement of subscriber and service specific quality of service and traffic management over both the wired and wireless network. With the Aperto-Allot solution, operators can prioritize managed T1 offerings over the data services with 1.5 Mbps maximum bandwidth. Premium voice offering can be differentiated from the free peer-to-peer voice service and given priority through the network.

Service differentiation and prioritization can be accomplished between users (e.g., enterprise versus consumer) or even within the same user (e.g., when the same user is using Skype plus the managed VoIP offering). Either way, the result is positive for the operator: enhanced revenue potential, increased ARPU, increased customer satisfaction, and other positive benefits.



### ■ ■ Solution Benefits

- Offer Premium VoIP Services
- Offer Managed Data services
- Tiered Data Services
- Enhanced Revenue Potential
- Increase Average Revenue per User
- Improved Service Satisfaction
- Attract New Subscribers
- Enterprise Service Level Agreements

### ■ ■ Key Features

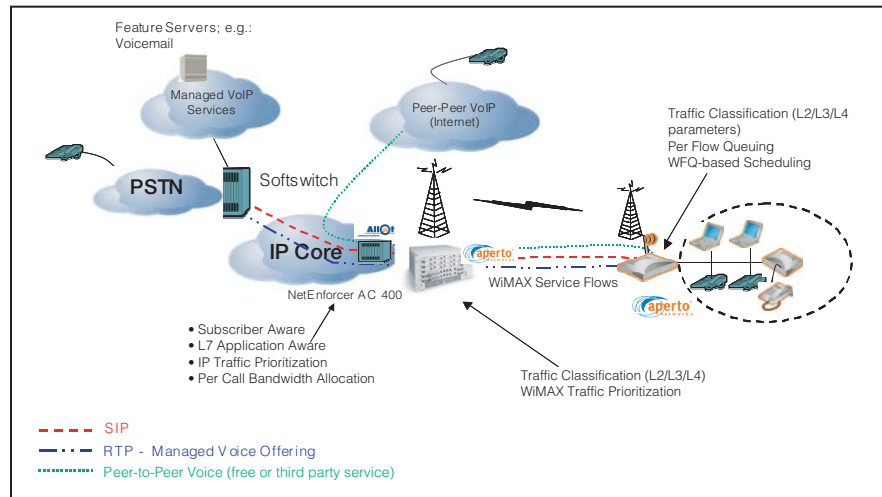
- Oversubscription Management
- Control VoIP
- Service Fairness
- Differentiated Services
- Application Traffic Monitoring
- Maximize Spectrum Efficiency



Wireless to the MAX

## Solution Approach

The integrated solution includes Aperto PacketMAX and Allot NetEnforcer products to ensure effective delivery of voice, multimedia, and data services to the end user. Having NetEnforcer's traffic-management capabilities in a wireless access network provides operators with cost-saving and revenue generation opportunities. NetEnforcer device uses DPI (deep packet inspection) to provide granular insights into the applications and protocols traversing the network. NetEnforcer also provides advanced QoS control capabilities that allow operators to set policies that automatically control and shape traffic flows by application, subscriber, or a combination of both.



*Example: Managing Call Priority with Aperto-Allot*

## Key Features

**Control VoIP**—VoIP has rapidly emerged as a critical application that must be monitored and controlled by operators due to its sensitivity to network delay and jitter. Allot NetEnforcer can guarantee the performance of operator managed VoIP services and reduce the priority of competing or free services.

**Application Specific Bandwidth Management**—A key advantage of Allot NetEnforcer is its ability to perform application specific bandwidth management. Bandwidth hungry applications, such as peer-to-peer file sharing and delay-sensitive applications such as VoIP and online gaming, need guaranteed QoS in order to provide optimal service levels for paying subscribers. Establishing application control policies allows operators to differentiate their service offering, control bandwidth allocation to those services and subscribers, and optimize the use of their WiMAX network.

**Oversubscription Management**—In order to meet its financial goals, every operator oversubscribes the network, provisioning many times more subscribers than the network capacity. P2P traffic, generally responsible for 80% of total network load, is used extensively by a small number (5%) of subscribers. Allot NetEnforcer can limit P2P while other applications continue normally. This allows operators maintain optimal service levels to most subscribers with a significant cost saving on uplink costs and other infrastructure investments.

**Offer Tiered Data Services**—In order to succeed in the marketplace, WiMAX networks must allow operators to assign relative value to the services—driving revenues higher. The application control provided by Allot NetEnforcer enables the implementation of a wide variety of tiered rate plans and customized billing plans. Operators can limit and/or guarantee bandwidth per subscriber based on selected service plans, prioritize and/or block certain applications, support bandwidth on-demand and can track bandwidth usage (by subscriber and application) to support bundled and usage-based billing models.

**Application Traffic Monitoring**—With real-time and long term traffic monitoring and reporting, operators can manage their networks for optimal efficiency and performance.

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