



## COMPANY

20 Years of History

# SITE

Testing is our Competence



GlobalRoamer



Foundation of  
SIGOS System-  
integration GmbH

Testing and integration  
support for the first  
German GSM network

Active participation in  
standardization process  
as full member of ETSI



1985

1987

1989

1990

1991

First ISDN  
communication  
system is  
established

The idea for  
GSM is born  
("Memorandum  
of Understanding")



First GSM network is  
launched in Finland ("2G")

## Keynote SIGOS 20 Years of History



Keynote SIGOS was founded under the name of SIGOS Systemintegration GmbH back in 1989. For two decades we have been supporting the telecommunications industry, including most of the World's Top Twenty operators, ensuring and improving their Quality of Service and helping them to both discover new opportunities and launch new services. In other words, we have helped our network customers to continuously improve the experience of their own customers, driving up customer satisfaction and retention.

We are doing this through providing flagship solutions for active End-to-End Testing to the telecommunications industry. Since we have dedicated ourselves totally to this speciality we always have to be top notch in what we do.

The development of our product portfolio also reflects the development of telecommunications itself: we started with testing of fixed line

services, expanded our intelligent testing solutions towards mobile telecommunications in 2G and 3G. Of course we won't stop there: we will continuously strengthen our customers' position through providing more than just basic network operator testing services. Next generation network including VoIP quality testing, revenue assurance and Drive Service Testing are good examples of solutions that go beyond the verification of standard services.

Today, Keynote SIGOS offers the most thorough active End-to-End Testing solutions in the market.

We have a clear business focus, close co-operation with our customer base and an established and experienced team. Digital mobile technology is a relatively young business but we can proudly look back on two decades of success.





SITE End-to-End testing environment for fixed line networks is born

SIGOS plans a GSM core network

SITE DECT for type approval tests introduced

SITE ISUP for conformance test for C7 networks

1992

1993

1994

1995

1996

SMS is introduced  
World Wide Web (www) is born

First commercial website



VoIP in its infancy is used for the first time

GPRS / EDGE ("2.5G")  
ADSL allows high-speed communication over phone lines

## ■ SITE Test System

### Unique Test Platform for Various Technologies

Whether you require a stand-alone test solution or you wish to span your testing facilities around the globe at multiple locations: from Keynote SIGOS solutions you can always expect scalability, integrity and great expertise reflected in our solutions and professional services.

With the Keynote SIGOS SITE Test System – comprising sophisticated hardware and software solutions – network operators are enabled to host and work with their own testing facilities. Key here is the ability to easily integrate into the existing network infrastructure realities. Interfaces to complementary solutions, e.g. monitoring systems, are provided so that SITE can be exactly matched to your specific requirements.

The SITE Test System's architecture is completely modular. Only the modules that are needed for the given tasks needs to be purchased.

#### Your Own Scalable and Highly Flexible Test Platform

##### End-to-End Service Quality Testing

- ▶ Speech / Data / Messaging
- ▶ Roaming (Inbound / Outbound)
- ▶ Drive Service Testing
- ▶ Handset Simulation

