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TEMS DISCOVERY ENTERPRISE – DEVICE MODULE 10.0



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AGENDA

- Product Overview
- Key Features
- New Analytics
- New Capabilities
- TEMS Discovery Device Suite

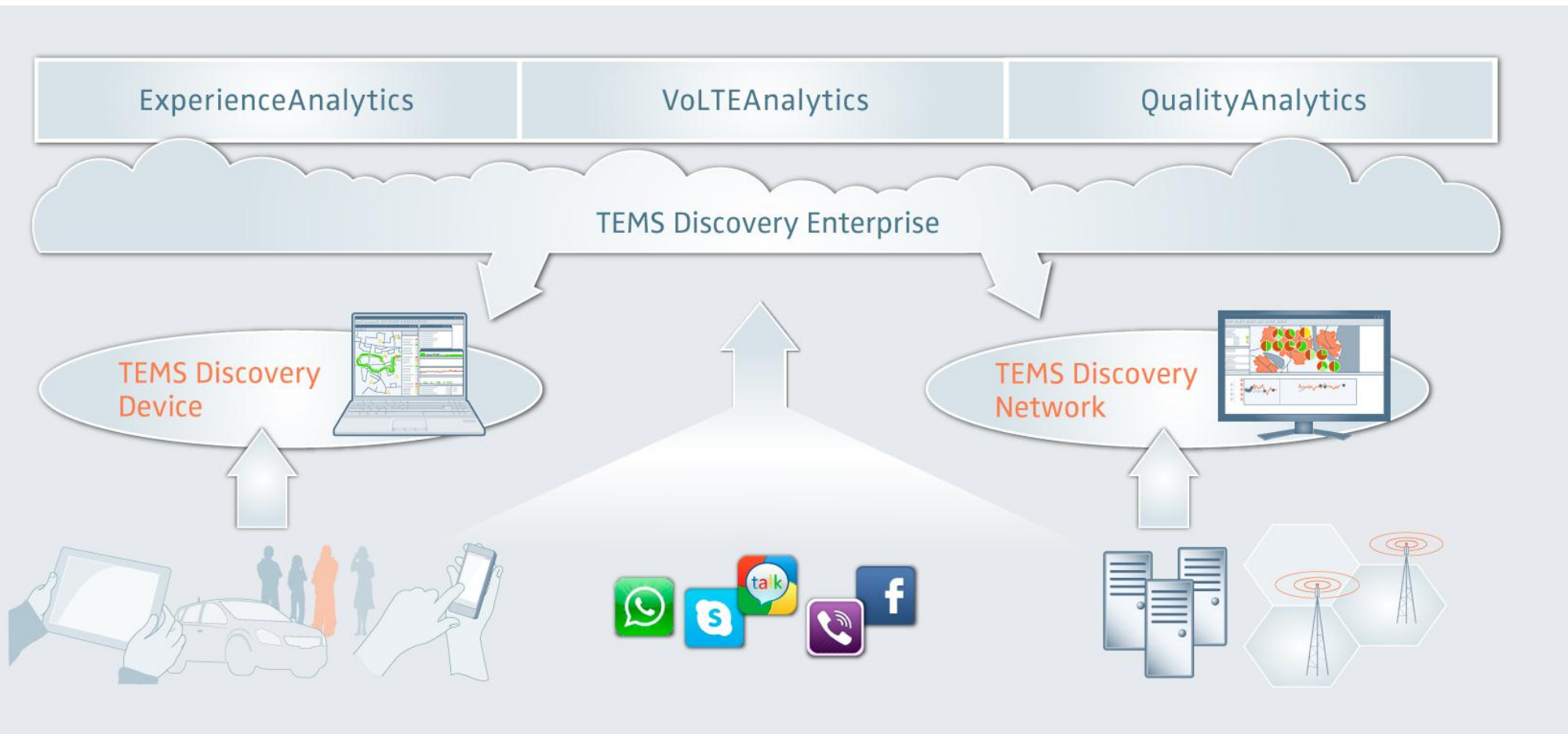


