WISP ENFORTA, RUSSIA

InfiNet wireless

ЭНФОРТА
ЛИДЕР БЕСПРОВОДНОЙ СВЯЗИ

The largest fixed wireless broadband footprint in Russia. WISP Enforta.

Challenges

- Regulatory challenges
  - Limited spectrum availability
  - Lengthy regulatory process for approvals
  - VoIP is regulated

- Competing with "grey" or illegal WiFi operators in the consumer segment

Solution Technology

- InfiMAN Point-to-Multipoint solutions

- InfiLINK high-capacity Point-to-Point solutions

Benefits

- Enables lower cost, high-speed throughput applications over extended coverage areas

- Deployable across geographically challenging topologies and within cities that are subject to diverse and extreme climatic conditions

- Significantly reduced deployment time and upfront network investment as a direct result of InfiNet product flexibility for configuration, deployment and bandwidth/frequency allocation

Introduction

Enforta was founded In October 2003 with the objective of providing wireless-based broadband telecommunication solutions and other state-of-the-art technologies in Russia's regional capitals.

Fuelled by a rapidly growing economy, Russia now ranks eighth in the world for its number of Internet subscribers. However, with broadband internet penetration still relatively low at less than 8% of the population, Enforta's founders recognized that that there was an opportunity to increase the broadband penetration through the use of high-capacity broadband wireless – a technology that could leap-frog the legacy telecommunications infrastructure that was simply too old to accommodate DSL or other broadband technologies, and provide a viable economic and technical option to overcome subscriber densities that were simply too low in many cities to justify massive cable investments.

Though wireless broadband remains in its infancy both globally and in Russia, in six short years Enforta has steadily risen to the Number 1 position within the Russian wireless broadband market. Enforta now boasts the largest fixed wireless broadband footprint in Russia, with an aggregate footprint covering a population of over 70 million people, operating in 78 of Russia's largest cities and in all cities with populations greater than a half of a million inhabitants. In 2010, Enforta plans to further extend its services to another 25 cities in Russia.

Approach

Enforta's goal was to provide a full portfolio of broadband services to its SME, Enterprise and SOHO consumers covering high speed internet access, local and national telephony, email, website hosting, and dedicated VPN service for secure communication between branch offices and to homeworkers.

www.infinetwireless.com

Business Objectives

- To build a cost-effective, scalable national network using Wireless technologies in 5.15-5.35 GHz band
- To cover all of the largest cities of Russia to attract and serve large, medium and small enterprise customers
- To provide high speed 1-5 Mbps internet access, L2/L3 VPNs, voice & fax services for 1000-3000 subscribers in each city with differing QoS capabilities for different markets/products
- To build intercity backbone to feed base stations and repeaters at remote areas
- To provide coverage in remote suburban areas for logistic center and production facilities
- To ensure high network availability & reliability.

"InfiNet has been a valued strategic partner to Enforta for over five years. In over 12 000 fixed subscriber installations, InfiNet equipment has proven to be reliable, feature rich, and well supported. For the operator with bandwidth hungry subscribers, InfiNet products represent outstanding price-performance", comments **Lee Sparkman, President of Enforta.**

Achieving this with a broadband wireless network was both innovative in its approach and highly challenging in terms of working with a new technology on such a large scale, and in particular with the challenges of wide-scale deployment across major cities – a deployment scenario that had not been tried anywhere else in the world. In addition, the extremes of geographies (including building obstructions) and climatic conditions across the diversity of the cities made wireless technology a difficult option for large-scale broadband deployment – especially in terms of reliability and availability - although wireless would clearly be an advantage in being able to quickly deploy a new network infrastructure to business customers across the cities, which would necessary be possible when using the legacy wireline infrastructure.

Wireless technologies were particularly well suited and economically efficient for Russia given the broadband penetration that was being forecast at the time of the deployments, and Enforta decided upon WiMax technology (more precisely known as IEEE 802.16) as its wireless network of choice. Whereas Wi-Fi is designed for "local area networking" (LANs), WiMAX is one of a number of systems designed for "metropolitan area networking" (MANs) with each base station capable of covering several square kilometers. In addition to being able to send the signal further than Wi-Fi, WiMAX provides the operator with the means to monitor and manage the quality of the service provided to each individual subscriber, which is crucial when offering business-class networking to large enterprise customers.

Solution

Enforta uses a number of networking vendors, including Infinet Wireless, to achieve its city coverage for broadband wireless access and wide-area networking connectivity. InfiNet Wireless provides its InfiLINK high-capacity, long distance backhauling products in order to connect remote areas or regions to the core network, as well as inter-connecting the base stations within the cities. InfiLINK backhauls are capable of reaching over 200km to remote locations, although in many cases such as Moscow they are used for shorter-reach backhauls (up to 30km) to connect rural areas to the core city network.

InfiNet's point-to-multipoint solution, InfiMAN, is used within the core wireless network to connect to the multiple base stations required to offer city-wide coverage. Depending upon the subscriber density, the geographical terrain and coverage area, InfiMAN will typically cover between 5-7km radius from a single InfiMAN base station.

InfiNet & Enforta Partnership

InfiNet's technology enables lower cost, high-speed throughput applications over extended coverage areas of geographical challenge, and InfiNet's reputation for reliability and robustness across difficult terrains and through varying environmental and climatic conditions is well known across the industry.

InfiNet's products possess a rich set of features and reliability mechanisms to ensure the highest link availability in the industry, and powerful Quality-of-Service mechanisms and time-critical data prioritization algorithms allow the traffic to be shaped and profiled for optimal use of the wireless links.

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