

## Wireless LAN for mobile operators – Test the availability and services!



The number of worldwide Wireless LAN (WLAN) hot spots supported by the mobile network operators will grow enormously in the next few years.

The existing customer SIM card will be the preferred (and secure) identification and authentication.

SITE WLAN is testing the availability of Wireless LAN hot spots and the access.



## SIGOS offers you a fully automated Wireless LAN Test System!

### Features

- ▶ Simulation of real subscriber behaviour
- ▶ Central SIM Multiplexer: infinite number of SIM cards can be managed
- ▶ Interfaces: GSM/UPRS  $U_m$ , ISDN  $S_o$ , WLAN
- ▶ WLAN 802.11
- ▶ SSID – Network search
- ▶ WLAN authentication
- ▶ Payment/Billing
- ▶ Detailed test reports



- ▶ Search for available WLAN networks in the hot spot area
- ▶ Entering SSID of WLAN network
- ▶ Entering WEP network key
- ▶ Receiving IP address via DHCP
- ▶ Receiving DNS servers and default IP gateway from the backbone IP network
- ▶ Payment/Billing procedures

DHCP:	Dynamic host configuration protocol
DNS:	Domain name system
SSID:	Service Set Id (Identifies the WLAN network to attach)
WEP:	Wired Equivalent Privacy (Encryption/Security mechanism for WLAN)

## SITE Test System Architecture for WLAN

The diagram illustrates a network architecture for monitoring and management. At the top left, a 'SITE Central Unit' (represented by a computer monitor and tower) is connected to a 'LAN' cloud. This LAN cloud is also connected to a 'SIM Multiplexer' (represented by a server rack) at the top right. Below the LAN cloud, a dashed oval encloses three components: a 'Compact Local Unit' (a small device with an antenna), a 'GSM Probe' (a mobile phone), and a 'WLAN Probe' (a laptop). The 'Compact Local Unit' and 'GSM Probe' are connected to the LAN cloud. The 'GSM Probe' is also connected to a 'GSM' tower icon. The 'WLAN Probe' is connected to a 'WLAN' tower icon. The 'GSM' tower is connected to a 'PLMN' cloud. The 'WLAN' tower is connected to a 'HotSpot' cloud. The 'PLMN' cloud is connected to an 'Internet' cloud. The 'HotSpot' cloud is also connected to the 'Internet' cloud. The 'Internet' cloud is connected to a 'Server' (represented by a server rack) and an 'Access Point' (represented by a small device) within a light blue oval. The 'Access Point' is connected to the 'WLAN' tower icon.

- ▶ Automated testing: avoid time and money consuming manual tests
- ▶ Increase reliability of the GSM and UMTS networks → ARPU
- ▶ Increase customer satisfaction
- ▶ SQM: monitoring and measuring of service availability and quality → Ensuring SLAs with precise KPIs
- ▶ Scalable architecture: from stand alone to widely distributed systems
- ▶ Central SIM Multiplexing → No “SIM card traveling”
- ▶ Quick detection of problems due to parallel testing at any time