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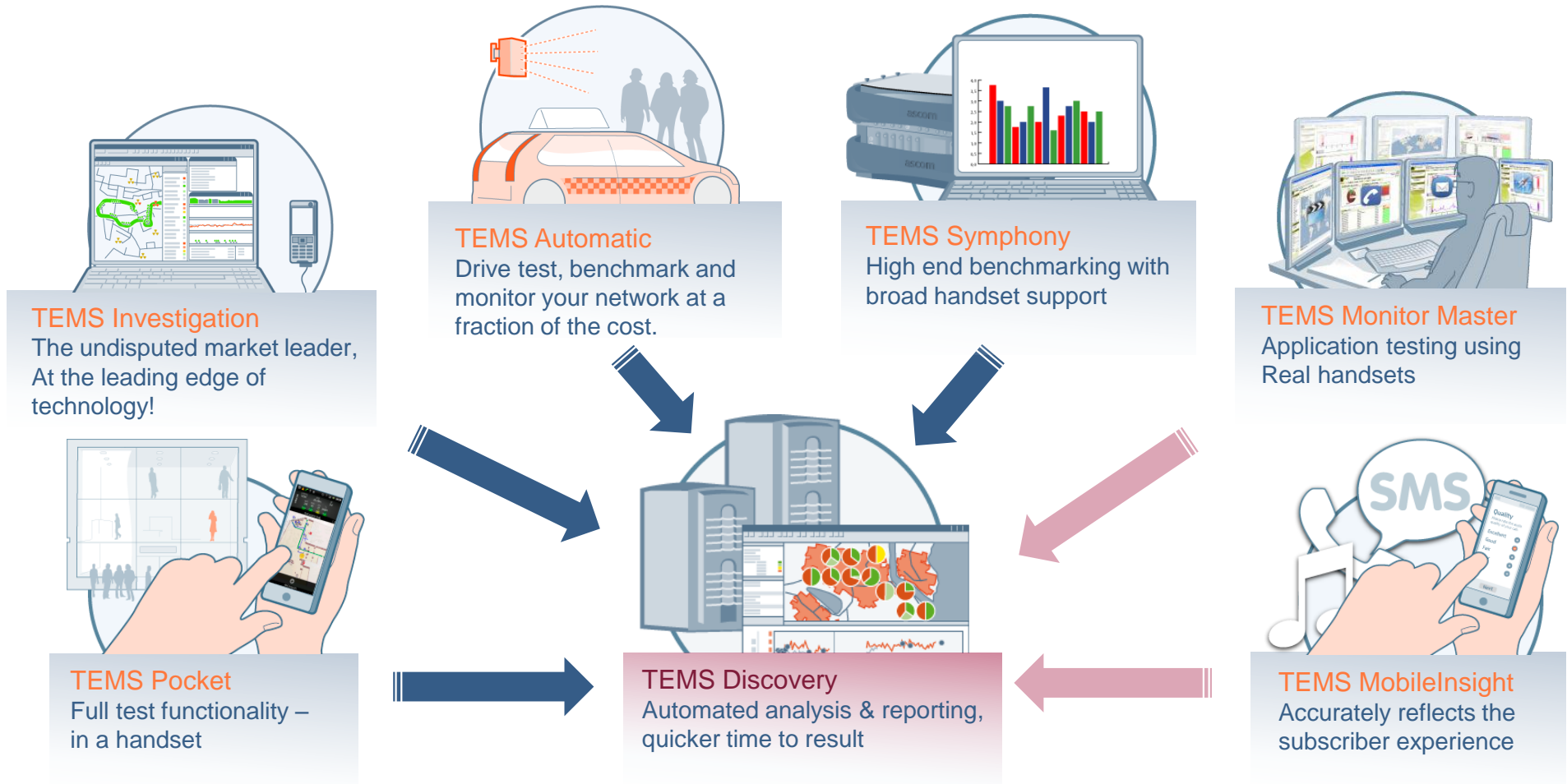
PRODUCT OVERVIEW



TEMS DISCOVERY ENTERPRISE



TEMS™ PORTFOLIO STRATEGY – OPERATIONAL EFFICIENCY



TEMS DISCOVERY ENTERPRISE – DEVICE MODULE

A solution approach to operational efficiency

- 24x7x365 Monitoring
- Operational Efficiency
- One Common Centralized View
- Analytics



