LTE– BUSINESS PERSPECTIVES AND THE TECHNOLOGY

"The training described LTE both from technical and business perspectives and was very appreciated by the whole team. The trainer was highly skilled in both mobile and data networks design. I would attend a similar course from Widermind if the opportunity arose."

– Genrong Li, Technical Sales
Business Sales Support Mobile, Tele2 AB

Course Description

Information and Communications Technologies (ICT) are converging around the Internet Protocol. Technical achievements on all levels of HW and SW have fueled the transition towards a common technology base. All players in the global arena are strongly committed to this converged technology.

Wireline and Mobile Communications are no exceptions to this trend. Internet protocol technology was embraced at an early stage, and the convergence towards Internet based standards have been decisively driven by the industry.

Key players in the public communications industry are important contributors to new converged technologies, assuring that IP technology will develop to meet and exceed public operator expectations on all infrastructure levels: Transport, Network and Services.

This course gives a high level technical description of the ICT industry in transition. It explains the technological expectations and the reasons behind the convergence and elaborates on the major market forces and business opportunities that are shaping the industry.

Whether the participants are involved in decision making related to IT, Mobile or Wireline Telecoms, Internet applications or Broadband access and Transport systems, they will find the 'missing links' and gain a broader understanding of the ICT industry.

The course is suitable for both technical and non technical management staff. Traffic cases and real-life examples are presented, helping the participants to identify, discuss and analyze new important business opportunities. The focus is set on achieving broad business- and technological perspectives, combined with specific descriptions of available solution portfolios.

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Content

Trends and expectations on the Industry

- Consumer and Business customer trends and expectations
- Public operator needs and expectations
- Content, media- and service provider trends and expectations
- Regulatory requirements and expectations in society

Technological achievements leading to convergence

- Development of Chip-sets and devices
- Advanced radio and transceiver developments
- The Internet protocol and its toolkit
- Software development, SDK Eco systems and the Web 2.0.

Network evolution from Telephony to Internet standards

- What is the main difference between telephony and data technologies?
- Why is traditional technology insufficient?
- What's special with 'next generation' systems?
- How and where is convergence happening?
- What is the role of the Internet protocol suite?
- How are operators positioned for the future?

The mobile radio revolutions

- How GSM started: technology, architectures and user expectations
- Impact from the Internet: complementing GSM for Internet access
- UMTS: evolving from telephony centric to mobile broadband access
- LTE and 4G: setting the new targets on mobile broadband

Mobile system architectures

- Modern architecture for the mobile network, access and core
- The radio access network: architecture and product positioning
- HSPA, lower cost and higher performance than previous technologies
- Soft Switch, making mobile telephony cost efficient and future proof
- Core network systems for the internet access, packet switched domain
- Charging, quality control and service access, faster, better and flexible
- User cases, implementations, Push/QoS/3rd Party content/Billing

Wireline broadband access and transport network systems

- The shift from ATM/SDH towards IP/Gigabit Ethernet
- The entrance of Gigabit Ethernet on the transport domain
- LAN, Metro LAN, Backhaul and Back Bone network topologies
  'One network fits all' - Traffic separation and prioritization in IP based transport
- Portfolio positioning in the broadband area
- IPTV, IP telephony, Internet access. Typical Triple play success story

Learning objectives

Commercial and technical perspectives

- The major market drivers and players
- The shifting business models in our industry
- The important standardization forums and information sources
- The regulatory approaches in EU and elsewhere

Technological evolution and enabling innovations

- The timeline for important datacom and telecom innovations

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- Principal differences between circuit switching and packet switching
- The internet protocol model and its core functions
- The end-to-end connectivity model across the internet
- Existing converged products and services

The mobile radio access

- The different generations of mobile radio access
- Principal differences between TDMA and CDMA radio
- Exemplify implementations using different radio technologies
- Differences between WLAN and WCDMA coverage and capacity
- Explain the principles for the new 4G radio access (LTE)
- List the femtocell opportunities and integration with 3G/4G services

3G and 4G solution portfolios

- Draw a high level picture of the 3G system architecture
- Point out the recent changes due to HSPA introduction
- List the market expectations on 4G services
- Explain how the MSS delivers cost efficiency and flexibility
- Explain the purpose of IMS and its importance in a 4G/LTE solution
- Draw a connection between a mobile and an internet web server
- List the systems involved in charging, security and quality of service
- Explain which 3G systems are upgradable to LTE/4G
- List new business customer solutions that are possible to deliver with 3G/4G
- Describe the fallback options for SMS and CS voice over LTE/4G

The broadband and transport solution portfolios

- Explain why ATM/SDH is abandoned in favor of IP/Ethernet
- List some implementations that are in the middle of this transition

- Explain how IP and Ethernet deliver more than 'best effort' services
- Draw a typical transport infrastructure from access to the internet
- List the nodes used in broadband access and backbone networks
- List the available fiber and radio transmission solutions

Target audience

The target audience for this course is: Strategic product and services managers, Business and Application developers, System and Solutions architects, IT managers, Regulator authorities and ICT financial investors.

Pre-requisites

The participants should have an understanding for, and/or working experience from WCDMA and GSM Systems.

Course length

3 days

Widermind communicates the knowledge you need to develop and implement new technologies for current and future network operations. Our clients are telecom operators, system integrators, system suppliers and consultancy firms.

Based in Stockholm, Sweden, we develop courses backed by a comprehensive network of associates. Our instructors employ technical and pedagogical skills that have made Widermind training well known and appreciated as one of the best services in the field.

You are warm welcome to contact our representatives at:

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