GeoProbe® | Femtocell

Network Assurance for Mobile Access

Ensuring Femtocell Deployment and Profitability

With the introduction of Femtocell technology, wireless providers seek to capture additional revenue by improving the mobile experience in over-subscribed and rural areas. By deploying small cellular base stations, wireless operators can leverage existing broadband connections for the following benefits:

- Extended indoor coverage and capacity for wireless handset use.

- Simplified service introductions and increased ARPU.

- Reduced CAPEX and OPEX.

Troubleshoot a wide range of Femtocell problems including nodal issues, network capacity limitations and backhauling issues with GeoProbe's Protocol Analyzer.

Monitoring Femtocell Networks

With customer satisfaction and increased usage as the primary objectives, wireless providers must ensure the introduction and ongoing health of Femtocell installations.
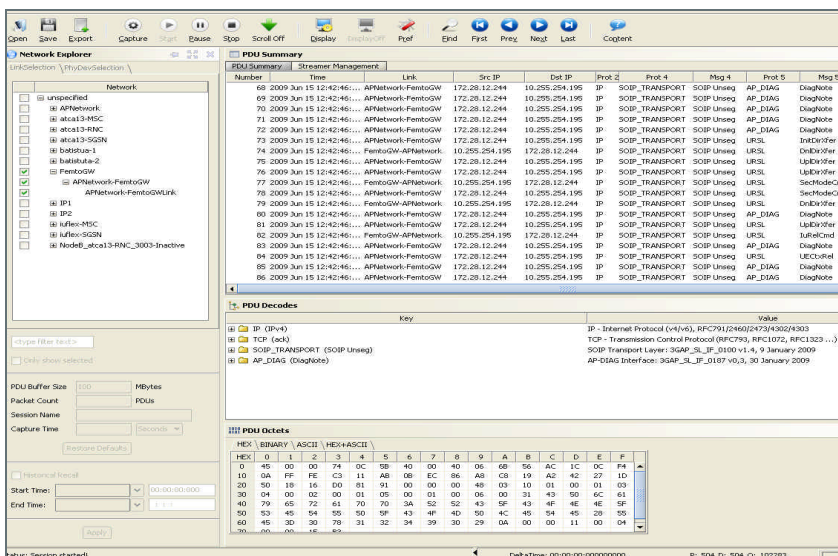
Isolate Home Node-B (HNB) Issues

Providing connectivity between existing residential broadband and associated 3G handsets, the HNB plays a vital role in the success of Femtocell deployments.

GeoProbe's support of IuH/Iu+ protocols can assist wireless operators in addressing some of the most common HNB-related issues including gateway registration errors, secure tunnel establishment failures and unauthorized/unsupported handset usage.

Proactively Monitor Handover Success

While Femtocell networks are focused on residential and business environments, end subscribers expect seamless service when "moving" between home-based femtocells and shared 3G network coverage areas. With GeoProbe's extensive support of core network protocols in addition to IuH (Iu+), wireless operators are well-positioned to understand and troubleshoot network handoffs with end-to-end visibility and unmatched multi-protocol correlation capabilities.

Tektronix®
Communications

While the actual responsibility of service may be shared with a broadband provider, the wireless carrier is often at greater risk if subscribed service experience falls short of customer expectations.

By taking a proactive approach to monitoring Femtocell deployments, wireless operators can ensure ongoing customer satisfaction—reducing the overall churn potential.

GeoProbe for Femtocell Networks

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

- Automatic detection of connected HNBs simplifies the configuration process for immediate monitoring of IuH (Iu+) interfaces.

Designed to addresses both proprietary and standardized 3GPP-based implementations, Tektronix Communications' Femtocell monitoring solution is typically deployed at the HNB Gateway for the IuH (Iu+) interface.

Product Features

Protocol Analysis:

- Delivers end-to-end, real-time and historical network troubleshooting capabilities.

- Utilizes Tektronix Communications new Protocol Analyzer for protocol, message, and parameter-based filtering.

- Femtocell support includes IuH (HNBAP, RUA) and Iu+ (URSL, SOIP, BSMIS, AP-Diag.) protocols.

Real-time & Historical Call Trace with Multi-Protocol Correlation Support:

- Call tracking capabilities include network element and extensive digit filtering.

- Transaction, timeout, cause and status filters are also available.

- Signal Unit level decode capabilities enable complex traffic scenarios.

- Correlation of access network protocols with core UMTS (IuPS/IuCS) delivers E2E visibility.

Statistics & Statistical Event Alarms for IuH*:

- Real-time and behavioral statistics

- Network alarms for interface failure identification

- Statistical event alarms for Femtocell event triggers

Call Detail Record Generation for IuH*:

- Femtocell call records are made available for downstream applications with the DataCast mediation platform

Planned for future release.

About Tektronix Communications:

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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