

CASE STUDY | MOTOROLA - DATA SHEETS

Wireless Service Provider Delivers Affordable Broadband with 100 Percent Availability to Chicago-Area Businesses Thanks to wi4 Fixed Solutions

Service provider overviews: Business Only Broadband
 Headquartered in Chicago's Westmont suburb, Business Only Broadband (BOB) provides primary and backup wireless Internet access to thousands of "The new generation or disaster recovery products and solutions to assist continuity strategy."

The challenge: create an independent broadband network that provides faster response times to incumbent networks
 Companies are increasingly dependent on their Internet connectivity, and they or even a few hours. That's why many companies are looking for an alternative to wireless Internet connectivity as a back-up to their existing wireless connectivity, waiting weeks to get it or putting up with unexpected connectivity needs.

The solution: a wireless broadband network that delivers 100 percent network availability at a fraction of the cost of wireless solutions
 Point-to-Point and Canopy Point-to-Multipoint access network solutions, it created a broadband wireless network that delivers 100 percent network availability to customers.

With two data centers, 29 transmission sites, a self-healing ring architecture and no common point of failure, the network delivers not only 100 percent availability but also Quality of Service (QoS) that is on par with or superior to that provided by traditional service providers. The completed network—backbone ranging from 15 Mbps to 300 Mbps, supports Multicast/Label Switching (MPLS), direct, secure routing, and interconnects with multiple Tier 1 service providers.

BOB's business customers use BOB service primarily for data transfer, file transfer, email access and Web browsing. Other applications include video surveillance and voice over IP calls. The bandwidth of network traffic is approximately 40 percent data and 20 percent voice.

Czech Republic Service Provider Uses Motorola wi4 Fixed Equipment and Motorola IPTV Technology to Deliver Triple Play Services

Service provider overview: Mattes AD, spol. s r.o.
 Established in 1991 as an IT company, Mattes AD began offering Internet connectivity to residents and enterprises in the Czech Republic in 1996, making it one of the first Internet service providers in the region. In the spring of 2004, the company installed Motorola's wi4 Fixed products and began offering its Internet services almost exclusively on the Canopy® wireless broadband platform using the brand name BOB.cz. In 2005, Mattes AD introduced IPTV across the Canopy platform. In 2006, Mattes AD introduced IPTV service via fiber-to-the-home using Motorola's IPTV technology, making it a triple-play leader in the region.

The challenge: to deliver an interference-resistant wireless broadband voice and data service to a large number of residents and businesses.
 It was 2004, and Czech service provider Mattes was looking for an alternative to ADSL technology that could cost-effectively deliver connectivity to thousands of Internet customers. The company considered several WiFi solutions and even some WiMAX solutions, but trials with these technologies failed in a dense environment, as these technologies could not handle the high level of interference experienced in densely populated areas.

Luckily for Mattes, regulators in the Czech Republic had just opened up new frequency bands at 5 GHz for general use. The savvy Internet service provider saw an opportunity to get out of the 2.4 GHz band—which was saturated with WiFi users—and install an interference-resistant, cost-effective wireless solution at 5 GHz.

The solution: a 5 GHz wireless broadband solution that delivered high quality of service and could provide a foundation for triple-play services by supporting high-speed data, voice and even some video.
 The company found the interference resistance it required in Motorola's MOTOw4® wireless broadband product portfolio. Motorola's 5.4 GHz Canopy equipment provided Mattes with the perfect balance between cost and performance. The Motorola equipment made it easy for the service provider to quickly add more equipment as it grew, which was in stark contrast to the inability of WiFi equipment to scale. And it was amazingly resistant to interference.

Mattes installed the Canopy products in the spring of 2004 and began offering Internet connectivity services under the brand name BOB.cz that same year. Voice over IP (VoIP) services soon followed in 2005, and in 2006, Mattes introduced IPTV service as well using fiber-to-the-home and Motorola IPTV technology (see sidebar). Today, Mattes even uses the wireless broadband network for some video applications such as video surveillance.

wi4 Indoor Solutions Enable High-Speed Broadband Access for University Dormitories

Company overview: Liberal Arts University
 In the hallowed halls of one of Florida's most prestigious private universities, students pursue academic programs in disciplines ranging from the arts and sciences to business, education and social services. The university remains at the forefront of higher education institutions focused on the environment of the learning experience with the application of advanced communication services and tools. Together with their service provider Rapid Systems of Tampa, Florida, the university is once again demonstrating this innovation with Motorola's wi4 Indoor solutions and Broadband Over Powerline (BPL) technology.

The challenge: provide broadband services to students housed in the university's dormitories.
 Focused on becoming a preeminent private institution of higher education in the 21st Century, the university made broadband communications a high priority for all students and faculty. As part of the overall broadband strategy, the university needed to provide broadband access to students housed in on-campus resident halls. Traditional wired solutions presented several problems. First, the building's construction was very dense and consisted of concrete walls and ceilings. Secondly, the facility was older and lacked any detailed drawings or documentation. Finally, the building was simply not constructed to support the numerous wiring scenarios of cable, electrical, telephone and broadband. Adding cable or DSL services to each of the student's rooms was cost and time prohibitive and would have required extensive drilling and potential damage to the treasured building.

The solution: a BPL solution that quickly and easily enabled high-speed communications without requiring extensive reconstruction.
 With the coming of the new school year rapidly approaching, the university turned to Rapid Systems to design and deploy a broadband network for the two-story dormitory. Using technology by Motorola, Rapid Systems designed and installed the Powerline MU network. Installation was very simple. The university wasn't really a candidate for an internal wireless deployment and needed a plug-and-play solution. Once the electrician arrived on site, the network was up and running in less than two hours.

The dormitory is connected to the university's network using a high-speed wireless point-to-point connection. From the Ethernet bridge, the signal is passed to a small switch and then to the Powerline MU Gateway. The Gateway converts the broadband signal into the HomePlug® protocol for injection onto the low voltage wires that deliver electricity throughout the dormitory. The signal travels through the circuit breaker panel with the electricity and is distributed to standard electrical outlets in the dorm. Powerline MU modems convert and supply broadband access to students through standard Ethernet connectors. The Gateway, which is in the

CUSTOMER PROFILE
 Institution
 Liberal Arts University
 Service provider
 Rapid Systems
 Tampa, Florida
 Industry
 Higher Education
 MOTOw4 solutions
 • wi4 Indoor Solution
 • Powerline MU
 • BPL technology
 Solution features
 • High-speed broadband connectivity
 • Fast, easy, non-invasive installation
 • Minimal of applications including Internet access and VoIP
 Benefits
 • Competitive differentiation
 • Low-cost, secure broadband service

Motorola needed some newly designed data sheets to be distributed in the USA and in Europe. Design templates needed to be developed to fit letter and A4 size paper lengths.

Color design is an important start. What are the main colors and the sub colors per case study template? After matching up the right blends, and using the Style Guidelines from Motorola, using gride systems and accurate logo placement.

Success! These data sheets are currently being used and can be found on their web site for downloading purposes.