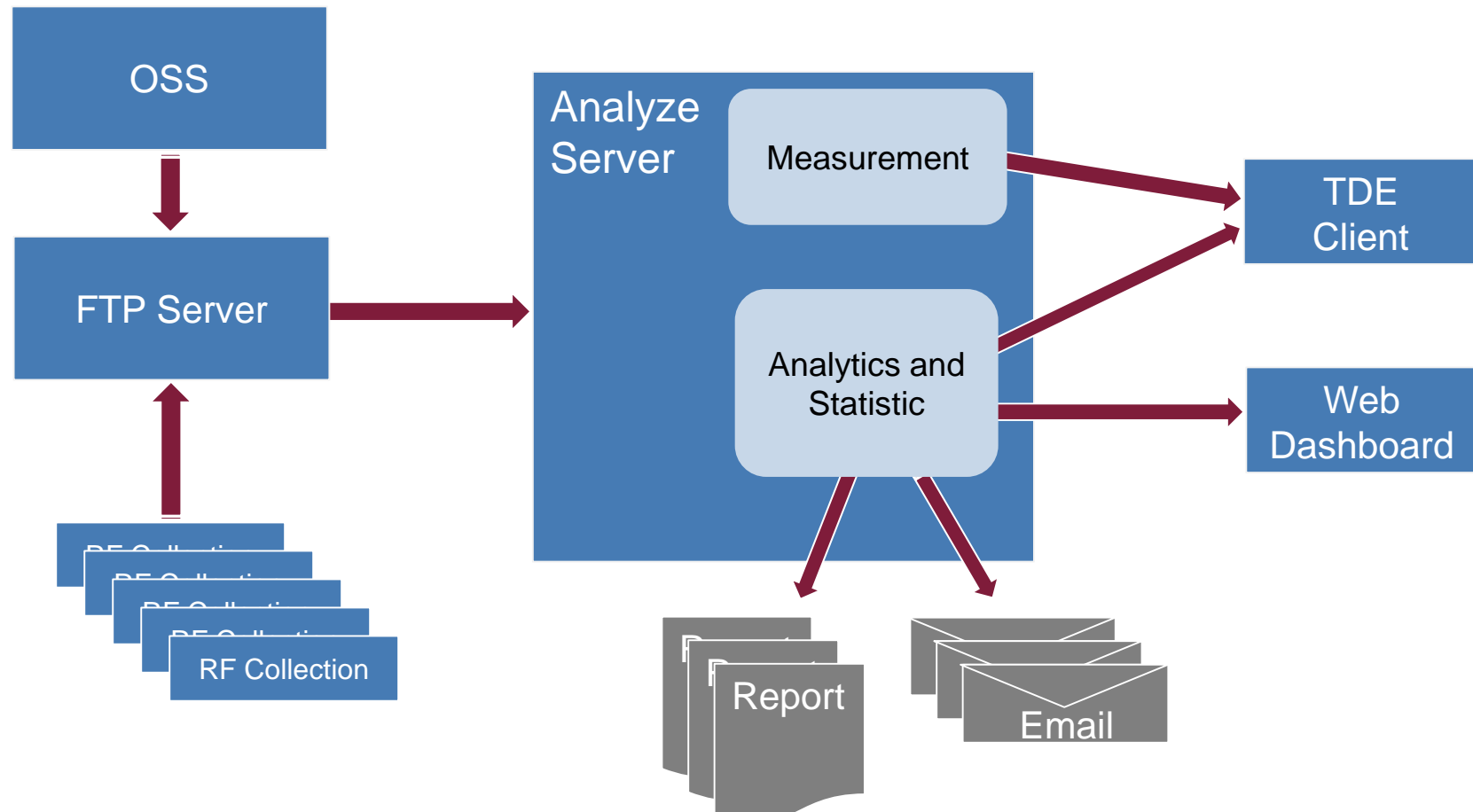
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A solution approach to operational efficiency

