



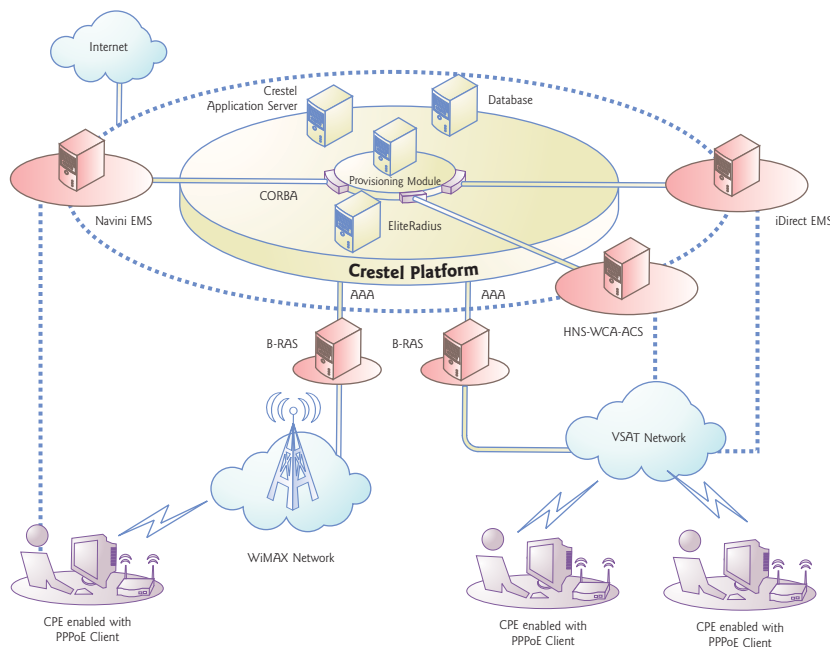
Wimax Case Study

WiMAX Deployment for Emerging Markets- With focus on Implementation done for Direct On PC (DOPC) Africa

Wireless access networks based on WiMAX-compliant solutions provide an opportunity for operators to participate in the high growth opportunities that exist in emerging markets such as Africa. Wire-line infrastructure in these countries is either non-existent or only accessible to a small part of the population. Prior to WiMAX, many operators had to rely on proprietary fixed wireless technologies for broadband services. In areas without pre-existing physical cable or telephone networks, WiMAX is a viable alternative for broadband access, WiMAX-based access networks can enable local operators to cost-effectively reach millions of new potential customers and provide them with traditional voice and broadband data services that up to now have been denied. About Direct On PC Ltd

Direct On PC Ltd. (DOPC) DOPC commenced its operations on 1st June 2002 and has been licensed by NCC (Nigerian Communication Commission), It recently rolled out WiMAX service in West Africa. The services will include customized Internet and intranet access for Banking, Corporate, Oil and Gas, Educational and Government sectors throughout the region. DOPC expects to have over 15,000 users in 2007 and as they migrate to 802.16e Mobile WiMAX. Although these markets have high growth opportunities, they are not without challenges. The challenge before DOPC was to deploy a system that met the following requirements.

Crestel's WiMAX Deployment for DOPC



“Our aim was to provide convenience of anywhere high-speed data and content offerings in Nigeria which required different levels of service delivery, We chose Crestel to meet our OSS/BSS requirements, as a convergent solution which should be flexible, scalable and can support large customer base across various platforms, Crestel delivered network agnostic OSS / BSS, functioning through a unified control layer enabling us to seamlessly integrate our WiMax offering with our current various VSAT platforms and other fixed wireless network, hence was possible to deliver services to various customer segments from Residential Internet to Large enterprise requirements of end to end intranet solutions, from single window of Crestel. ”

Says DOPC Executive Director.



DOPC's Requirements

1. Required end to end integration between Billing system and Navini EMS for Wi-MAX Service Deliver platform.

2. Effective utilization of WiMAX spectrum.

Utilization of spectrum becomes really important when multiple users are connected in wireless network. Usage done within users of same network has to be tracked and charged to avoid revenue leakage. Additionally there were chances of spectrum being utilized because of virus attacks from any user's computer to other users connected in network.

