Vodafone Essar Limited chooses ECI for network optimization proof of concept

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Challenges: As a tier 1 operator facing increased demand for services, Vodafone Essar Limited was looking to improve reliability and increase network capacity while at the same time reduce opex and defer capex.

Solution: Vodafone Essar Limited selected ECI Telecom to perform in-depth network analysis and consultancy services. With its Network Design Platform (NDP), ECI identified key areas for optimization and laid out a plan for a smooth, efficient migration path to NGN.

Results: The proof of concept was very successful, pinpointing areas in which single points of failure could be reduced or eliminated and identifying over utilized links. Once the recommendations are implemented, the operator can expect to see improved network reliability and room for growth.

About the operator
As one of the largest telecommunications service providers in India, Vodafone Essar Limited operates across the entire country, serving over 78 million people and offering a full range of communications services including telephony, cable and high-speed Internet. The company also acts as a carrier of carriers (CoC).

Keeping pace with demand
Over the last several years, Vodafone Essar Limited had been adding subscribers and services (and consuming bandwidth) at a brisk rate. To help keep pace with growing demand, the telco went in search of a solution that would allow it to leverage its existing TDM infrastructure while:

• Increasing capacity
• Improving reliability
• Reducing opex (operational expenditure)
• Deferring capex (capital expenditure)

This presented a daunting challenge, and one that could not be achieved without optimizing the network. Without optimization, over time the network could become bottlenecked and subject to service failures. But how could Vodafone Essar Limited carry out an optimization that could potentially result in a dramatic transformation while still leveraging its significant investment in the existing TDM network? The answer would come in the form of an NGN, or next-generation network.

The requirements: 'I want my NGN'
Once the decision to move to an NGN was made, Vodafone Essar Limited needed to ensure the solution met the following requirements: Smooth implementation – The transformation had to be performed in a gradual manner dictated by customer demand and without service interruption, to dramatically reduce risk and the loss of income.

Network agility – Methods for reducing service provisioning time were required to keep customer satisfaction high and implementation costs low. Network planning (short-, mid- and long-term) and changes needed to be simplified as well.

Network reliability – The highest level of network reliability possible was needed to ensure customer satisfaction and cost containment.

Reduced opex – The reduction of operating expenses was a must, although this posed significant challenges given the constant network development that's required to maintain a leadership position in the market.

Deferred capex – As networks are built with the goal of minimal investment-per-growth, a plan was required that intelligently optimized the network to operate in a steady state and not under extreme capacity conditions, minimizing the investment for every change to the network or for newly added services.

The solution: a powerful framework for network design & optimization

To satisfy its requirements, Vodafone Essar Limited turned to ECI Telecom for in-depth network analysis and consultancy services. The ECI team used its Network Design Platform (NDP), a powerful framework for network design and optimization, to lay out a plan for the smoothest, most efficient migration path.

• cutting across all layers and technologies. It's integrated with management systems and enables tactical and operational planning via a single, unified platform. This increases efficiency and service levels while simultaneously reducing network complexity and operating costs.

• To ensure optimal and efficient use of resources, the NDP utilizes advanced network planning tools to analyze and place network components and devices – and even the services themselves.

• To ensure a level of reliability not previously available, the NDP's restoration-analysis feature analyzes and performs optical restoration schemes. It also examines links and backup links, helping to eliminate single points of failure throughout the network.

• The NDP operates in multi-vendor environments, supporting virtually all vendors and enabling accurate analysis of the network as a whole.

• From the highest level down to the smallest detail, the NDP features a distinctive, easy-to-use graphical user interface (GUI) that provides a comprehensive view of the network.

A robust planning and operations tool, the NDP provides all-in-one functionality that encompasses support for multiple layers and technologies and provides inventory capabilities that enable incremental analysis and optimization.

The results are in When the NDP analysis and resulting recommendations were presented to Vodafone Essar Limited, the results were clear:

• Opportunity for increased network reliability – Through a network architecture audit, the NDP showed how single points of failure could be reduced and revealed how the number of hops per service could be minimized.
• Potential for capex savings – Bottleneck analysis revealed over utilized links and showed how optimization could free up capacity, enabling the delivery of more services with the same resources.

(Courtesy: NetEvents)