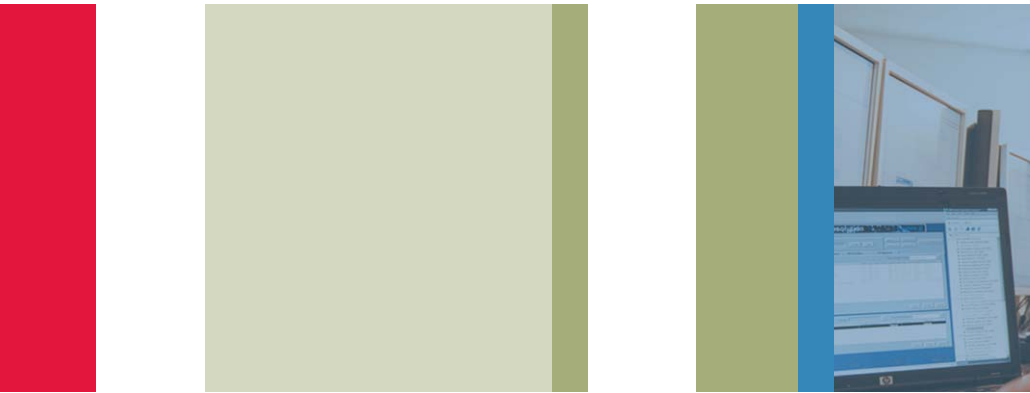


# Orion™ | Interconnect Mobility Services

## Service Assurance for Converged Networks



### Maximize Roaming and Interconnect Mobility Transaction Performance

With Tektronix Communication's Orion | Interconnect Mobility Services offering, operators can better manage premium interconnection and roaming services. Interconnect Mobility Services takes advantage of advanced features and full service performance integration for maximum visibility and seamless troubleshooting of interconnection performance issues associated with Mobility, SMS, USSD and CAMEL services. With the optional roaming package, Orion's value is extended to include roaming service assurance for Mobility, Voice and SMS through specialized correlations (ISUP-MAP, MAP-MAP) and reporting on inbound/outbound roaming directions.

Filter	
Average MSU Count	1.00
Enhanced MER 1	1.00
Failed Transactions%	100.00%
Response Only MSU Count	12,000
SCCP Errors	12,000
Total MSU Count	12,000
Total Transactions	12,000
Average Transaction Latency (msec)	1.00
Failed Transactions	12,000
MER	1.00
Response Only Transactions	12,000
SCCP Errors%	100.00%
Total Transaction Latency (msec)	12,000.00

High-level portlets offer drill-through to KPI gauge displays. These java-based reports are easily exported and shared as PDFs or CSV files.

#### Product Applications

- Interconnection Partner Scenarios
- Roaming Partner Scenarios
- Roaming Hub Service / Transit Scenarios\*
- Global Roaming Quality (GSM Association GRQ) Compliance Scenarios\*
- Travelers' Security/Advisory Scenarios\*
- Complement the Orion | Interconnect Voice Services offering

#### Feature Summary

- Highly flexible, user-configurable dashboard
- Converged view of disparate networks
- Full featured CDR browser\* with powerful drill-down capabilities
- Extensive Key Performance Indicator (KPI) threshold capabilities
- Expansive alarm management functions
- User-customizable & ad hoc reports\*
- Standard interfaces for integration with external OSS
- Advanced security measures and secure "customer" portal options
- Report scheduling from all reporting applications

*\*optionally priced*

### Personalized, Actionable Information

UACN application users can customize service views with My Homepage dashboard portlets.

- Top-level Carrier and Service views deliver at-a-glance performance reporting in chart, graph or gauge views.
- Drill-down paths guide users from portlets to detailed views of KPIs, alarms and reports.
- Access failed call logs and enable further drill down into multi-protocol call trace summaries.

### Mobility Performance KPIs

Orion | Interconnect Mobility Services has an unmatched set of message-based KPIs that can be used to report on mobility performance.

