



Azure Communications – Extending Wireless Broadband

Azure Communications delivers wireless broadband solutions to alternative network operators focused on underserved markets and specialized applications

While cable and DSL remain the dominant fixed broadband access technologies worldwide, large underserved markets remain, domestically and internationally. Of ten million small- to medium-sized businesses (SMB) in the United States, more than thirty-five percent do not have access to cable and DSL broadband. More than six million rural households in North America and Western Europe are also beyond the reach of wired broadband.

As a result, broadband wireless communication solutions, principally using license-free radio frequencies, have seen tremendous growth. Typically, these solutions have used either adapted Wi-Fi or proprietary approaches, with distance limitations and a lack of interoperability. WiMAX, which will bring interoperability, improved performance and coverage, and lower costs, promises to expand the wireless broadband market further. Estimates vary, but most analysts agree that the WiMAX equipment market could exceed \$5 billion by 2010.

Interestingly, while large scale municipal Wi-Fi mesh implementations, along with nomadic and mobile WiMAX, seem to get much of the attention, most of the activity in the market has been for small systems, purchased by what Gartner has aptly termed, “alternative network operators.” Yet most wireless equipment providers, many still offering proprietary products, target large carriers with the “big iron” solutions they require. Azure Communications (Azurecomm) believes that this creates a market opportunity.

Azurecomm develops and markets wireless base stations and backhaul hubs that support broadband industry standards including WiMAX, Wi-Fi, and DOCSIS; license-free and licensed frequency bands; fixed, nomadic, and mobile applications. Azurecomm equipment has been designed to work with virtually any WiMAX standards-based customer premise equipment and to be seamlessly integrated into existing Wireless ISP (WISP), municipal mesh, cellular and cable networks.

Unlike most currently available wireless base stations, which are complex – external antenna, indoor and outdoor radio transceivers, rack mounts – and difficult to configure and install, Azurecomm products are compact – baseband, RF, antenna in one enclosure – modular, and easy to install. Software configurable processors used by Azurecomm add flexibility and ease upgrades, while AzureSmart intelligent radio technology mitigates interference and enables higher data rates required to support video and VoIP.

Azurecomm plans to focus on three distinct markets: fixed wireless broadband for alternative network operators, wireless cable extensions for Multiple System Operators (MSO), and municipal mesh and cellular high speed wireless backhaul applications.

Alternative network operators are generally small, entrepreneurial businesses, such as ISPs, wireless ISPs (WISP), independent operating companies (IOC), and rural telephone companies. Leaders among them want WiMAX systems, while all require simple, flexible solutions with low total cost of ownership. Azurecomm smart micro base stations provide WiMAX standards-based technology that meets bandwidth requirements, while easing the transition for these operators from adapted outdoor Wi-Fi systems to WiMAX.

Multiple System Operators are seeking to expand their subscriber base by targeting the SMB market. Where these efforts are limited by the reach of their cable plant, MSOs explore wireless options. As DOCSIS is the most widely deployed standard for data delivery in the cable industry, wireless solutions must interoperate with this protocol. Unlike most available wireless cable extensions, which simply retransmit DOCSIS signals, Azurecomm equipment fully demodulates the signal and converts it to WiMAX, enabling the full interoperability that WiMAX promises.

Backhaul of voice and data from cellular base stations and municipal Wi-Fi networks is a unique opportunity. It's a costly proposition for operators, typically using leased T-1 lines to connect cellular base stations to the wireline network. Direct fiber connections are an alternative, but are still not widely deployed. For a wireless backhaul solution to be maximally effective, it must support high data rates, well beyond those currently specified in the WiMAX standard. AzureSmart technology is unique in its ability to deliver best-in-class data rates, sufficient for the most demanding backhaul requirements, while remaining interoperable with basic WiMAX equipment. For municipal applications, it creates a high performance, smart Wi-Fi/WiMAX mesh network.

In summary, Azure Communications products deliver an unmatched combination of features, flexibility, and low total cost of ownership, ideally suited to the needs of alternative network operators focused on underserved markets and specialized applications. They support industry broadband industry standards including WiMAX, Wi-Fi, and DOCSIS; license-free and licensed radio frequency bands; fixed nomadic and mobile applications. Early testing predicts best-in-class data rates, fully exploited by AzureSmart technology. For more information, please visit www.azurecomm.com or call +1 408.376.3600.