- Full decoding of metrics and events
- Customizable problem detection and analysis
- Any KPI can be defined and reported automatically
- Supports all major wireless technologies
 - LTE, TD-LTE, EV-DO (Rev. 0/A/B), WCDMA/HSDPA/HSUPA/HSPA+
 - WiMAX, IS-95/cdma2000 1x, GSM/GPRS/EDGE
 - TD-SCDMA, Wi-Fi
- Supports measurements from:
 - TEMS™, JDSU™, Nemo™, Qualcomm™
 - ZK Celltest™, LG™, PCTEL™, Rohde & Schwarz™, Generic Text Import

TEMS DISCOVERY ENTERPRISE – DEVICE MODULE

A solution approach to operational efficiency



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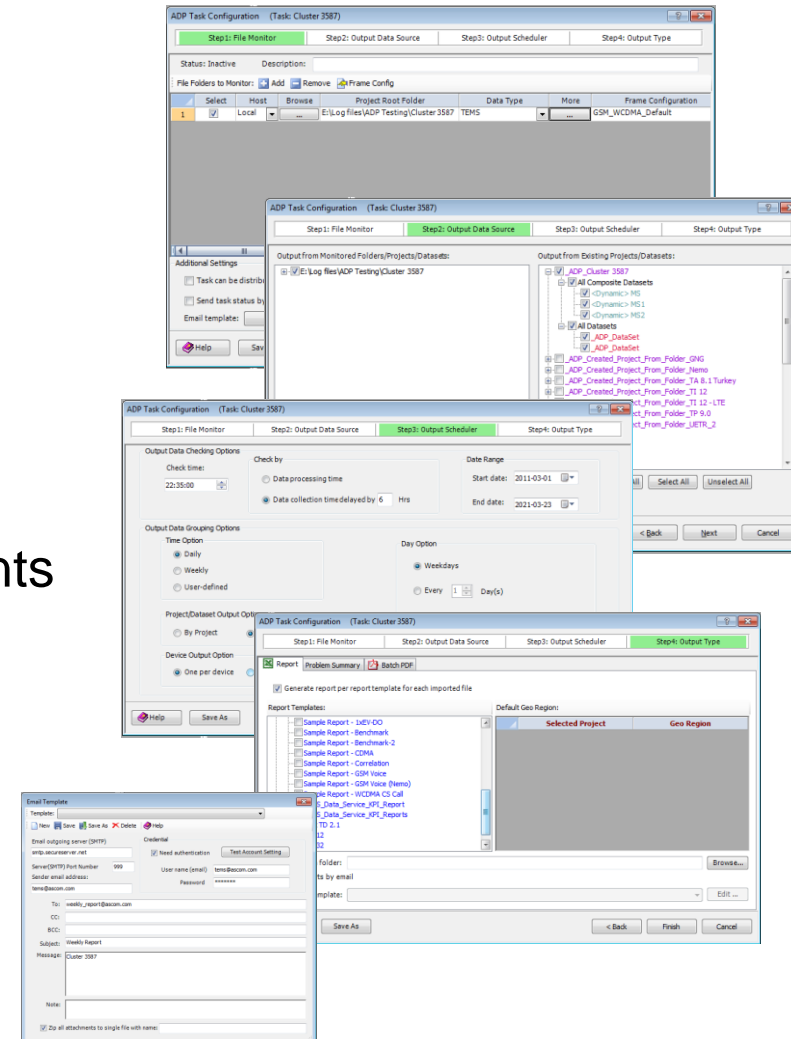
KEY FEATURES