- Total Transactions
- Failed Transactions
- Failed Transactions %
- Mobility Effectiveness Ratio (MER)
- Enhanced MER
- SCCP Errors
- SCCP Errors %
- Total MSU Count
- Average MSU Count
- Total Transaction Latency
- Average Transaction Latency

Optional intelligent KPI correlation capabilities enabled by Cognos Event Studio allow for customizable combinations and extensive fine-tuning.

*\*Represents the sum of the number of Successful Transactions and Subscriber Error Codes per the number of Total Transactions.*

## Increase Interconnect and Roaming Call/Session Completion Rates

When roamers or your own subscribers cannot place or receive calls/sessions from partner networks, revenue is jeopardized. Tektronix Communications' Interconnect Mobility Services offering provides a complete view of mobility service performance to (outbound) and from (inbound) your roaming partners' networks.

- Identify configuration and performance problems affecting interconnect carriers and PLMN partner networks with real-time alarm capabilities.
- Ensure that performance of GSM mobility services such as authentications and location updates are acceptable to you and your mobility partners with Public Land Mobile Network (PLMN) and Interconnect Carrier reporting.

## Enforce and Demonstrate Superior Mobility Performance and GRQ Compliance

Enforce superior mobility performance standards from other PLMNs, interconnect partners and roaming hubs.

- Verifying that your subscribers can make and receive voice calls and SMS when roaming in other PLMNs will protect your customer satisfaction levels.

Demonstrate superior mobility performance delivered to mobility partners with outbound transaction tracking.

- Validating that "visiting" subscribers from other PLMNs can make and receive calls/sessions can open premium rate and interconnection revenue opportunities.

Support GRQ-driven Service Level Agreements with composite reporting of Roaming performance (inbound and/or outbound) by Country and PLMN.

- Monitor the quality of Mobility (Location Updates), Voice and SMS services with KPI performance tracking over time.

Support government requirements regarding national security and facilitate notification of subscribers in declared emergency situations.

- Interconnect Mobility Services maintains a database of all inbound and outbound roamers based on every location update seen on interconnect links. This capability allows an operator to comply with regulations and produce a list of subscribers (unique IMSIs) currently roaming in a given Country and PLMN (or visiting from a given PLMN).



Create Alarm Configuration

Product Portfolio : Interconnect/Data/Mobile Transit

Key Set : inboundIcCarrier, outboundIcCarrier, direction, service, protocol, opCode

Definition : Select Definition

Name : Select Definition

Description : Average Transaction Latency (msec)  
CAMEL Failure Rate %  
Enhanced Mobility Effectiveness Ratio %  
Failed Transactions %  
Failed Transactions  
Location Update Failure Rate %  
Enabled : Mobility Effectiveness Ratio %

Ack Required : SCCP Errors %  
SCCP Errors

Auto Clear : Total Transactions  
UDTS Failure Rate %

Fwd to TeMIP :  Profile: Select Profile

Fwd to Geo :  Profile: Select Profile

Fwd to SNMP :  Profile: Select Profile

Create Alarm Config Cancel

Interconnect Mobility Services' alarms are configurable by inbound and/or outbound Interconnect Carrier, PLMN Carrier, Service, Protocol, OpCode/Procedure, IC Node and GMSC combinations. Additional Roaming Inbound/Outbound direction configuration options are available with the roaming package.

## Focus on the Customer Experience

Reduce corporate account churn by improving customer satisfaction levels and proactively managing SLA commitments. Interconnect Mobility Services aggregates performance metrics to assist operators in the identification and resolution of unfavorable trends before revenue impact occurs.

Additional secure customer portal options enable Enterprise and Carrier Partners a selective view of their own performance data.

## Real-time Alarm Detection and Display

Dashboard displays provide real-time notification of emerging interconnection mobility problems as well as near real-time and historical views. Alarms trigger and clear automatically based on user-defined thresholds.

A common UACN alarm framework supports OSS integration efforts.

