



Czech Republic Service Provider Cuts Operational Costs More Than 70 Percent Using wi4 Fixed Canopy® Solutions



Service provider overview: VIVO Connection

Located 2.5 hours east of Prague and 1.5 hours north of Vienna, Šlapanice is a political and cultural hub in the South Moravian Region of the Czech Republic with around 6,400 inhabitants. Although the South Moravian Region in which Šlapanice is located houses Brno, the second largest city in the Czech Republic, 60 percent of the region is agricultural and more than 96 percent of the vineyards in the Czech Republic are found in this region. Given that much of the area is rural, many inhabitants do not have access to the Internet or even basic telephone service. To fill this void, local service provider VIVO Connection has extended its current broadband network to reach new customers, and is offering reliable high speed connectivity to residents and businesses within the Šlapanice community and neighboring villages.

The challenge: offer reliable, cost-effective wireless service to community residents and businesses that supports both voice and high-speed data

VIVO Connection first began offering Internet access and Voice over IP (VoIP) services to local citizens — as well as small and medium-sized businesses — using WiFi based equipment. The service provider soon realized that these solutions were too cost-prohibitive for outdoor applications and couldn't adequately scale to support subscriber growth. In fact, because each WiFi access point could only support about 40 users, expanding the network meant exponential costs to manage interference and support the current customers. Approximately nine WiFi access points were required to support 370 customers. The network's configuration and system requirements translated into exorbitant maintenance and equipment costs for VIVO.

In addition, the WiFi equipment could not support the quality of services VIVO needed to provide adequate bandwidth and reliable voice service to its customers. Customers located farther from the access points experienced much lower speeds and higher latency, which translated into poor quality, than those located within a closer proximity. These network limitations created a considerable problem for VIVO

who was trying to serve many potential customers located in Šlapanice as well as extend service to remote villages and outlying rural areas.

The solution: a wireless broadband network that delivers consistent, quality service to customers no matter where they are located

Company officials soon began looking for alternative solutions, and they liked what they saw in Motorola's MOTOwi4™ product portfolio. VIVO installed a Motorola 5.4 GHz Canopy® Advantage Access Point on a 30-meter tower located on the highest hill in the area. VIVO now covers its entire service area with only that one Canopy Access Point. This is in stark comparison to the nine access points that would

CUSTOMER PROFILE

Service provider

VIVO Connection

Šlapanice, the Czech Republic

Industry

Service Provider

MOTOwi4™ solutions

- wi4 Indoor Solution
- 5.4 GHz Canopy Advantage Access Points and Subscriber Modules
- High-Speed PTP 600 Ethernet Bridges

Solution features

- High-speed wireless broadband connectivity
- Scalability
- DES Encryption
- Backup Power
- Uninterruptible service

Services provided

- Email
- Web browsing
- Voice over IP

Benefits to service provider

- Significantly reduced operational costs
- Increased revenue opportunity
- Increased reliability
- Better coverage
- Satisfied customers



REACHING THE OUT OF REACH

Serving customers with wireless broadband service in rural and sparsely populated areas can be very challenging and very expensive. In some networks, it requires installing, maintaining and monitoring multiple access points throughout a region with little hope of recouping the financial investment. The Canopy 5.4 GHz Connectorized Point-to-Multipoint system enables service providers to select from a wide range of antenna options that effectively boost the radio signal and extend its reach. This clearly changes the financial model for those hungry to serve the underserved with outstanding broadband service. Proven in over 120 countries around the globe, Canopy continues to deliver high interference tolerance, DES encryption, low cost of ownership and flexibility in design.

“We started offering broadband services using WiFi equipment, but we soon realized that WiFi solutions were cost-prohibitive and did not provide the level of service quality we needed. After we installed Motorola’s Canopy solution, our operational costs dropped by 70 percent. And the improvement in our quality of service after we replaced our WiFi solution with the Canopy equipment was astounding.”

— *Michal Morda, General Manager, VIVO Connection*

have been required to cover the same area using the previous WiFi based systems. Currently, the single access point serves more than 500 customers and provides the same quality of service no matter where the customers are located in the network. Whether the distance is 10 meters or 100 meters away from the access point, the quality of service remains constant.

The company is also using 5.4 GHz Canopy Advantage Subscriber Modules as well as the high-speed PTP 600 Series Ethernet Bridges to support backhaul applications. With the Canopy equipment, VIVO can offer customers throughputs of up to 14 Mbps with latency of just 5 to 7 milliseconds. The PTP 600 Series supports ranges up to 200 kilometers in line of sight configurations and delivers up to 300 Mbps of throughput.

The benefits: delivery of quality, uninterrupted service with significantly lower operational costs than WiFi

After installing the wi4 Fixed equipment, VIVO’s operational costs were immediately lowered by 70 percent. This significant cost reduction was due, in large measure, to VIVO’s ability to cover the entire service area using one access point as well as the nearly faultless operation of the Canopy wireless broadband equipment and the Point-to-Point Ethernet bridges. With the need to manage only one access

point, redundant connection to the backbone network was easy to manage and service.

One of the key cost advantages of the Canopy system is that it required only one power backup system to support the network in the event of a power outage. Whereas, the previous WiFi systems required a significantly greater number of access points and associated backup power systems. This represented a significant cost savings, particularly in the Czech Republic where consumers and businesses in remote areas experience electrical outages on a fairly regular basis. To ensure that these outages do not interrupt broadband service, a backup power system must be installed and maintained at every access point. This was an extremely expensive proposition when using WiFi equipment.

In the future, the company’s plans include extending coverage even farther to include other districts and dozens of villages and cities. The Canopy system’s streamlined design allows VIVO to do this easily by simply adding new access points and subscriber modules. The network can easily be expanded to support new locations, new customers and new applications.



MOTOROLA

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