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Automatic data processing

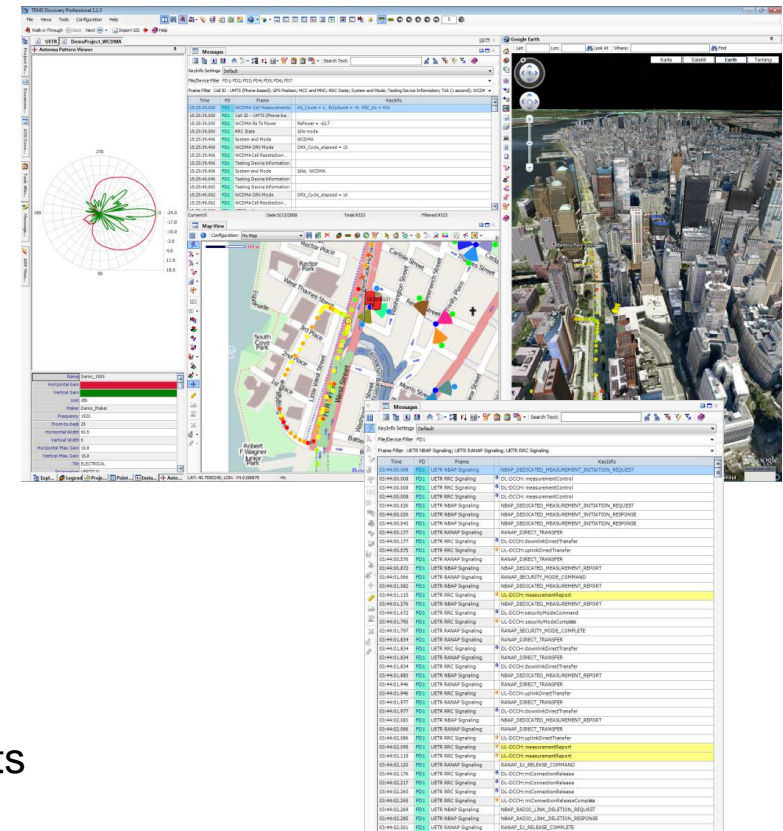
- Monitoring and processing of incoming data
- Automatic creation of multiple projects and data sets according to user's configuration
- Automatic “Aggregation to Statistic” generation
- Automatic creation of KPI plots and reports
- Automatic email notifications to multiple recipients
- Multiple tasks can be configured
- Easy and flexible configuration



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Versatile data analysis

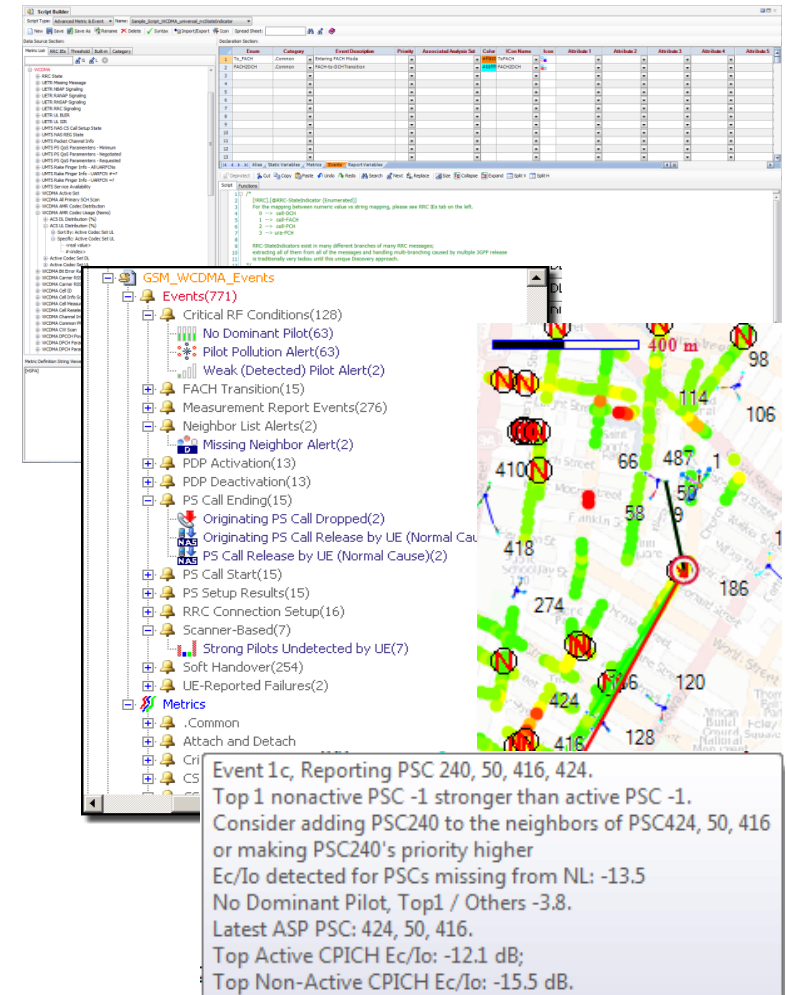
- Multiple data sources
 - Measurement data
 - Scanner and UE drive-test data
 - IP data
 - OSS Data
 - User Equipment Traffic Recording (Ericsson UETR)
 - GIS data
 - Support for more than 100 GIS formats
 - Integrated Google™ Maps or Microsoft Bing™ Maps
 - Network cell configuration and parameters, neighbor lists
 - Antenna pattern



