

# Welcome SMS System

## General Overview

PROTEI SMS Welcome system is a highly efficient tool for mobile operators to provide a range of services both for foreign subscribers visiting their networks and for their own subscribers when they are roaming in foreign networks.

'Welcome SMS' and 'Bon Voyage SMS' services allow subscribers to receive information about the network they have registered in, tariffs for main services in the network, useful information about the country etc.

'Welcome SMS' and 'Bon Voyage SMS' service implementation favorably differentiates mobile operators in the telecoms market and increases both the subscriber and roamer loyalty.

SMS Welcome system administrator software provides convenient and easy to use web-based tools for displaying the volume and structure of roaming traffic, helping the marketing department to work with roamers efficiently, and also for collecting information about the most visited networks etc.

Successful registration in a foreign network activates the welcome messages scenario. To detect this event a special SS7 probe is used. This device monitors SS7 links to detect messages concerning Update Location and Cancel Location MAP procedures.

The distributed architecture of PROTEI SMS Welcome allows scalability according to carrier needs and adaptation to suit customer requirements. Hardware architecture provides guaranteed reliability (the system can use Raid 1 or Raid 5 protected striped hard drives, dual CPU motherboard and dual power supply unit).

## System Features

- Monitoring of SS7 links used for connection with roaming partners in passive mode;
- Monitoring of Update Location, Cancel Location and Insert Subscriber's Data transactions in real time;
- Sending 'Welcome SMS' message sequence to visitors according to specified scenario;
- Sending 'Bon Voyage' SMS message sequence to subscribers registered in foreign networks according to specified scenario;
- Choosing the language of 'Welcome SMS' messages depending on the home country of the visitor;
- Support of 'prohibited hours'. Subscribers who have registered in the network during the 'prohibited' period will be welcomed when the period is over;

- Support of subscriber profiles. Subscriber profiles allow the service to be enabled or disabled for selected subscribers, and allows message set and message delivery scenario to be specified;
- Network 'black' list support. Subscribers who have registered in networks from the list will not receive welcome messages;
- Dynamically formed content can be inserted into messages (e.g. current exchange rate from the currency of the visitor's country to the home currency);
- Statistics collection.

## Administration and Maintenance

- Setting parameters of the home network;
- Setting parameters of the roaming partner networks;
- 'Welcome' and 'Bon Voyage' message sending scenario management;
- Subscriber profile management;
- Network 'black' list management;
- Viewing and analysis of collected statistical information;
- Tools for mass data input (VLR list for MNC etc);
- Obtaining lists of visitors registered in specified networks during a specified period;
- Alarm and Event monitoring.

The system collects the following statistical information:

- Counters and lists of 'Welcome' and 'Bon Voyage' messages that were sent sorted by countries, regions and networks;
- Number of subscribers registered in the specified networks during a specified period;
- Number of subscribers moving from one network to another during selected time intervals more than 'n' times;
- Number of roamers from specified networks during a specified period in the carrier's home network.

