

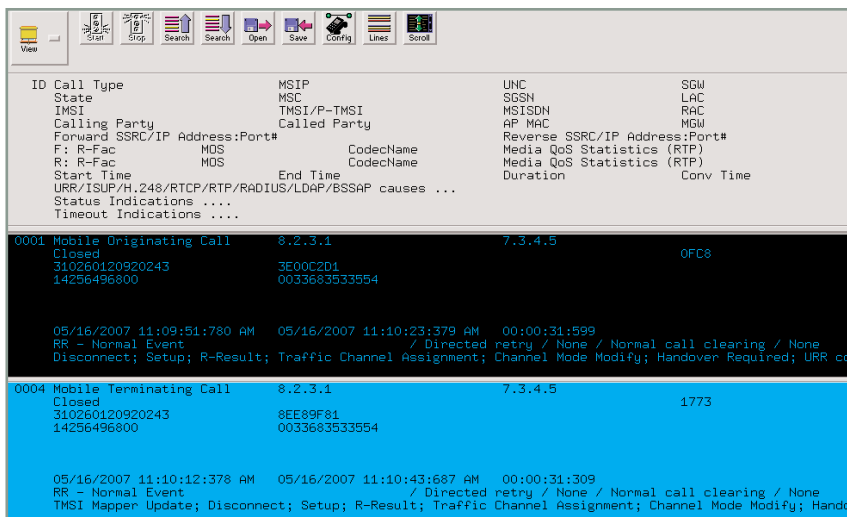
GeoProbe® | UMA

Network Assurance for Mobile Access

Ensure UMA Network Rollouts with Core-to-Access Visibility

With Bluetooth and WiFi becoming a commercial standard for mobile station connectivity to GSM and GPRS mobile services, ensuring the performance of the Unlicensed Mobile Access (UMA) Network plays a critical role in a carrier's business.

- Voice and data services need to be monitored holistically from access to core in order to ensure profitability.
- Subscribers expect a consistent user experience from any and all locations.



ID	Call Type	MSIP	UNC	SGW
0001	Mobile Originating Call	8.2.3.1	7.3.4.5	OFC8
0004	Mobile Terminating Call	8.2.3.1	7.3.4.5	1773

Troubleshoot inter-MSC handovers from GSM to UMA with robust multi-protocol correlation capabilities.



GeoProbe for Mobile Networks

UMA is part of Tektronix' comprehensive GeoProbe solution for Mobile Networks and is designed to assist carriers in meeting the following objectives.

Reduce Customer Churn

- Provide visibility into subscribers' service experience with proactive, customer-centric, end-to-end call tracing and QoS performance monitoring capabilities.
- Supports Unified Assurance's detailed reporting and trending analysis features.
- Enables the identification of QoS degradation before problems results in customer trouble reports.

Leverage Technology Revolution

- Flexible solution meets carrier needs at each phase of new technology deployment, from rollout and troubleshooting to management and optimization.

Manage Complex Networks with Simplicity

- Monitor entire 2G, 2.5G and 3G mobile networks from access to core with a single platform and common suite of applications.
- Gain end-to-end views with multi-protocol call trace for troubleshooting complex call scenarios such as IRAT Handovers.

The addition of UMA support to Tektronix' GeoProbe system allows carriers to easily extend core network management investments in order to troubleshoot and monitor the mobile access network.

GeoProbe for UMA provides a comprehensive, end-to-end view across multiple network technologies and types.

- Access to Core
- Voice and Data
- Handovers between UMA and GSM/GPRS

Typically deployed on the private side of the security gateway, GeoProbe for UMA monitors the clear, un-encrypted Up' interface. At this location, all control and data with the exception of IKE control and IP sec tunnel setup messages are captured for real-time display and historical analysis.

Product Features

Unified Assurance Integration:

KPI generation and drill-through troubleshooting support.

Network Status Maps: Customized infrastructure network maps for at-a-glance link and node status.

Protocol Analysis: End-to-end, real-time network troubleshooting for UMA, GSM, GPRS, SS7 and VoIP networks.

Multi-Protocol Correlation: Basic and Advanced suites for both Packet and Circuit-switched Domains.

- Basic for UMA, GSM and GPRS (RR/RLC/BSSAP/Gb/LDAP*/RADIUS*)
- Advanced for UMA, GSM, GPRS, SS7 and VOIP (RR/RLC/BSSAP/MAP/ISUP/H.248/RTCP/RTP/Gb/GTP/Gi/LDAP*/RADIUS*)

**Refers to the protocols captured on UMA Access Network connecting to either UNC or SGW nodes, not the ones captured from Gi network.*

Real-time & Historical Call Trace:

Filtering capabilities include network element filters by interface, extensive digit filtering and transaction, timeout, cause and status filters.

Statistics & Statistical Event Alarms:

- Real-time and behavioral statistics
- Network alarms for interface failure identification
- Statistical event alarms for UMA event triggers

Protocol Support: Based on UMA Specifications Stage 2 R1.0.4 and Stage 3 R1.0.4

- CS control plane using URR protocol (URR/TCP/IP)
- PS control plane using URR/URLC protocol (URR or URLC/TCP/IP)
- CS user plane using RTP/RTCP protocol

PS user plane is not supported.

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

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