

# SGA

## Advanced Telecommunications Systems and Services by AITIA

### Business and Intelligence

AITIA International Inc. is a dynamic, extremely adaptive company, where innovation and customer satisfaction are never out of focus. The company is situated in Budapest, Hungary. The wide product portfolio of AITIA stretches from Telecommunications Testing and Services through Agents-Based Modeling/Simulation to Voice Portal Systems.

The Telecom division of AITIA is acknowledged as the leading Hungarian provider of telecommunications network monitoring systems, core network solutions and highly reliable application gateways. We provide advanced telecommunications equipment and solutions for GSM, GPRS and UMTS mobile networks as well as for IP-based data networks.



### Product Background

Our Signaling Generator and Analyzer (SGA) product family has emerged from our self-developed telecommunications interface cards inserted into economical, industrial grade PCs which can handle complex protocols and a very large volume of data due to our highly efficient application programs.

### Network Monitoring

- **SGA-7N**

Our Signaling Network Monitoring System is an ideal tool for locating faults and frauds in mobile or fixed networks. It is ideal for complete analysis, since signaling data are stored on the probes bit-by-bit, 24/7. Main features include on-line and off-line analysis, functions covering message statistics and call data record generation, remotely controlled data filtering and capture, real time call tracing and protocol analysis.

- **SGA-GPRS**

The SGA-GPRS system monitors the operator's core links to capture, analyze and store GPRS messages, even from ciphered network links. Message data can be remotely fetched by the operator's own workstation for protocol analysis or troubleshooting.

- **SGA-XS Portable Analyzer**

SGA-XS is the ultimate portable protocol analyzer and line-tester. This compact equipment can monitor two bidirectional 2048 kbps E1 lines and be connected to a USB 2.0 port of a notebook, to enable easy protocol analysis.



**AITIA International, Inc.**

Czetz J. utca 48-50., H-1039 Budapest, Hungary  
Tel.: +36 30 748-4575, +36 1 453-8080 Fax: +36 1 453-8081  
E-mail: [info@aitia.ai](mailto:info@aitia.ai)  
[www.aitia.ai](http://www.aitia.ai)

# SGA

## Advanced Telecommunications Systems and Services by AITIA

### Roaming Services

- **SGA-Roaming Testers**

The main operating principle is simulation of subscribers using SIM cards - purely from software. The system logs and lists test results and generates reports. The product family includes our Location Update Tester, CLI Tester, SRI4SM Tester for inbound and WorldTrip Tester for outbound roaming tests.

- **SGA-Roaming Steering Service**

SGA-RSS is installed in the international signaling path. It rejects or permits the roamer to attach to the requesting foreign network, hence steering him/her towards some preferred networks.

- **SGA-Intelligent Call Assistant**

SGA-ICA is a system designed to improve call connection success rates of inbound roaming subscribers. Roamers' calls are often unsuccessful, because they dial without prefixes. SGA-ICA can correct the number and notify the roamer about the proper way of dialing.

- **SGA-Welcome and Bon-Voyage SMS Sending System**

SGA-WSMS is a system designed for sending customizable welcome text messages to incoming roamers and farewell text messages along with useful roaming information to subscribers leaving the network.

### SMS Distribution and Control

- **SGA-SMS Fraud Detection System**

The aim of SGA-SMSFD is the detection of fraudulent and illegitimate usage of SMS's and active intervention if configured so. Our analysis rule-set for message filtering has been approved by various operators.

- **SGA-Mass SMS Receiving System**

The SGA-MSMS is a mass SMS system for operators. It is able to handle several million incoming messages daily, arriving from either external or local SMSC's.

### Core and Value Added Services

- **SGA-Equipment Identity Register**

SGA-EIR is our implementation of the EIR, an essential part of GSM/UMTS networks. The unique IMEI of the handset can be classified in white, black and grey lists. Before service initiations the EIR can be interrogated about the status of the particular handset.

- **SGA-USSD Gateway**

SGA-USSD Gateway is a modular system for supporting enquiry or modification of service statuses from the user's mobile terminal. USSD-based services include micro-payment, balance enquiry, roaming service activation / deactivation, info-SMS request, call-back, and many more.

- **SGA-Missed Call Notification**

Operators can increase their revenue by reducing the number of unsuccessful calls. Nevertheless, calls can be unsuccessful because of unreachable or busy subscribers. If calls with such release causes get forwarded to SGA-MCN, the system sets up notification procedures for both the caller (SGA-NotifyMe) and the called (SGA-WhoCalled) in order to notify the parties by an SMS about "Who Called" them, or when to try calling again.

### AITIA Telecommunications References



#### AITIA International, Inc.

Czetz J. utca 48-50., H-1039 Budapest, Hungary  
Tel.: +36 30 748-4575, +36 1 453-8080 Fax: +36 1 453-8081  
E-mail: info@aitia.ai  
[www.aitia.ai](http://www.aitia.ai)