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Scripting

- Predefined or user-defined scripts
- For problem finding, analysis, and reporting
- Simple use of predefined scripts for pinpointing network issues
- Use Script Builder to create your own tailored scripts for automated problem finding
- Findings displayed in Map View (or any other view) and included in a report



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Reporting

- Predefined and user-defined report templates
- Generate report on any projects, files or devices
- Scheduled or immediate generation of report based on selected template
- Create your own tailored report templates for specific interests and needs



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NEW ANALYTICS IN TEMS DISCOVERY 10.0



TEMS DISCOVERY ENTERPRISE – ANALYTICS

Add-on packages addressing specific areas.
Automate data analysis and report creation, and
visualize valuable insights on dashboard.



ANALYTICS PACK IN TEMS DISCOVERY ENTERPRISE

■ VoLTE Analytics Pack

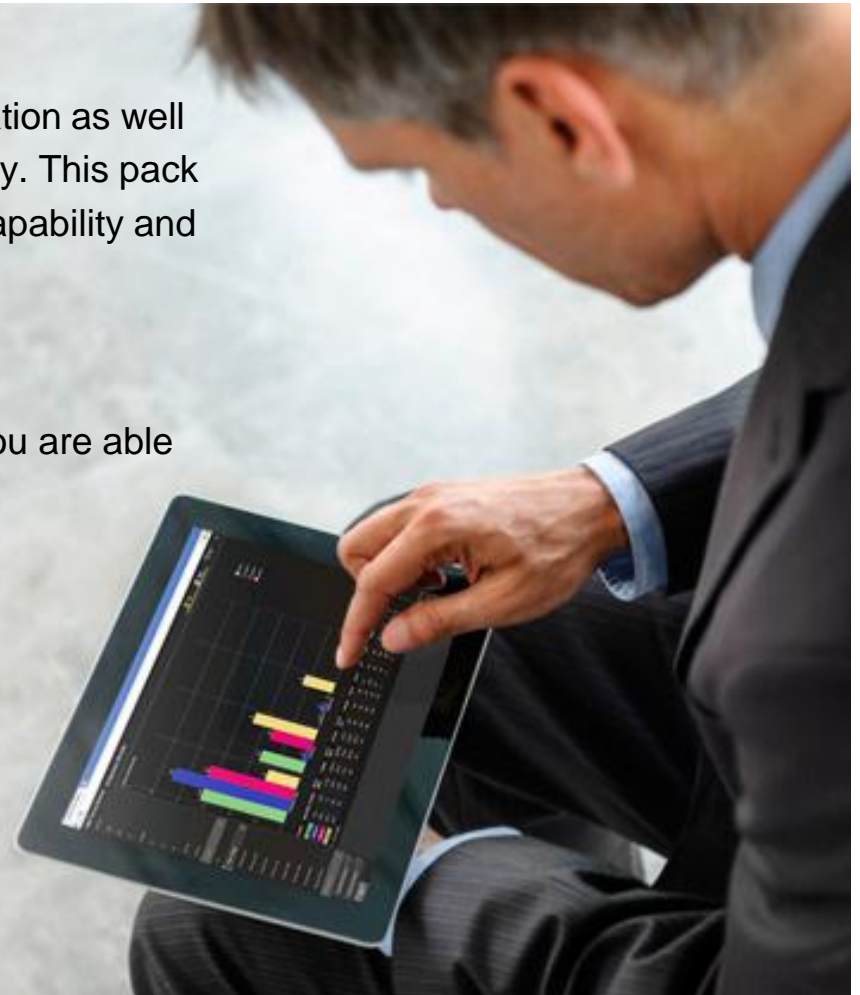
- VoLTE requires a correct integration of RF and IP configuration as well as IMS deployments to give users the expected voice quality. This pack helps you to verify VoLTE configuration, analyze the LTE capability and produce reports for the VoLTE KPIs.

