

## The unique worldwide quality of roaming monitoring platform

### What does the platform offer?

- Worldwide network of test appliances (over 75 Countries)
- Test scenario library for testing current mobile services
- Test designer for creating customized test scenarios and testing VAS (Value Added Service)
- Centralised web based real time monitoring
- A range of alarm technologies including SMS, Email, JMS, JMX, SNMP
- Centralised web based ticketing system for tracking problems from inception to resolution
- GPS assisted data analysis
- GIS based visualization (Map View)
- Centralised web based reporting for viewing, archiving and distributing reports
- A range of test appliances to test in a variety of conditions: stationary, in car, on train, on boat
- Open interfaces to connect other data sources like billing, statistical and tracing information
- Service Data Model (DWH) as a data repository for quick and meaningful data analysis
- SIM Array for centrally managing SIM cards and flexible test definition



### Possibilities on offer

- Regular reports (daily, weekly, monthly) via email or FTP
- Regular reports are made available via the web, including collaboration support.
- With the help of the web based real-time monitoring, alarming and ticketing platform, selective time based reports can be executed to assist in problem resolution.
- Execute specific time-limited bilateral tests to help resolve roaming related problems with the help of web based, real time monitoring, alarming and ticketing.
- Use the platform within the context of an ASP model
- Use of the platform to monitor service quality inside a given network provider group (e.g. Vodafone Group, Telefonica Group)
- Use of the platform for obtaining inbound (In country) tests and rent test appliances in any of the locations offered by Pixip.net.
- Obtain test results in XML or CSV format via HTTP or FTP on a regular basis
- As a basis for monitoring SLA agreements (Supports the GRQ specification)

## Test any service anywhere any time

### *Worldwide network of test probes*

Xroam provides testing of mobile services across 250 different networks with a range of test appliances spread over 700 locations in more than 70 countries.

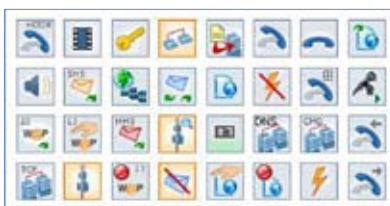
An extract from our current location list:

CANADA	ALGERIA	COSTA RICA
GERMANY	BULGARIA	NIGERIA
BRAZIL	ARGENTINA	COLOMBIA
CHILE	FRANCE	DOMINICAN REPUBLIC
VIETNAM	EGYPT	QATAR
POLAND	TURKEY	CHINA
FINLAND	BELGIUM	VENEZUELA
PORTUGAL	ROMANIA	PUERTO RICO



### *With the help of an extensive Test Scenario Library all current mobile services are easily tested*

Our test library already includes support for main stream mobile services including:

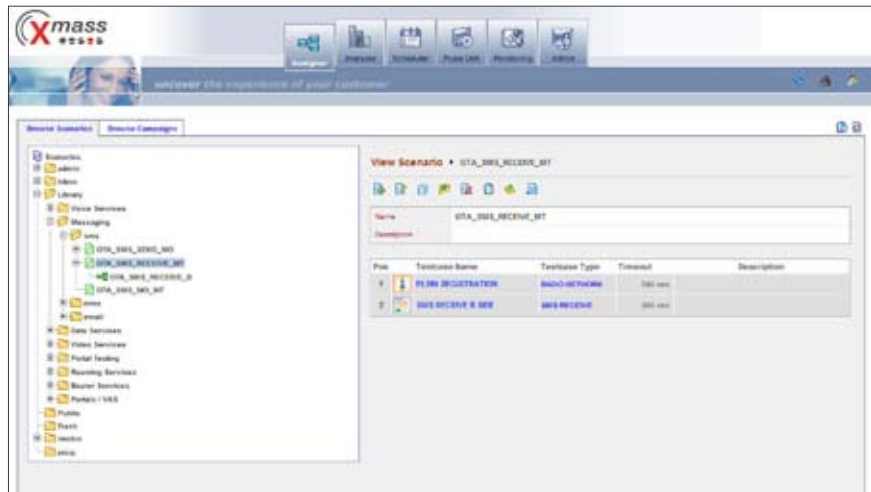


Call Establishment	SMS Availability	MMS Performance
Video Quality	Voice Quality	Location Update
CLI	Call Forwarding	Call Barring
Test according IREG	Test according CAMEL	Test according TADIG
USSD Availability	PDP Activation	PS Attach
WAP	HTTP	PING

## Know what's going on at all times

*Using our Test Designer you can create your own test scenarios in just a few clicks*

With just a few simple clicks you can create your own test scenarios. For services requiring specialized logic, our test case palette can help create your test.



