Teleca 3G Test Lab

With Teleca's concrete and huge experience in 3G testing and various testing tools, the 3G Test Lab was created to provide the key answer to the most important challenges in the growing 3G business.

How can you increase your business today?

With Teleca, the key partner from operator network to end user services.

Background

The telecommunications business sector is striving to move forward with third-generation service offerings. It is imperative for both carriers and service providers to give their subscribers a smooth transition to new 3G-based applications and services. Its also necessary to guarantee the integrity of their third-generation infrastructures and handsets.

3G needs an effective test strategy for an optimal match of mobile contents and services with the device functions.

Teleca 3G Test Lab simplifies these tedious and necessary testing activities. In complex communications structures like 3G systems, this need translates into the explicit testing of protocol stacks in hundreds of different specific and repeatable situations across a range of normal and abnormal operating conditions.

A successful transition to 3G will require the ready availability of rigorously tested, 3G-capable handsets.

Compliance testing and application testing are required using comprehensive test suites to rigorously exercise complex 3G protocol stacks.

In light of the increasing complexity of 3G systems, providers cannot afford to rely only on operational testing as they roll out new products and services. If they did, they might have handsets in the field that would not function properly as new services are added.

Handset developers can perform basic-level module tests and then progress on to integration testing. It's critical to ensure proper operation for the handset needs to be thoroughly tested as a single entity.

This scenario could make costs rise constantly and unpredictably with loss of competitive position. The only viable solution provided by Teleca is to conduct comprehensive pre-deployment testing of handsets using the pre-defined test specifications.

What is Teleca 3G Test Lab

- A laboratory to test 3G Mobile UE functions and services with specific tools and equipment (e.g. MMS Testing Tool Suite, Messaging Test Tool, Sip Test Tool, PoC Test Tool, E2E Monitoring tool: wap/sms/mms/email, streaming server, i-mode gw, network simulator: to perform automatic RF transmission/reception, content delivery management server, java download, java device testing suite, streaming).

Teleca is an international telecom and IT services company focused on R&D that develops and integrates advanced software and information technology solutions. With in-depth expertise in the latest technology and profound industrial knowledge, Teleca helps technology- and software-intensive customers worldwide to strengthen their market positions and shorten their times to market. The company has more than 3,000 employees and operations in 15 countries in Asia, Europe and North America. Teleca is quoted on the Attract40 list of the Stockholm Stock Exchange.

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MTT (Messaging Test Tool)

MMT is used to automate messaging test execution:
- Process SMS-MMS-EMS from fixed/mobile users
- Scheduling tests (for monitoring, regression and acceptance)
- Data reporting for SMS/MMS/EMS.

To process an SMS/MMS/EMS on fixed line, a hardware device is required to use the V23 (1200 bit/s) modulation protocol. Due to the incompatibility of current modems on the market, a bespoken modem has been developed which is part of the MTT. The system is modular/scalable and customisable to best fit messaging service requirements.

MTT provides a GUI allowing the following functionalities:
- Test scheduling
- Data reporting
- Connection monitoring

The Sip Test Tool (STT)

SIP (Session Initiation Protocol) is a relatively new Internet standard. It is a simple, low-level protocol for initiating interactive communication sessions between users. Such sessions include voice, video, chat, interactive games, and virtual reality. The Sip Test Tool is suited to conformance, integration and automation testing for SIP components such as user agent, Proxy, Registrar, Presence and IM server, and Peer to Peer over IP. It also provides a number of pre-defined test cases.

The PoC Test Suite

PoC (Push-To-Talk over Cellular) is an open standard for PTT (Push-To-Talk) "walkie-talkie" technology. Created by the OMA (Open Mobile Alliance) standards organisation, PoC uses VoIP technology to stream voice over data networks such as GPRS. The PoC Test Suite can be used to simulate a PoC network consisting of PoC clients/terminals/handsets both software and hardware to be tested and verified.