3. Single system to manage both WiMAX and VSAT networks: as using multiple systems added to the cost and was inefficient.

Solution

Crestel WiMAX Service Delivery Module enabled end-to-end integration with WiMAX EMS of Navini Networks. Solution facilitated DOPC to Manage CPEs, activate/deactivate CPEs based on change in status of Customer, upload CPEs in Bulk to EMS, provided tunnel based authentication to ensure optimized usage of WiMAX Spectrum. Additionally, CRESTEL WiMAX Service Delivery Module was deployed on existing platform managing broadband internet access services on VSAT based network. Rule based provisioning was also configured to support single management of subscribers across VSAT and WiMAX networks within same system

Pre-provisioning and Self-provisioning - Crestel enabled pre-provisioning and self-provisioning of WiMAX CPEs. This would enable tie-up of service providers and equipment vendors to offer an out-of-the-box solution for WiMAX subscribers. Crestel enables rule based provisioning; allowing only the registered CPE to function which in turn helps in the management of Inventory at the same time prevents revenue leakage.

Support for Multiple Authentication Methods and Devices - Crestel supported multiple authentication methods such as UAM, RADIUS and Ppoe.

Spectrum Optimization - PPPoE client-based subscriber authentication ensured spectrum optimization, by monitoring point-to-point local usage. Revenue leakages occurring as a result of local usage of the network can thus be checked and accounted.

Easy Integration with Umbrella OSS/BSS - Crestel, being a convergent provisioning and billing platform, easily integrated with existing networks.

Service Offerings - Multiple services on disparate networks (viz. WiMAX and VSAT) could be offered in a single platform. The provisioning of services for the customer is based on the configurable parameters defined in the package. Usage was metered on the basis of time or volume and limited or unlimited access to services was provided.

AAA - Crestel's in-built RADIUS server - EliteRadius, for authentication, authorization, and accounting purposes Supported Vendor Specific Attributes for interactions with proprietary security systems and also is access network agnostic.

Rating - Crestel single rating system for VSAT and WiMAX based network supported time-based and volume-based rating. Rates could be applied in a tiered, flat or usage-based manner. Provision for free usage, applying port charges, and billing pulse was also made available in the system.

Implementation

Crestel Service Delivery Platform Implementation was focused on key requirements mentioned by DOPC. All operations related to subscriber viz. creation, activation, deactivation, change of CPE, change of package were mapped with respective events in EMS of Navini Networks. Additionally Bulk Activation, Deactivations were also provided to bring ease in operations. Reports were provided to monitor integrity of CPE between Crestel and EMS of Navini Networks. Business Rules were configured in product catalog so that provisioning components drive provisioning of subscriber during subscriber creation/activation. Subscriber creation also had rules defined to ensure authenticity and verification of CPE with the one configured in EMS of Navini Networks.

Result

Complementing Existing Network

Crestel Solution enabled WiMAX service to co-exist with existing VSAT network having multiple NMS systems from different vendors and served as a complementing element to the existing network infrastructure and services.

Faster Service Roll-outs

The Crestel architecture facilitated speedy assembling of new schemes and services which helped DOPC in faster roll-out of products.

Profitable Value Additions

By taking WiMAX from pure backhauling and remote connectivity to front-end enhanced services to customers, Crestel generated higher WiMAX margins ensuring high profitability for DOPC.

Future Compatibility

Crestel ensured compatibility with future WiMAX standards.

Crestel Convergent Framework

Crestel is the carrier-grade billing, customer care, mediation and provisioning platform that enable next generation data, voice and video services over wireline and wireless networks. Crestel's integrated approach to the 4Cs of the convergent market place - customers, competition, content and channel partners enhances service providers' competitive strengths.



www.crestel.in
info@elitecore.com

Corporate Office

Elitecore Technologies Ltd.
904, Silicon Tower, Off. C.G. Road, Ahmedabad - 380 006, INDIA.
Tel: +91-79-66065606, Fax: +91-79-26407640

International Sales & marketing

Bangalore Tel: +91-80-41517880 / 81 Fax: +91-80-41517883
Mumbai Tel: +91-22-66951280 / 1380 Fax: +91-22-66923363

USA

New Jersey Tel: 201-484-7581 Fax: 201-777-2113