*Active monitoring of your services is made possible through web-based real time monitoring*

Supervise the status of your services from anywhere and anytime with our web based monitoring system. Easy to use KPI / KQI based on drill down technology, which leads you from Alarm to the source of the problem via shortest way possible.



## Using GPS Data, know about a problem where it happens

### *Alarming, for being informed about current problems at all times*

When problems occur it's essential to be informed as soon as possible. Xroam supports a range of communication technologies ensuring you're the first to find out, including:

- SMS
- SOAP
- JMX
- JMS
- Email
- SNMP

False alarms are often a bigger problem than no alarming. It's essential to be able to differentiate real problems from non-critical. Through flexible thresholds alarms can be defined on the basis of:

- A critical alarm is triggered when the availability rate drops below 90% between 12 noon and 6pm or when it drops below 95% during the night.
- The current results are rated higher than the previous ones, since the current results represent a more accurate picture.

### *Analyse GPS accurate data*

Problems are often related to location. Consequently GIS information is always an integral part of our test results.



### *Track problems from inception to resolution*

Problem tracking inside or across organisational boundaries, for example with partners, is made possible with ticketing. Not only does it support tracking a problem from inception to resolution, it can also serve as a knowledgebase for the transfer of knowledge with all concerned parties. Having previous experiences at your fingertips can help resolving similar problems that arise later on.

### *GPS based visualization*

Today's market leaders in the area of online GIS are integrated in Xroam



## Share results bilaterally with roaming partners

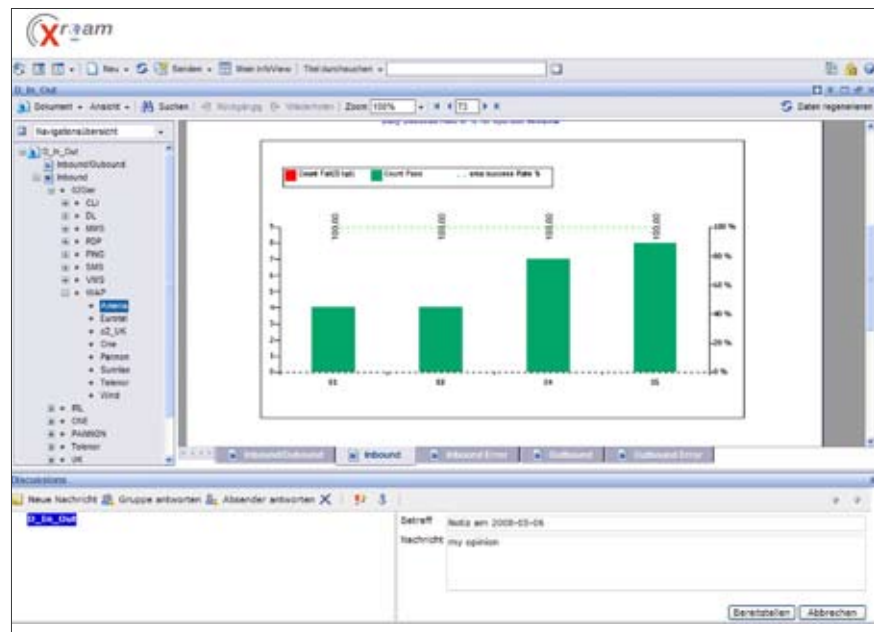
### *Collectively resolving problems with your roaming partners*

With the help of the central monitoring and reporting platform pinpointed tests can be defined and executed together with partners to assist finding and resolving specific types of problems.

Using the integration possibilities supported by Xroam, it is possible to combine quality data collected from other sources with data from Xroam. This allows for a more exhaustive and precise data analysis.

### *Online Reporting*

Up-to-date reports are always on hand through the integrated online reporting system. Furthermore reports can be custom defined, archived, exported and distributed. Discussions related to reporting information are assisted through the integrated collaboration platform.



### *Combining stationary test data with test data collected on the way*

Alongside the distributed testing possibilities, Xroam allows tests to be carried out whilst driving, travelling by ship or by rail. The goal here is to determine how the quality is affected or influenced in different situations. To handle such flexible test scenarios a range of test appliances are offered.

### *Combine billing, statistical and tracing information using our open interface*

Combine test data with data from other systems. Monitor revenue assurance for example, by connecting billing information or make drilling down to the lowest levels possible by connecting other system traces.

Pixip.net exposes an open interface for integrating numerous data types including XML or CSV over HTTP or FTP. Furthermore a central data warehouse for analysing data is also provided.