A Teleca End2End complete test premises including radio and core network. Operator coverage isn't necessary to run tests.
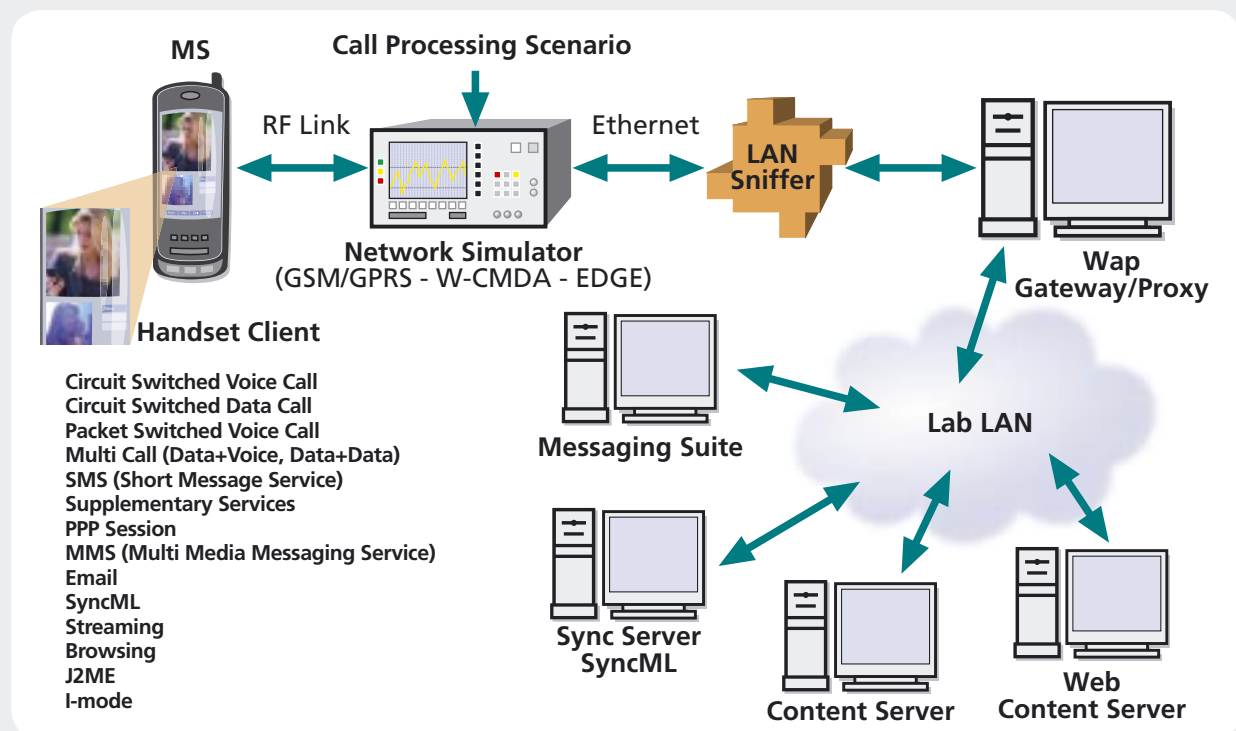
Main 3G Test Lab Activities
- Handset Certification; compliance with standards.
- Handset IOT (interoperability testing) with Application Platforms;
- IOT between different handsets

3G Testing Environment

Application test system simulator can support a range of bearers that provide necessary data communication for various wireless application testing. The internal PPP server establishes a PPP session with the connected UE and relays IP packets between the UE and network.

Why choose Teleca 3G Test Lab?

It provides a comprehensive test suite which is the result of Teleca's expertise combining our unique test strategy and our technological experience, customising solutions for you.

MS
Call Processing Scenario
RF Link
Ethernet
LAN Sniffer
Network Simulator
(GSM/GPRS - W-CMDA - EDGE)
Wap Gateway/Proxy

Handset Client

Circuit Switched Voice Call
Circuit Switched Data Call
Packet Switched Voice Call
Multi Call (Data+Voice, Data+Data)
SMS (Short Message Service)
Supplementary Services
PPP Session
MMS (Multi Media Messaging Service)
Email
SyncML
Streaming
Browsing
J2ME
I-mode

Messaging Suite
Lab LAN
Sync Server SyncML
Content Server
Web Content Server

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