##### Revenue Assurance

- ▶ Billing and Rating Verification
- ▶ CDR Comparison
- ▶ SIM Box Detection

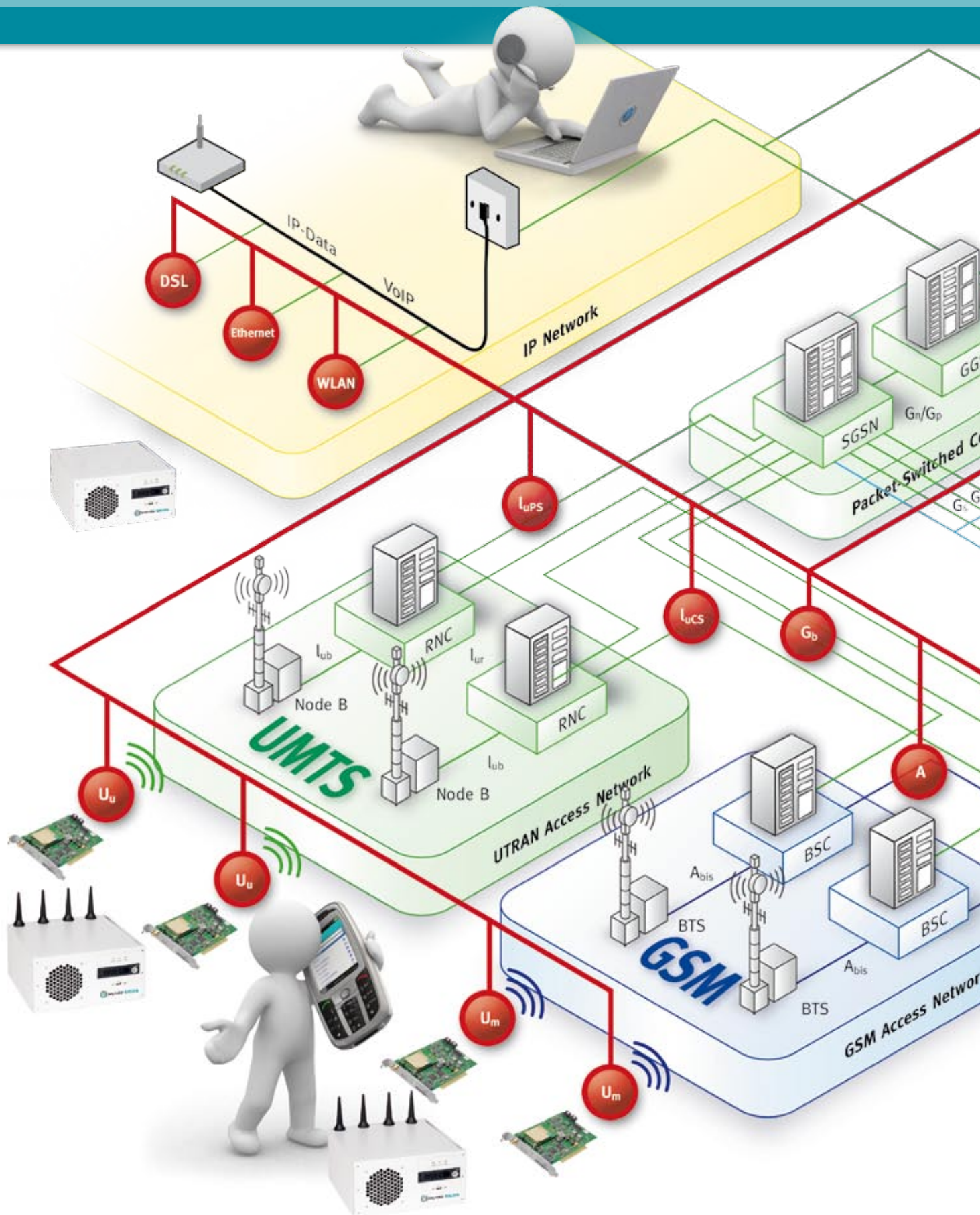
##### Protocol Testing

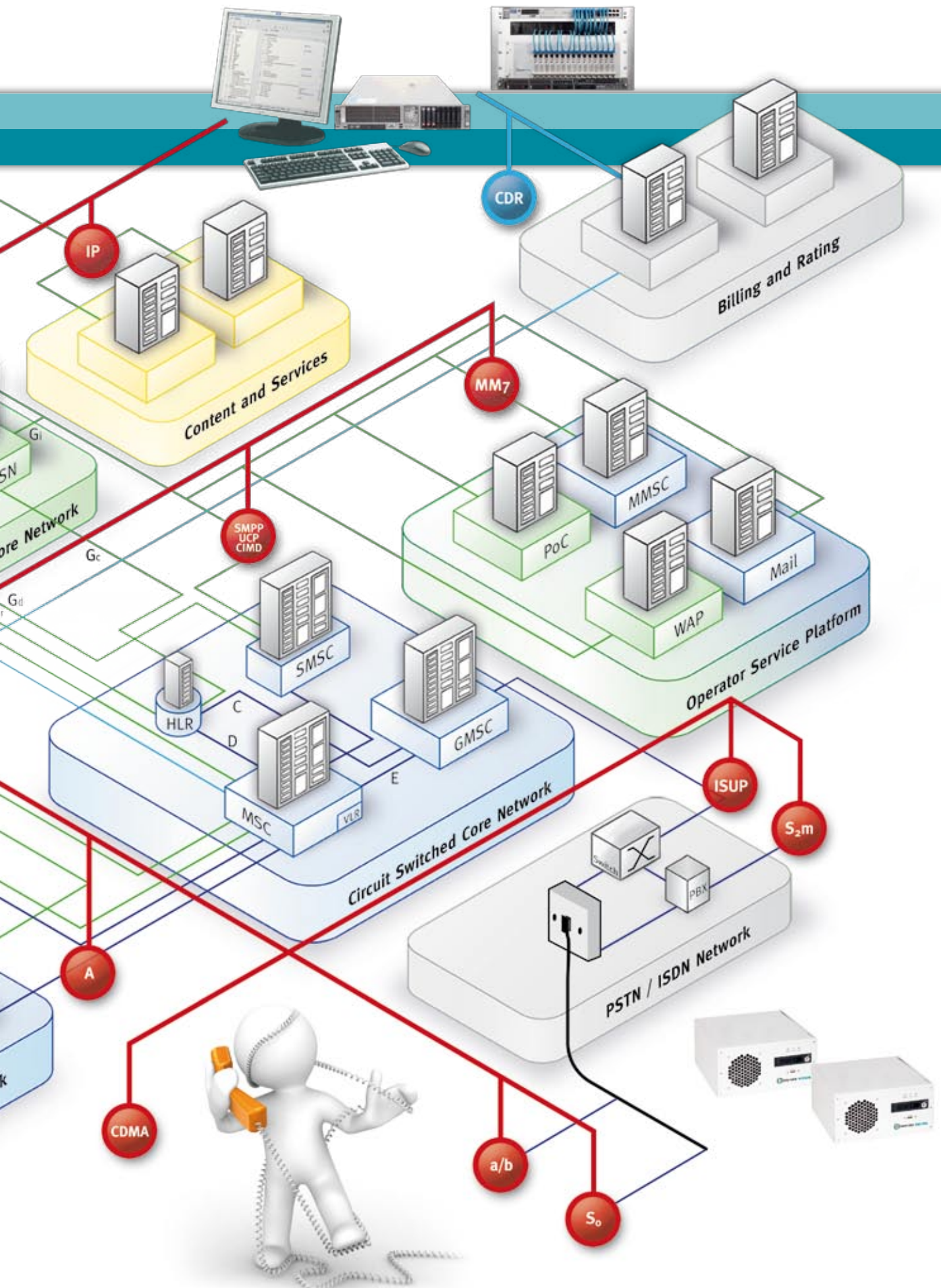
- ▶ Core Network Test Environment
- ▶ Layer 3 Trace Analyses
- ▶ IN / CAMEL Test Environment

