

Technical IT and Telecommunication Core Competencies :

1. Mobile network

- **Mobile Access Networks**
- **Small Cells**
- **Wifi Offload**
- **Broadband Networks**
- **Mobile-Network planning, capacity analysis and performance evaluation**
- **Preparation of Bids**
- **Radio network planning**
- **Siemens GSM D900 SSS 1.2 bis LM3.0 und SR4.0**
- **Emergency und Safeguarding Procedures**
- **Data services**
- **Mobile network structures**
- **Base Station Systems**
- **Analysis of A-Interface, Signaling Procedures, Location Update etc.**
- **Traffic statistics and performance evaluation**
- **Function and interworking of HLR and VLR**
- **Installation and network integration procedures**

2. Broadband

2.1 Products

- **Next Generation Local Switch**
- **Siemens Internode, SURPASS**
- **Quality of Service for Broadband networks, ATM Switches / Layer3 Routers**
- **Router / Bridges**
- **Layer 3 Switches / TAG Switching**
- **Layer 3 Router / ATM Switching / Fast Ethernet / FDDI / SMDS**
- **Virtual Trunking**

2.2 Access

- **X-DSL, T-DSL, ADSL**

2.3 Protocols

- **ATM / FrameRelay / IPv4 / IPv6 / IP Derivate**
- **Network structures**
- **B-ISDN**
- **IP over ATM**
- **PNNI**
- **Routing**
- **SIP**
- **H.323**
- **MGCP**

2.4 Markets

- **Strategies to continue the development of routers and ATM and broadband switches**
- **Competitors in the LAN and WAN market and available products**

3. Private Branch Exchanges

3.1 Products

- **SDE (Siemens Small digital exchange) SW Version 6 to 10 (Small Digital Exchange, public private branch exchange up to 5000 subscribers**
- **HICOM (Siemens private branch exchange)**
- **HIPATH (Siemens IP based private branch exchange)**

3.2 Protocols

- **QSIG - Interface (Transparent Signalling for PABX)**
- **ISDN, DSS1**
- **POTS , country specific**
- **#7 signaling**
- **MFCR2, country specific**

3.3 Market

- **Impacts of the ASP model for private branch exchange vendors (evaluation for the board of Siemens)**

3.4 Hardware

- **HW / FW Dependencies for all SDE Softwareversions**

4. Narrow band network

4.1 Products

- **EWSD V4.2 bis V15**
- **ADSS (Advanced Digital Subscriber Services)**
- **Line Trunk Group + SW - Loadtypes**
- **Important new features (Delta between different EWSD-SW Versions)**
- **SLMA /SLMD (Subscriber Line Interface Analog / Digital)**
- **Quality of Service (QoS)**
- **Feature for the complete Siemens narrow band system V4.2 bis V15**
- **Installation and network integration Know How for especially Siemens switches**
- **Geocentrex**

4.2 Protocols

- **ISDN / ISUP**
- **PINT - Protocols**
- **CLIP in fixed network**
- **MFCR2 country specific**
- **SSNC, #7-Switch, #7 Routing**
- **Network protocol analysis with K1103, K1197**

4.3 Peripheral networks

- **Customer specific Softwaresubsystems**

- **SSP for Intelligent Networks**
- **Intelligent Networks**
- **ISTS (Protocol Tester for all Signalings)**
- **IP/SN (Intelligent Peripheral)**
- **ODC (Optical fiber distributed system**
- **Voxportal (Voice connection for Internetportals)**
- **Lawful Interception**

4.4 Central Components of Siemens networks

- **Core Innovation EWSD (TCP/IP,ATM , SSNC etc.)**
- **CP112 / CP113, Siemens Core telecommunication processor**
- **Memory (CMY/LMY - Memory for Main Processor)**
- **Tracing Tools**

4.5 Specific Hardware

- **Siemens HiA ...**
- **HW / FW Dependencies for all EWSD Softwareversions**
- **SMT1D-N (Transmission Interface)**
- **Digital Line Unit DLU (DLUA,DLUB,DLUD,DLUG)**
- **PHI/LTG (Packet Handler Interface)**

4.6 Market Analysis

- **Network structures , Performance analysis**
- **Competitors in the market and their products**
- **Products and feature of different vendors**

5. Operator Places

- **ADMOSS (Operator PC, see e.g. Telegate number inquiries)**

6. Access

- **V5.2 / V5.1 (Interface for Access Products)**
- **Access-Products e.g. FASTLINK**
- **DECTLINK**

7. Operation und Maintenance

- **Operator - Know-How, Strategies for operators**
- **Liberalisation of telecommunication - market**
- **Traffic statistics and network performance**
- **Node Commander (central O&M Terminal)**
- **Data Communication Processor (central O&M Terminal, Siemens Nixdorf Machine)**
- **SPOTS (Tool for traffic analysis and performance evaluation)**
- **NETCAP (Automatic Network Control Mechanisms, Overload handling mechanisms)**
- **ILTF (Integrated Line Test Functionality)**
- **Line Test PC (Subscriber Line Testing)**
- **Complete overview Siemens database for EWSD V4.2 to V14**
- **AMA / Billing**
- **Q3 Network Management**

8. IT / IP network and applications

- **Application Service Provider business model and voice impacts**
- **Voice über IP**
- **Telemedia (MPEG2 etc.)**
- **E - Commerce, CRM, SCM**
- **IPv4, IPv6 strength and weaknesses**
- **OSPF / BGP**
- **ATM - Protocols**