■ Customer Experience Analytics Pack

- Understand what the VIP subscriber truly experiences so you are able to fix issues before subscribers complain.
Understand subscriber usage of applications and services.
Study trends in subscriber behavior.

■ Benchmarking Analytics Pack

- Compare the QoS for all types of services and wireless technologies against other operators. Be sure you are good enough or best in class in providing network services.



VOLTE – ANALYTICS

- VoLTE KPI Report
 - Statistical data related to session setup and completion, VoLTE client Registration to IMS server, and RTP statistics related to Jitter, throughput and delays.
 - LTE RRC and HO statistics related to RRC Connections and intra-frequency handovers.
- RAN and IP Configuration Analysis
 - Walk through all protocol layers from the RF to application, and analyze settings and suggestions for improvements for optimal VoLTE performance.
- Capacity Analysis
 - Present number of VoLTE calls (uplink/downlink) given current configuration and cell performance (max, typical, cell edge).
- UE Battery Optimization
 - Analyze the DRX settings and suggest improvements.
 - Analyze that the scheduling is done in an optimal way for VoLTE; otherwise suggest improvements.
 - Analyze CSI/SRS allocation and suggest improvements.



CUSTOMER EXPERIENCE TESTING – ANALYTICS

- User perceived quality of wireless services
 - Near real-time monitoring via dashboard available in your Web browser
 - QoE trending
- QoE benchmarking
 - Compare QoE from real users using TEMS Pocket Lite
- Monitoring VIP customer SLA



BENCHMARKING – ANALYTICS

- Detailed benchmarking analysis
 - Analyze network service quality across a large variety of network operators, device types, and wireless technologies, i.e., network service KPIs
- Coverage analysis
 - Benchmark technology and service capability
 - Best-in-class analysis
- Objective comparison
 - Statistical analysis of large volumes of collected data, same time, place and environment



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NEW CAPABILITIES IN TEMS DISCOVERY 10.0



TEMS DISCOVERY ENTERPRISE 10.0

New Capabilities

- Faster data import performance
- Significantly reduced time for generating report directly from measurement database
- Significantly reduced measurement database size
- Optimized database partitioning for faster data access
- Significantly improved user experience for working with large composite data set
- Data import as a service

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New Capabilities

- Pre-defined OLAP cube definitions
- Enhancements to handling of OLAP cube processing
 - Define data scopes by defining any subset of:
 - Projects
 - Data collection date or data processing date
 - The user can enable cube-processing on any data scope/cube definition combination
 - The user can define an OLAP cube process interval



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New Capabilities

- Mapping directly on integrated online data sources
- WCDMA root cause analysis
- Data streaming
- Enhanced MIMO support for PCTEL scanners
- IP Multimedia Subsystem (IMS) support for TEMS logfiles collected from Qualcomm chipset based devices



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New Capabilities

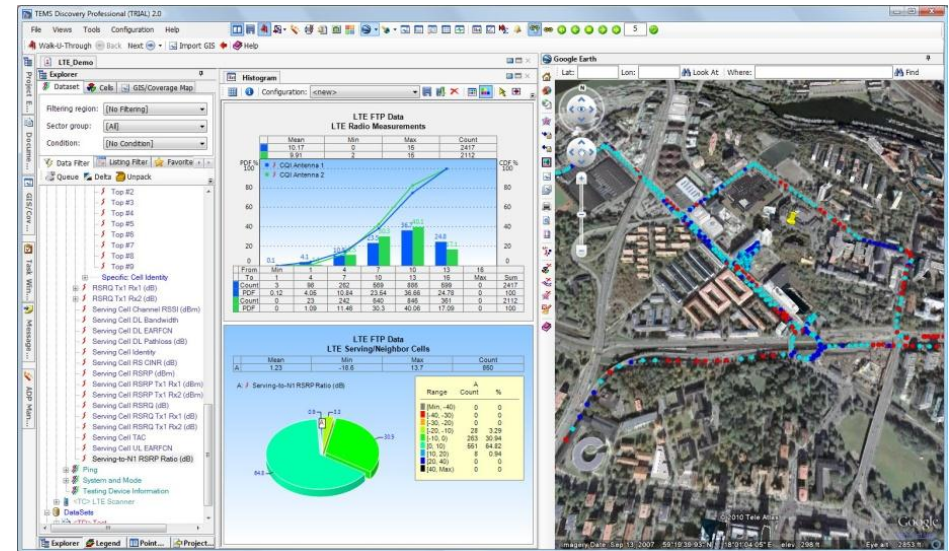
- Support of logged files collected with TEMS data collection tools:
 - TEMS Automatic 9.2
 - TEMS Symphony 7.2.2
 - TEMS Investigation 15.2
 - TEMS Pocket 13.2
 - TEMS Pocket Lite 13.2



