

VALIDITAS TSSN: THE GPRS AND UMTS RAN SIMULATOR

Validitas TSSN (Transmission Simulation Support Node) enables mobile operators, carriers and service providers to transform existing networks into economic engines while accelerating the exploitation of their current resources and creating new profitable mobile products at the same time.

Exploit Your Current Resources

Validitas TSSN is a solution that enables you to extensively investigate your GPRS and UMTS backbone, regardless of whether you want to analyze gaps in connections, GGSN reachability, DNS server connectivity or PDP context creation for GGSNs.

With Validitas TSSN, you can test the operation of the entire packet core network from a single location. Moreover, unlike conventional testing methods, which show the status of one network element at a time, TSSN allows you to test the operation and verify the configuration of the entire packet core network with a single test.

Test-drive Future Applications

Mobile service providers, content designers and mobile operators can test-drive future applications to accelerate their time-to-market while providing the end-user with more accessible, reliable and profitable services.

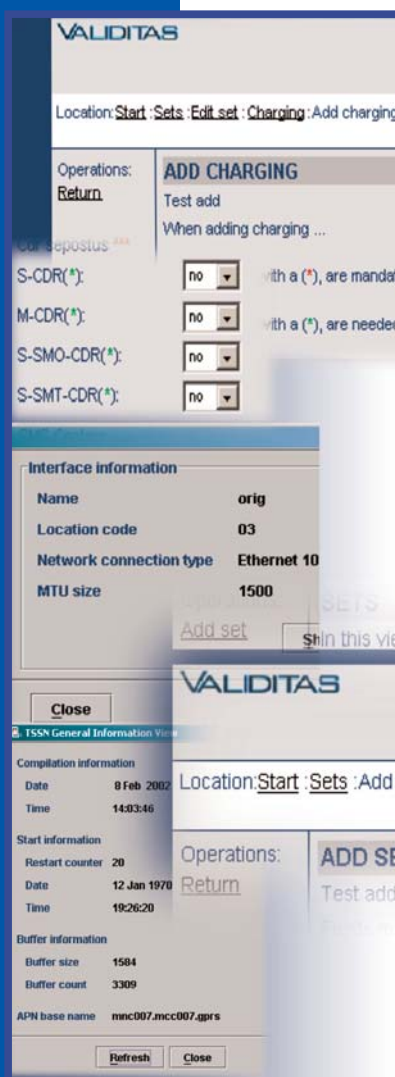
Add Value through Charging Development

The use of Validitas TSSN to develop charging gives you an opportunity to ensure that your system will perform at top efficiency to produce top profitability. In addition, by allowing you to anticipate user behaviour, Validitas TSSN gives your customers added value by supporting their business objectives.

Most importantly, you can be sure that pre-defined charging data for different customer segments and service portfolios will be created correctly for all users.

Competitiveness and Customer Focus

With TSSN you can discover new streams of revenue, secure a competitive edge and create long-lasting customer relationships through improved Quality of Service and customer satisfaction.



Validitas TSSN: GPRS and UMTS Air Interface Simulator

Patent pending.

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Features

- Test and verify the operation of an entire core network from a single location
- Locate performance bottlenecks that restrict your service delivery
- Perform load and capacity testing
- Connect to GPRS and UMTS services using your workstation
- Provide application developers and testers with a configurable air interface simulation
- Generate charging data records (CDRs) from real data passing through the network to develop, test and tune various charging schemes
- Support the development of content charging

Functional characteristics

Supports

- Up to 100 000 PDP contexts active simultaneously
- Up to 1024 GGSN's/BG's in one operators network
- Up to 10 DNS servers
- Up to 32 GGSN's per Access Point
- Up to 1024 Access Points simultaneously

Connections configured into TSSN have

- Access Point configuration
- Subscription configuration, containing IMSI, MSISDN, IMEI
- QoS and requested address configuration
- Originating network configuration

Connections configured into TSSN can have

- NAT translation of originating IP address to GGSN-provided User Equipment IP address
- NAT translation of targeted IP address into configured one
- Capacity limitation of communication path to simulate real Air Interface

Air Interface capacity limitation in GPRS mode can be done by

- Specifying the Coding Scheme and timeslot and radio block amount to uplink/downlink (These define the maximum speed and delay of communication)
- Specifying additional delays for uplink/downlink
- Specifying percentage of lost packets
- Specifying percentage of corrupted packets

Compliance with standards

- 3GPP TS 09.60 GTP across Gn and Gp interface
- Gn, Gp
- GSM 12.15 GPRS charging
- Ga

Protocol support

- IP, GTP, HTTPS



Hardware characteristics

- Processor
- 2 x Intel Pentium III 1000 MHz
- RAM
- 2048 MB
- Storage
- 2 x 40GB HDD, RAID 1+0
- CD-ROM

Interface characteristics

- Interfaces
- 10/100 TBase Ethernet, RS-232
- Standard interfaces
- 6 x 10/100 TBase Ethernet RJ45
- 1 x RS-232
- Upgrades
- Up to 10 10/100 TBase Ethernet RJ45

Power characteristics

- Two parallel used redundant power modules
- Power Fault warning
- LED and buzzer
- Voltage
- Input: 90 to 130 VAC or 180 to 260 VAC selectable
- Output: Maximum output power 230W at 30°C
- Power consumption
- ~200 W

Physical characteristics

- 4U height 19" rack mounting chassis
- Operating temperature
- 0" to 50" C
- Storage temperature
- -30" to 60" C
- Relative humidity
- 5% to 95% non-condensing

Electrical approvals

- EMI
- EN5502 Class B, ECC docket 20780 curve "B"
- Safety
- UL 1950, CSA22.2 No. 234, EN 60950

