Beamer™ | Mobile Networks

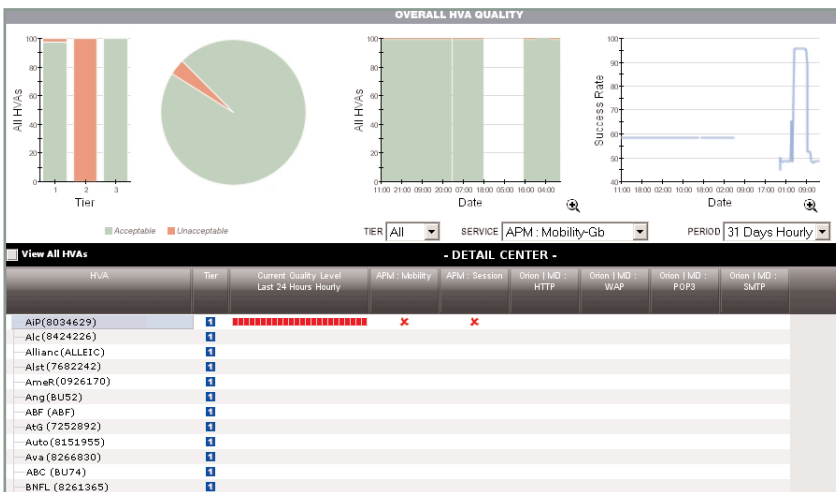## Customer Assurance for 2G and 3G Networks

Your key corporate accounts are your most profitable customers. Manage all aspects of the service quality your network delivers to them with Tektronix' Beamer offering.

- Continuously assess and report customer experience and satisfaction levels.

- Acquire and retain high-value corporate customers through superior customer management.

- Identify corporate business and revenues at risk.

The Management edition of the Operations application provides top-level management with a summary view of high value account (HVA) experience with available mobile services.

Quality of service has evolved into a key differentiator for competitive service providers. No longer is the focus solely on expanding network footprints and market share at any price—today's carriers strive to maximize returns from existing assets. One of the best ways to accomplish this is to accelerate the acquisition of high value customers and lengthen profitable account retention by proactively managing and reporting on the quality of service delivered to them.

A part of Tektronix' Unified Assurance offering, Beamer for Mobile Networks enables carriers to demonstrate the value of voice and data services from the perspective of their highest value accounts by providing visibility into the actual activities of premium level customers. With Beamer, carriers can increase wireless data and voice revenue while reducing operating costs and capital expenditures by proactively managing their customers and isolating the service quality performance for specific subscriber groups.

Tektronix®
Communications

Solution Benefits

- Retention of existing HVAs for longer lifetime revenues—A typical carrier classifies 2-4% of its subscribers as HVAs. HVAs typically have four to eight times the Average Revenue Per User (ARPU) of normal subscribers, resulting in a very high concentration of revenue distributed over a relatively small number of subscribers.

- Acquisition of more new HVAs within a given period of time for increased revenues—Use Beamer to demonstrate to prospective HVAs how their service quality will be proactively managed and reported to them individually.

- Reduction of customer care and network operations operating expenses and maximization of ROI for customer service and problem troubleshooting based on prioritization.

Commercial Services:

- HTTP
- WAP
- POP3
- SMTP
- MMS

Network Services
(Voice, Data and SMS)

- Mobility Management
- Security
- Session Connectivity
- Accessibility
- Retainability
- Handover

## Proactive Service Management Yields Significant Cost Savings and Revenue Benefits

As a complement to Tektronix' GeoProbe®, APM™ and Orion™ products, Beamer provides information about the quality of network, commercial and proprietary wireless services with real-time indications of performance degradation for each enterprise account.

The same information used to increase service quality may also be used to prove superior performance to your enterprise accounts. Combining proactive customer management with periodic quality reporting enables carriers to capture and retain more revenue from their enterprise accounts.

Customer Assurance for Mobile Networks

Beamer provides information per subscriber group and per service being used by the subscriber group. This information includes the following:

- How well service is being delivered to the enterprise subscriber with respect to key perception QoS metrics (Delay, Jitter, Packet Loss and Data Rate)
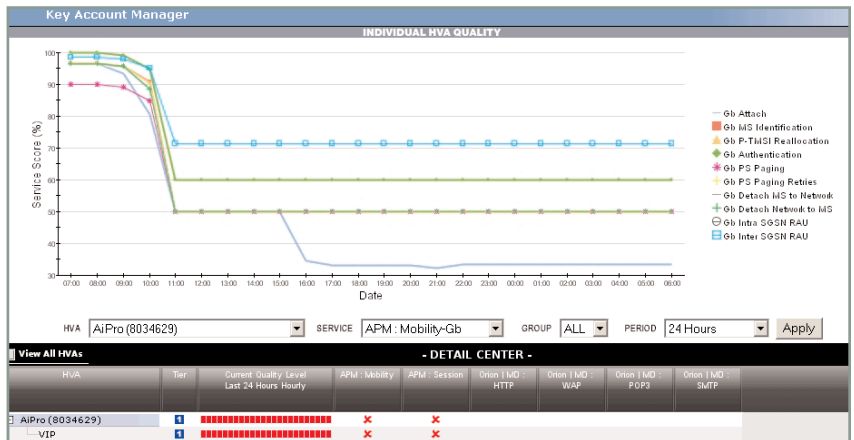
The Key Account Manager edition of the Operations application provides individual and combined quality performance scores for individual and select enterprise accounts.