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Enterprise Client

- Engineering Dashboard
- Problem Set / Analysis Set
- Drilldown functionality
 - Drag and drop any measurement to Views
 - Map, Table, Correlation, Message, etc.



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Enterprise Dashboard

- Always-On
- Near Real Time
- The entire organization can view the same data
- Accessible by any device with a Web browser



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TEMS DISCOVERY DEVICE SUITE



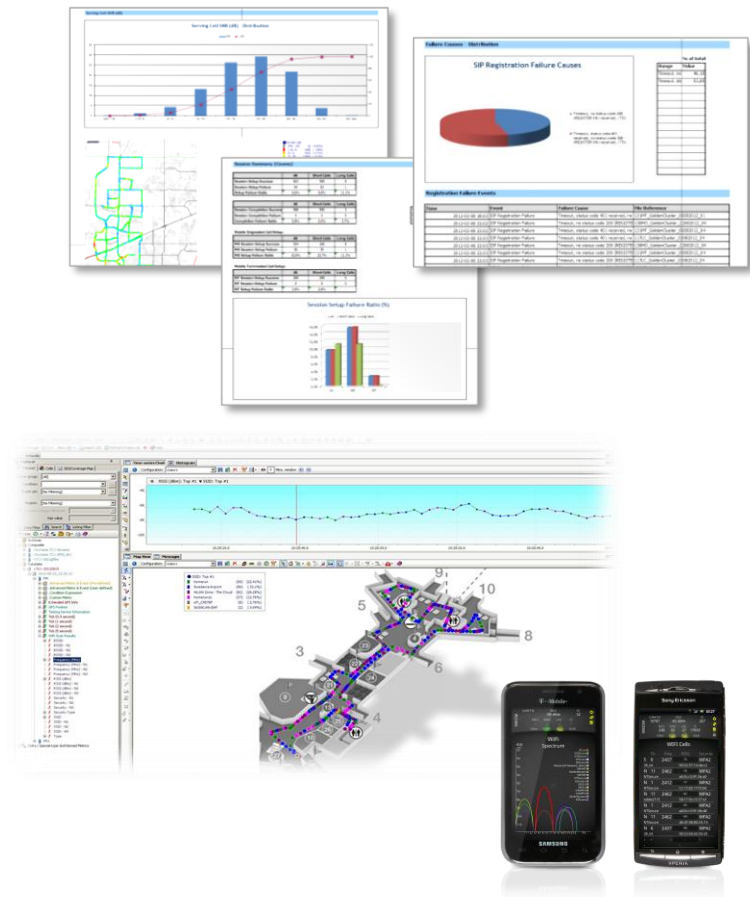
TEMS DISCOVERY DEVICE SUITE

- TEMS Discovery Device
- Standard Feature Set:
 - Post-processing tool for TEMS Investigation multi-logfile analysis
- Professional Feature Set:
 - Post-processing tool that can be tailored to fit into and improve your processes by combining logfiles from the major drive-test tool vendors



TEMS DISCOVERY DEVICE SUITE

- TEMS Discovery Enterprise:
 - 24x7x365 monitoring
 - Client-server based solution
 - Handles very large volumes of data
 - Statistical data storage and trending
 - Engineering and Web Dashboard
 - Works in conjunction with the existing TEMS Discovery product line



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THANK YOU!

