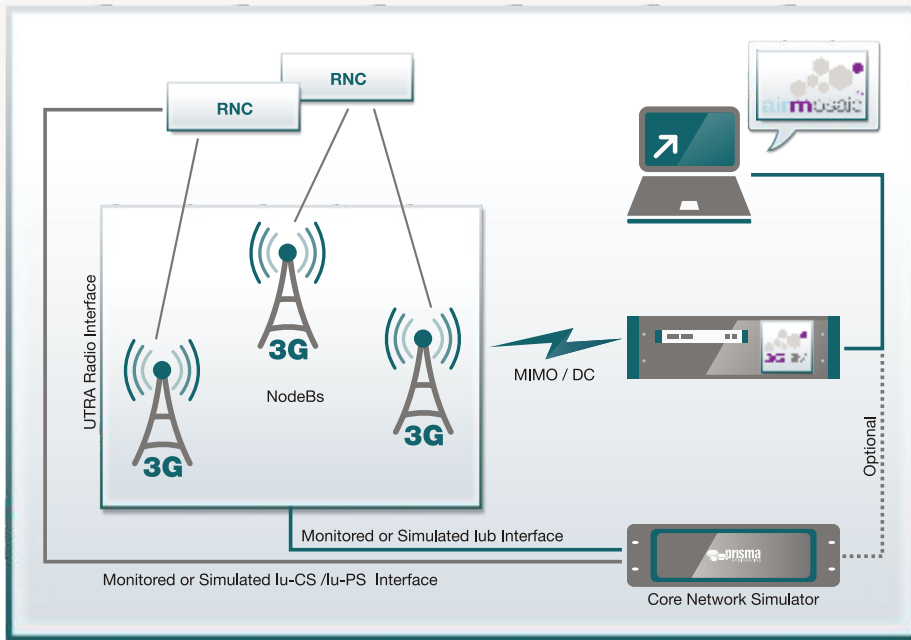**prisma**
engineering

3GSIM ™

3GSIM UMTS

multi-UE simulation over the radio interface with a single device

The revolutionary approach to perform full load and stress testing of UMTS radio carriers

The 3GSIM solution developed by PRISMA allows full loading of multiple UMTS sectors with a single device. On each sector, hundreds of simulated mobiles can concurrently generate load over the radio interface for both Circuit Switched and Packet Switched Services.

RNC
RNC
UTRA Radio Interface
3G
3G
NodeBs
3G
MIMO / DC
Optional
Monitored or Simulated Iub Interface
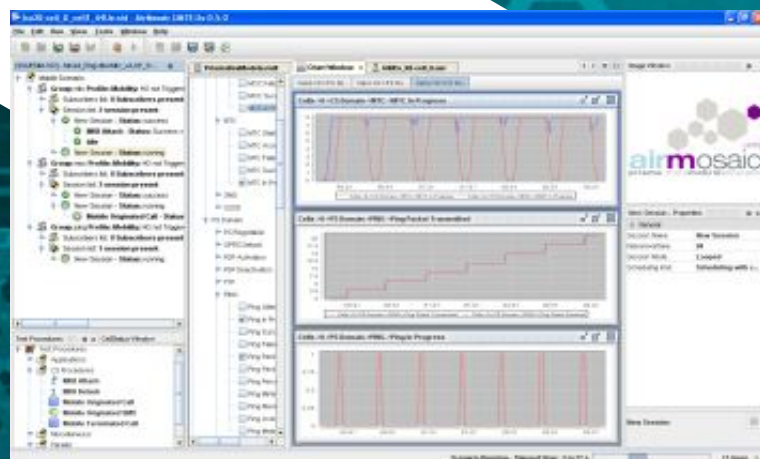Monitored or Simulated Iu-CS /Iu-PS Interface
Core Network Simulator

HSPA/HSPA+, Dual-Carrier and MIMO ready

3GSIM supports HSPA and HSPA+ standards. Appropriate radio modules allow a choice between 1900 and 2100 MHz bands. 3GSIM is Dual-Carrier and MIMO ready.
Direct baseband support can be provided via OBSAI and/or CPRI interfaces.

3GSIM radio interface testing can be complemented by Iu/Iub simulation

Detailed test options, easy operation and configuration of test scenarios

The advanced features offered by 3GSIM include detailed and integrated monitoring over radio and baseband layers. Complex test scenarios are simple to configure and execute: the intuitive Graphical User Interface *AirMosaic* provides a wide variety of combined traffic loads via scenarios associated to individual or groups of terminals. Reports rich in details are simple to outline. Specific issues can easily be associated to Devices Under Test (DUTs). Radio cabling is dramatically reduced by the use of a single device.

Testing Automation

Real World User Experience

3GSIM UMTS

QoS

Load & Stress Test

Fading

Complex test scenarios are simple to configure and execute: the intuitive Graphical User Interface AirMosaic provides a wide variety of combined traffic loads via scenarios associated to individual or groups of terminals

Verify radio performances and new features

Often UMTS Service Providers and Vendors are not able to evaluate and test new features to be rolled out in their network, due to a lack of terminals embedding the necessary capabilities. 3GSIM enables radio testing otherwise not feasible even with pre-commercial terminals.
Furthermore, integration with PRISMA's SIM Server array gives the ability to use real SIMs to verify the system behavior. Tight QoS policies can be verified in full load conditions with real user profiles.

Inter Radio Access Technology (RAT) testing

A key requirement for all 3GPP standards is the interoperability between different Radio Access Technologies (RATs).
PRISMA complies by providing multi-terminal solutions for 2G, 3G and 4G radio standards.

Integration with Iub/Iu-CS/Iu-PS simulation solutions

3GSIM can be part of a complete testing and monitoring solution if integrated with other PRISMA modules. Simulation over the radio interface can be complemented by Iub/Iu-CS/Iu-PS simulation, obtaining a complete end-to-end test platform for the UMTS network elements (NodeB, RNC).

Multi standard hardware platform

3GSIM is part of the LSU SDR Family designed by PRISMA to test radio interfaces with different standards, using a common hardware and modular software architecture. This approach will ensure an unrivaled protection of investment for testing equipment, simply because PRISMA's solution will intelligently follow Customer needs as they evolve and expand. PRISMA's LSU SDR hardware and software releases follow the ever evolving official standard versions, thus being immediately available for deployment.

Flexible hardware configurations to fit any capacity needs

3GSIM configuration is modular and easily scalable. It allows tailored solutions for any testing need and is suitable for both small and large test beds.

Integration with PRISMA's products, such as Ticket Producer for Charging Verification

Ticket Producer is a solution developed by PRISMA to avoid any risk of revenue loss on the network. It gives Mobile Service Providers the ability to verify at the signaling source of their wireless network elements the accuracy of their billing system. 3GSIM can be part of this solution, constituting the most accurate system for charging verification today.

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