

GeoProbe® | UTRAN

Network Assurance for Mobile Access

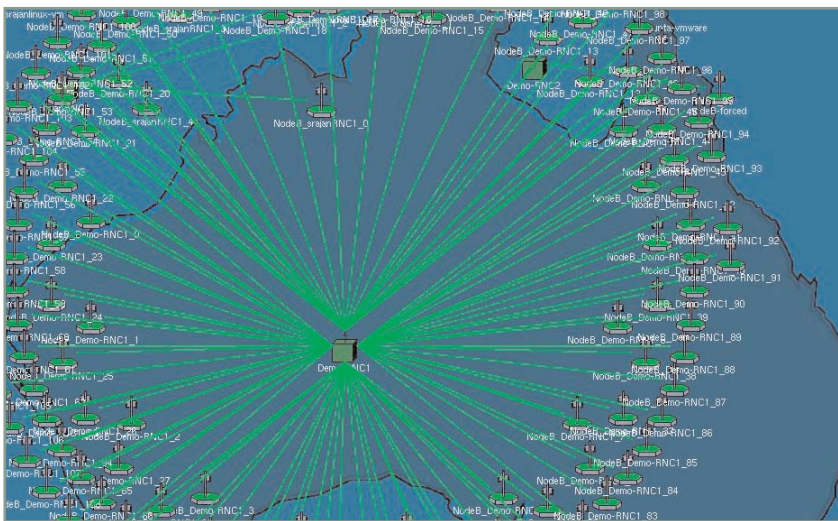


To stay competitive, carriers are raising the bar by offering complex services including video conferencing, music downloading, and mobile TV. While these services can translate into significant revenue streams, they require the highest Quality of Service (QoS) from the networks in order to meet Quality of Experience (QoE) expectations.

Tektronix' GeoProbe solution offers carriers a comprehensive toolkit for ensuring the health and performance of the most complex UTRAN architectures.

Capable of carrying real-time circuit switched traffic as well as IP-based packet-switched traffic, the UTRAN Terrestrial Radio Access Network (UTRAN) has become a critical component in the successful delivery of high speed mobile technologies. Proactive monitoring of the Node Bs and Radio Network Controllers that provide connectivity between the user equipment and the core network is required in order to identify and address potential problems before they become widespread customer satisfaction issues.

- Alleviate pilot pollution due to poor cell planning, inappropriate site location, antenna height and uneven terrain.
- Analyze poor coverage areas due to defective hardware, obstructions or a need for new sites.
- Validate benchmarks and maintain UMTS/UTRAN/UE system functionality by reporting the most pertinent Key Performance Indicators (KPIs) and Key Quality Indicators (KQIs)
- Identify issues impacting new service QoS/QoE in real time with 24 x 7 monitoring capabilities, reporting and trending analysis features.



GeoProbe for UTRAN utilizes a patent-pending algorithm to auto populate Node Bs and RNCs on the network map. Auto binding of RNCs is also supported.

GeoProbe for UTRAN

The GeoProbe system is capable of monitoring the luCS, luPS, luR and luB interfaces in both centralized and decentralized Universal Terrestrial Radio Access Networks (UTRANs):

In a centralized UTRAN deployment, the GeoProbe system monitors luCS, luPS, luR, and luB interfaces using a monitor port on the Asynchronous Transfer Mode (ATM) switch used to connect network elements.

For decentralized UTRAN deployments, the GeoProbe system monitors luCS and luPS interfaces using optical splitters to tap the SGSN and MSC connections to the ATM switch used to connect network elements.

UTRAN Product Features

24 x 7 Network Monitoring: Ensures proactive detection of critical radio network problems.

- Highly scalable solution capable of monitoring high levels of network traffic
- Real-time and historical analysis of call data

Multi-protocol Call Trace:

On-demand and historical session/call tracing for customer and links with extensive filtering capabilities

- Failed Call Tracing
- RNC Call Tracing on lub, lur, luPS, and luCS
- End-to-end Customer Tracing on all GSM/GPRS/UMTS/UTRAN Interfaces
- Inter/Intra system (3G-3G) Handover Tracing
- Inter-RAT Handover Tracing
- 3GPP Release-6 support for Call Trace includes HSUPA call tracking

Protocol Analysis: Extensive filtering provided for every protocol layer.

- lub/lur: Transport Channels, SSCOP, SSCF, MTP3b, ALCAP, NBAP, RNSAP, FP, MAC, RLC, RRC, and Layer3
- Pre- and post-capture filtering on links, message types, and protocol layer data

- Digit searching on permanent and temporary customer identities

- Signal unit presentation with full bit-level decoding

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

- Auto detection and auto population capabilities streamline configuration activities.

Performance Monitoring Statistics:

Interference Matrix, Radio Resource, Throughput, Quality, Network Accessibility and Retainability, Handovers, High Speed Data Support (HSPA) timeout, cause and status filters.

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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