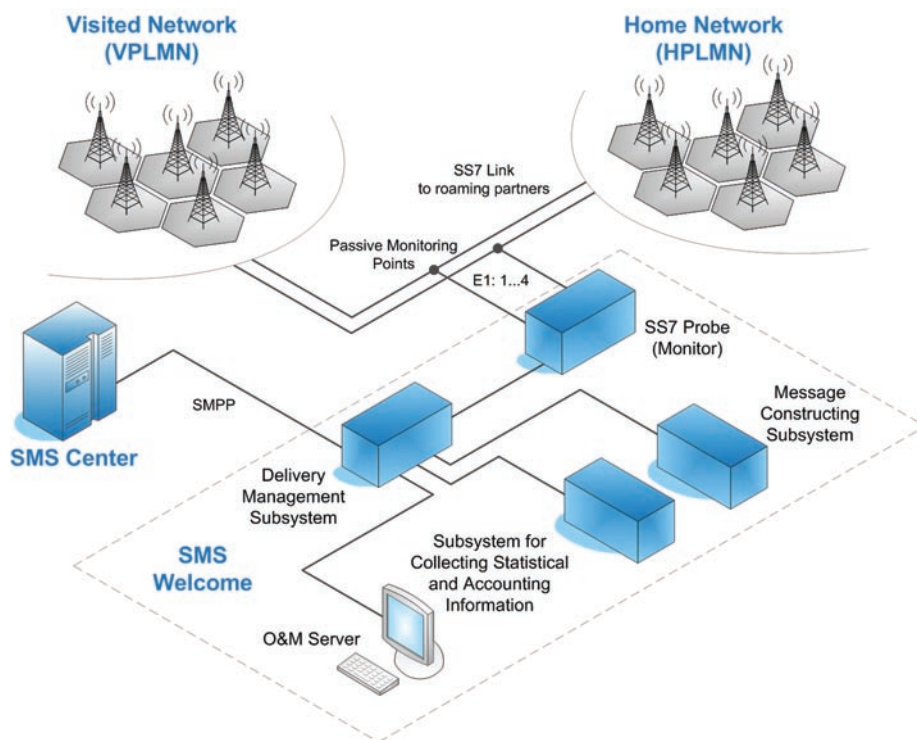
Web-based management interfaces support security policies for different categories of maintenance personnel (Administrator/ Message Manager/ Statistics Analyst).

All statistic reports can be displayed in table or graphic format.

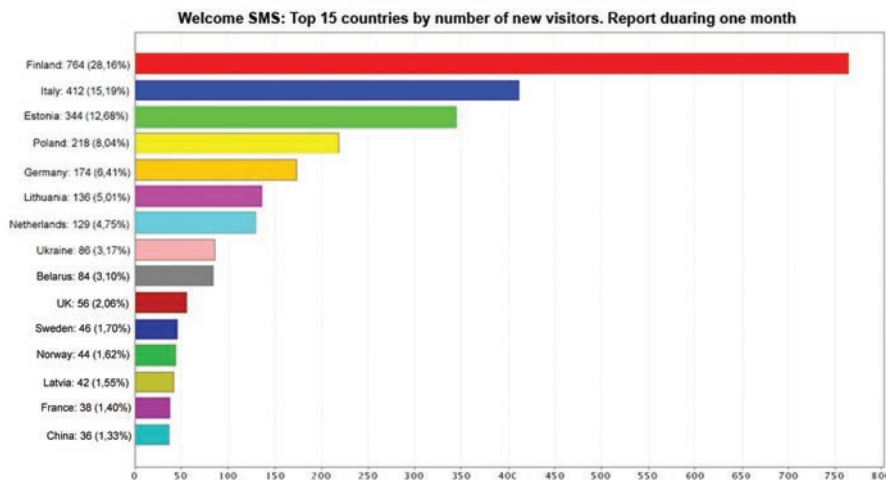
## Message Manager Facilities

- Scenario management;
- Schedules and period of activity management for each scenario;
- Message text and parameters (sender name, validity period) management;
- Message dynamic part configuration;
- VLR list configuration for each scenario;
- Subscriber's profile management;
- Network 'black' list management.

Managers can also view the collected statistical information.



Pic.1. SMS Welcome Functional Structure



Pic.2. Roaming Traffic analysis Tool

### Regional Sales Offices

#### Europe and North Africa

Na Piskach 65  
 Praha 6, CZ-160 00  
 Czech Republic  
 Tel.: +420 2 333 21 808  
 www.mobitel.cz  
 E-mail: mobitel@mobitel.cz

#### Russia, ex-USSR, MEA

60A B.Sampsonievsky  
 Business Center "Telecom SPb"  
 St.Petersburg, 194044, Russia  
 Tel.: +7 812 449 47 27  
 www.protei.com  
 E-mail: info@protei.com

### R&D Center

60A B.Sampsonievsky  
 Business Center "Telecom SPb"  
 St.Petersburg, 194044, Russia  
 Tel.: +7 812 449 47 27  
 www.protei.com  
 E-mail: info@protei.com