##### Departments which benefit from SITE:

- ▶ Service Quality Management
- ▶ Roaming Department
- ▶ Revenue Assurance
- ▶ Billing Department
- ▶ O&M Department
- ▶ Core Network
- ▶ Access Network
- ▶ Service Development
- ▶ Marketing
- ▶ Laboratory

# Various Technologies – ONE Test System: **SITE**





SITE Testing Environment now includes mobile network End-to-End testing



SIGOS provides test and integration support to all German GSM networks



GlobalRoamer goes online

Launch of BlackBerry, PoC, Video Testing



1997

2000

2001

2002

2005



3G starts: First CDMA2000 commercial system is launched in South Korea

First commercial UMTS network is launched in Norway

1 Billion of mobile phone subscribers world-wide

HSDPA is introduced

## ■ GlobalRoamer

### The Most Extensive World-Wide Test System for Outbound Roaming – Fully Managed by Keynote SIGOS

With GlobalRoamer, Keynote SIGOS offers the most extensive infrastructure for automated outbound roaming testing world-wide. We provide our customers with an extensive network of testing facilities around the globe, hosted by Keynote SIGOS. GlobalRoamer customers can use this sophisticated testing infrastructure through a web based user interface.

All that is required is a web browser and access to the internet. Simply log on with your password and set up your test schedules without worrying about a thing. However, Keynote SIGOS can also provide a fully managed roaming test service so that all that you really need to do is look at the results.

#### GlobalRoamer provides automated, pro-active testing of roaming services

- ▶ Pro-active monitoring assures optimal service for your outbound roamers
- ▶ Continuous network surveillance with graphical reports
- ▶ Predefined management reports based on the most important KPIs
- ▶ Ultimate flexibility in report generation and threshold setting
- ▶ Tailored service view sorted by geography, operator and service
- ▶ Automated e-mail alarms directly to the technical engineer
- ▶ Automated e-mail reports
- ▶ **Over 250 networks can be tested today and new locations are added continuously**

Keynote acquires SIGOS GmbH

SITE provides test environment for VoIP, ADSL, DSL, HSUPA

Launch of Billing Verification and Drive Service Test

Keynote SIGOS celebrates its 20 Years' Anniversary

2006

2007

2008



2009

VoIP is now established as communications platform

HSUPA is introduced

HSPA+ is introduced  
Mobile Connections hit 4 Billions world-wide



Beginning of LTE era ("4G")

## Professional Services

### Solution Consulting, Managed Services and More – Flexible and Customizable

We at Keynote SIGOS are always there for our customers: in each phase of your testing requirements we provide you with well experienced and specifically trained experts, whether it be for project implementation, maintenance, managed services, training or solution consulting. All our Professional Services can be customized to your specific needs.

For instance, with different levels of Managed Services, we can help our customers with the management, operation and administration of tests. Our services are completely customizable and scalable: we are handling complete SITE systems for customers as well as we manage small occasional testing projects. Just as you please.

Project Implementation

Maintenance

Hosted System

Training

Managed Services

Solution Consulting

## Professional Services

Some of our world-wide customers