- Forward alarms by SNMP or Email
- Save and forward alarms to a TeMIP system

## Roaming and International Voice/SMS

Tektronix Communications' optional Roaming Package enables accurate quantification of unique subscribers per Country/PLMN as well as roaming classifications and directional reporting based on service-level KPIs.

### Available Classifications by Direction

- Inbound National Roamers
- Outbound National Roamers
- Inbound International Roamers
- Outbound International Roamers
- Direct International Dialing/SMS

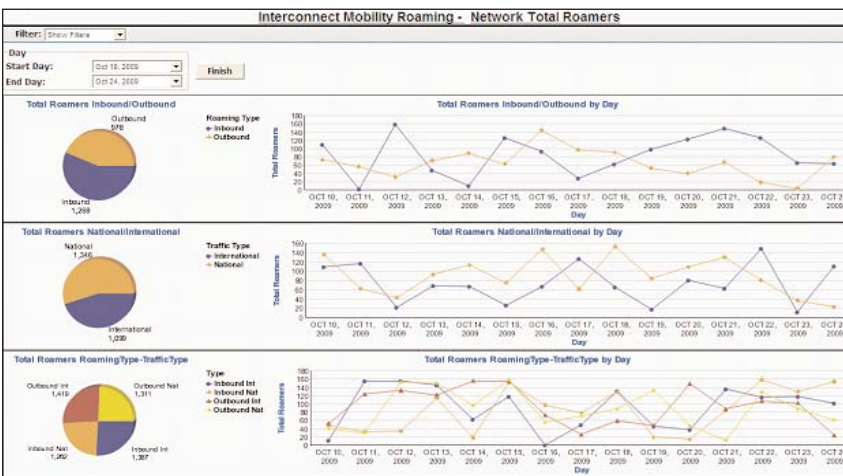
### Mobility (location updates), Voice and SMS Service KPIs

- Attempts
- Failures
- Failure %
- Mobility Effectiveness Ratio (MER)  
*(mobility and SMS services only)*
- Enhanced MER *(mobility and SMS services only)*
- Average Latency *(mobility and SMS services only)*
- SCCP Failure
- SCCP Failure %
- Network Effectiveness Ratio (NER)  
*(voice services only)*
- Enhanced NER *(voice services only)*
- Average Call Setup Time *(voice services only)*
- Answers *(voice services only)*
- Answer Seizure Ratio (ASR) *(voice services only)*
- Total Minutes of Use (MOU) *(voice services only)*
- Average MOU *(voice services only)*
- Short Calls *(voice services only)*
- Short Calls % *(voice services only)*
- Average SMS Delivery Time *(SMS services only)*
- Number of Roamers by Country/PLMN/Day  
*(roaming package only)*

## Extensive Reporting Capabilities

Orion provides extensive reporting capabilities through flexible OLAP cubes, pre-defined Management Reports and optional ad hoc reporting functions.

- Slice, dice and drill through pre-defined OLAP cubes for customized analysis of collected KPIs.
- Powered by Cognos 8, report views may be tailored to support troubleshooting and planning tasks with Daily By Hour and Monthly by Day Reporting.
- Top 'N' Reports for Point Codes and GTT digits aid in the detection of SMS Spammers and the highest-volume routes for each service type.
- UDT Reports\* assist operators in approximating SMS service data volumes.
- Roaming Reports\* support GRQ compliance initiatives and assist operators in building profitable partner alliances based on the roaming quality of service (Voice and Data) delivered.
- Cognos Query Studio enables ad hoc reporting, exporting and trending of any data in the Oracle RDBMS including transit KPIs if purchased.
- Reports on non-provisioned Global Titles and Point Codes assist in the identification of missing or outdated information provided in IR.21 reports received from other PLMNs.



Characterize your constituents with roaming reports designed to quantify and classify unique subscribers based on IMSI-MSISDN-PLMN mapping.

\*optionally priced

## 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](http://www.tektronixcommunications.com)

## Contact Tektronix:

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