

APM™ | UTRAN

Network Assurance for Mobile Networks



Informed Capacity Planning and Improved Customer Satisfaction

Tektronix' APM for Mobile Networks offers extended visibility into the your UMTS Terrestrial Radio Access Network (UTRAN) with key performance indicators (KPIs) for circuit- and packet-switched call quality, throughput, accessibility, retainability and HSDPA performance.

Available for presentation through the Unified Assurance Operations and Management Reporting applications, collected UTRAN metrics may be easily accessed, filtered and analyzed.

- Evaluate UTRAN utilization for capacity planning initiatives.
- Improve subscriber satisfaction by identifying and resolving access issues quickly.

With APM | UTRAN, carriers can measure and act on the following information:

- How many HS-DSCH to DCH Transitions were attempted during the last hour?
- What is the end-to-end latency of CS Speech Call Setup?
- What is the drop rate for PS Data sessions?

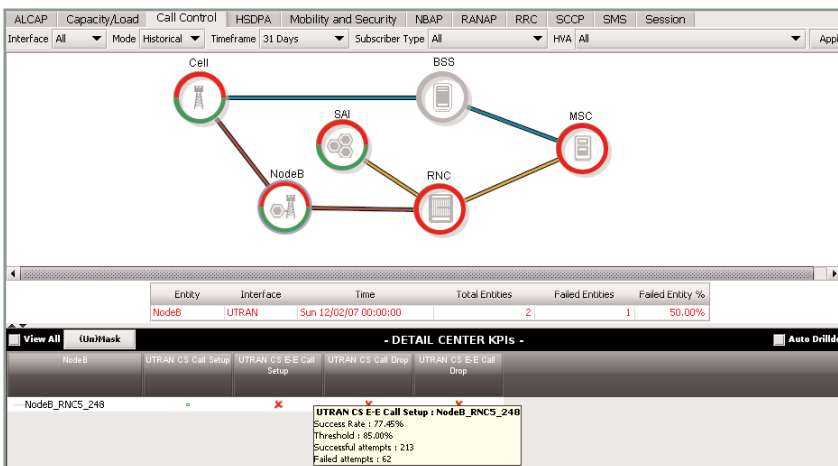
Operations Application

Enables real-time and historical troubleshooting to the root cause with alarming and alerting capabilities.

Management Reporting Application

Predefined report categories summarize the health of network services and entities in the UTRAN network.

- Apply pre-defined filters to simplify reporting results and hone in on areas of interest.
- Schedule reports for automated, ongoing updates of UTRAN performance status.
- View and print reports or save as CSV for issue documentation and post-analysis.
- Grouping options provide multi-level presentation of reported KPIs by Element grouping, Node-Bs by Market for example.



Top-level dashboard views provide visual, near real-time notification of UTRAN network problems isolated by offending nodes.



In addition to standard counter- and ratio-based reporting options, Tektronix' UTRAN solution offers BIN Reports. Based on frequent samplings, aggregated KPI measurements are available for graphical display over a pre-defined resolution interval. Accessed through active hyperlinks from selected Management Report element ids and measurement values, BIN reports support CSV export functionality.

Key Performance Indicators

- **Speech/Video Quality:** UL/DL CS
- **Capacity/Load:** Congestion - Customer Perceived, RRC and RL Blocking
- **Accessibility:** CS/PS - Call Setup, Service Denied Ratio, End-to-End Call Setup, Blocking, Call Setup Time; RRC - Connection Setup, Connection Setup Time
- **Handover:** CS/PS IRAT Hard Handover, Intra-RNC Inter-Frequency Handover
- **HSDPA:** HS-DSCH Bit Rate Measurement, Transitions
- **Retainability:** CS/PS - Call Drop Rate, End-to-End Call Drop Rate; RRC Re-establishments
- **Procedural:** Radio Bearer Setup and Reconfiguration; Transport Channel, Physical Channel; Radio Link Additions, Deletions and Setup; DCH to FACH, FACH to DCH and FACH to Cell PCH Transitions
- **Radio Link Performance:** Primary CPICH EC/IO and RSCP Distribution; CS/PS Average Used Power; Total Wideband Power RTWP Distribution; SIR Distribution; SIR Error Distribution
- **Interference Matrix:** Active Set Size Distribution per Sector

Available UTRAN Management Reports

- Accessibility
- Failure Cause
- Retainability
- Capacity/Load
- Handover Performance
- HSDPA
- Interference Matrix
- Radio Link Performance
- Speech/Video Quality

About Tektronix:

Tektronix Communications provides network operators and equipment manufacturers around the world an unparalleled suite of network diagnostics and management solutions for fixed, mobile, IP and converged multi-service networks.

This comprehensive set of solutions support a range of architectures and applications such as LTE, 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.tektronixcommunications.com

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