Beamer may also provide an indication per subscriber group regarding the status of certain network management functions servicing the subscriber group. This information includes the following:

- How well mobility and security are being managed by the network with respect to keeping the enterprise subscriber's handset enabled for usage

- How well each session is being managed by the network with respect to the connectivity of the subscriber's handset to the network when the subscriber or network initiates and is in the process of having a session

- How well QoS is being configured with respect to what is being requested by the handset and what is being guaranteed by the network

> **Tektronix' Unified Assurance solution is based on real-time, network-level data collection from hardware probes.**

Real-Time, Actionable Path

Each service is individually monitored and associated to the appropriate enterprise subscriber group. All service performance is compared to quality thresholds set by the carrier. When thresholds are exceeded, alarms and alerts are created.

Beamer provides a real-time, actionable path from the alarming and alerting process to the facilitation of immediate problem detection and localization to the network core, network access or handset model level.

In turn, this synchronized management approach leads to reduced OpEx and CapEx and well as increased revenue.

- Accelerate enterprise customer acquisition.

- Lengthen enterprise customer retention.

- Deliver superior quality at a reduced cost.

Data is collected from both the control and user planes, not from the network elements.

The solution presents actual subscriber experiences in an end-to-end sense versus just element and network node performance metrics.

The primary interface points for data collection are Gb/IuPS, GTP, Gi and A-Interface/IuCS.

The data collection and processing functions include control plane to user plane correlation to generate one record for QoS Configuration and Service Delivery Quality for each subscriber transaction.

A subscriber transaction is defined as a subscriber's total, end-to-end experience when requesting and receiving a specific service within an already established PDP session.

These records are received, aggregated, processed and stored by the system to fuel a variety of real-time and historical applications.

Unified Assurance is based on an open architecture.

- Easily access KPIs from third party applications.

- Forward alarms to higher order systems.

- Import provisioning information from external systems.

- Link to Unified Assurance's Operations GUI from external applications for guided troubleshooting paths.

Flexible Historical Analysis

Network Planning and Optimization organizations benefit from Beamer's Planning application. Through this application, analysis and trending efforts may be performed. Using the Online Analytical Processing (OLAP) tool, complex queries are easily performed with rapid response times.
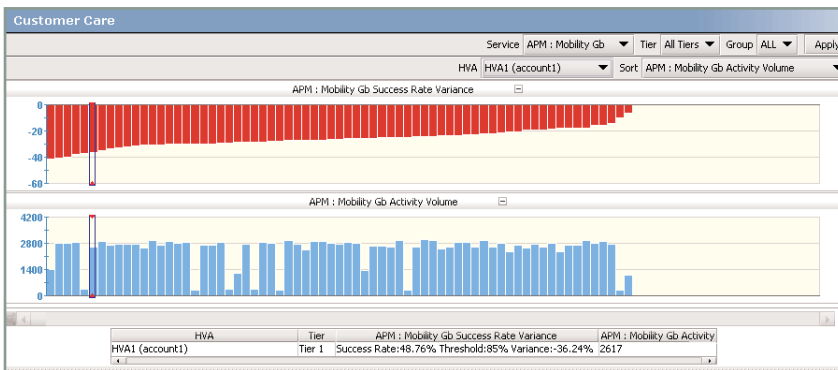
The Customer Care edition of the Operations application enables real-time tracking of score variance, activity volumes and KPI performance for individual and groups of enterprise accounts.

Customer Assurance Packaging

Operations Application

Enables real-time and historical troubleshooting to the root cause.

- Real-time (5-minute), Hourly, Daily or Weekly Updates with Alarming and Alerting
- Targeted editions provide focused views for Management, Key Account, and Customer Care personnel

Planning Application

Long-term OLAP Analysis and Reporting Tools

Management Reporting Application

HVA, Group, Element and Subscriber Reports

- Summary and Detailed Service Performance
- Protocol Transaction, Session and QoS Performance
- Release Cause/Category Faults
- Session Performance Summary
- Network Manager

About Tektronix:

Tektronix has more than 60 years of experience in providing network operators and equipment manufacturers a comprehensive and unparalleled suite of network diagnostics and management solutions for fixed, mobile, IP and converged multi-service networks.

These solutions support such architectures and applications as fixed mobile convergence, IMS, broadband wireless access, WiMAX, VoIP and triple play, including IPTV.

For Further Information:

Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology.

Please visit www.tektronix.com/communications

Contact Tektronix:

Please visit www.tektronix.com/communications

Phone:
1-800-833-9200 option 1
+1-469-330-4000

Locate your nearest Tektronix representative at www.tektronix.com/contactus

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