



- Automated end-to-end management of your Voice Network
- Automatic detection of Voice Service Faults, with intelligent impact analysis
- Policing of Service Level Agreements
- Accelerate deployment and acceptance testing of voice network element upgrades
- Improve the efficiency of Network Operations personnel

“Beethoven delivers control and visibility of your voice services, to operations personnel, making them more efficient, and reducing the cost of maintaining your network”

Beethoven VQAS

End-to-end management of your Voice Network

There are some difficult challenges facing Network Operators. Networks are dynamic entities, with repairs and upgrades a constant concern. Any element can become faulty, interfaces can become congested, and links can be broken.

Inter-working of network ‘islands’, from different equipment vendors, or different underlying technologies results in multiple management systems and a consequent increase in the operational expense. The fragmented management results in no coherent end-to-end management system for the service delivered to your customers.

The Beethoven Voice Service Assurance solution offers a customisable set of analysis capabilities that enables you to monitor and manage voice service related issues in your network.

Beethoven differentiates your solution, with more cost effective end-to-end technical management and higher quality of voice service delivered to your customers.

Increased revenue results from meeting customer expectations, securing their loyalty and staying ahead of your competitors. You save money by keeping the operating cost of your network to a minimum with more efficient and well informed operations staff.

Network Operators: reliability with cost control

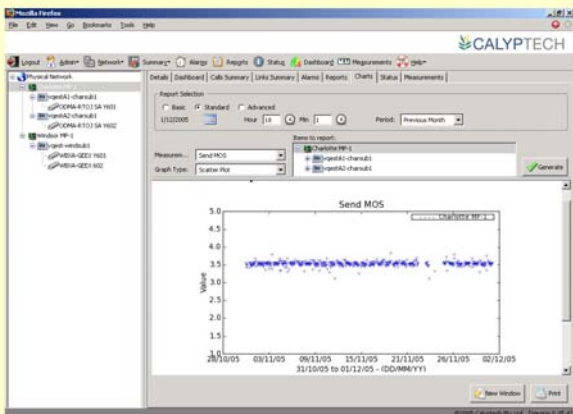
There is a strong need to reduce the cost of ownership and improve the return on investment (ROI) for network equipment. Increasingly, the ROI timeframe is being squeezed. The introduction of new technology, and the retirement of older equipment can present considerable logistical challenges for the operations teams. Late time to market with a new service due to a delay in the network deployment can be disastrous.

Competitors with a more streamlined homogenous network direct their attention to your high margin business, and steal your customers with promises of new services, new features, and lower costs.

You need the ability to execute automated end-to-end management operations on your networks. The benefit of this capability is a large reduction in the cost of managing the network. There is less need for "orphan" network element knowledge. Less complex operational procedures results in more efficient use of network operations personnel, and a reduction in the levels of training required.

At all stages in the deployment; equipment trials, pilot network customer trials, roll out and ongoing Network Operations, the Beethoven solution offers you the elements that enable you to monitor and manage the performance of your network.

The Beethoven solution is network agnostic, and can be deployed with Enterprise Level, Voice over Internet Protocol, Wireless, PSTN or Hybrid network configurations.



Enterprise Networks

Voice Services are no longer the preserve of large incumbent Network Operators, who managed and controlled the network right to the equipment on your desk. You now can configure your network to suit the way you work. This means that you must now accept responsibility for the way in which this network will operate, and make cost benefit decisions that can impact the quality of the service. You need the management tools that allow you to effectively determine the optimal configuration for the way your business operates.

VoIP Networks

To manage and maintain VoIP infrastructure, and the integration of these networks with the existing infrastructure, you need tools that give you end-to-end visibility for voice calls. You need to understand the actual customer experience, you need to be able to monitor the network operation, from the core to the edge. Enterprise network managers face the choice of implementing a proactive VoIP management system, or suffering the onslaught of unhappy end customers, ill equipped support personnel and baffling service degradations.

Wireless Networks

The mobility and promise of wireless telephony led to a rapid adoption of the new technology. Your customers were even willing to tolerate poor coverage, and the more than occasional drop out, one way speech, and the odd bit of echo. No longer. The customer has been educated, and their expectations are greater. They will flock to the operator that gives them value for their money, but they will not tolerate second rate service. Without a proactive monitoring capability in your network, you will end up using customer churn figures and lost revenue, to measure customer satisfaction.

PSTN Networks

The PSTN network is aging; copper loops are degrading with time, extra demands are being placed on the lines to accommodate digital line rates for xDSL services. Revenues are falling, and the cost of maintaining the network is increasing. Currently deployed line test management, coupled with voice monitoring and analysis reduces the cost of maintaining the aging infrastructure by helping to pin point issues rapidly.

Hybrid Networks

Your Network is a series of interconnected sub-networks, with varying operational requirements. Voice services carried on Wireless, PSTN, VoIP, and Satellite topologies are expected to 'just work'. The end customer has high expectations, and is not concerned about the technical challenges faced by the Network Provider. You may even be blamed for degradation that originated in somebody else's network. You need a tool to help you quickly isolate the problems for the responsible party.

Beethoven Voice Quality Assurance Solution

The Beethoven Voice Service Assurance solution gives you a scalable, configurable set of hardware and software components that fully instrument your network to assure the quality of the voice service. Beethoven offers a customizable suite of voice monitoring and analysis capabilities that enables you to optimally manage and control your network from a customer experience perspective.

You save money by quickly identifying and resolving issues resulting in increased network reliability, and a reduction in the cost of maintaining the high level of service demanded by end customers and regulatory authorities.

Increased revenues result from reduced customer churn through better customer service management, and higher customer satisfaction.

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