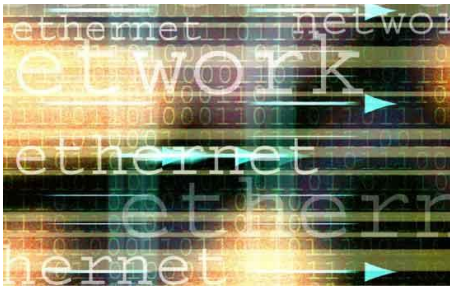# Memogram AB

IP based transport networks, 2 days

Course description

The migration from ATM/SDH transport technology to IP/Ethernet based technologies is now happening on a broad scale, worldwide. Including migration of mobile backhaul transmissions. The main drivers for this evolution is the promised cost efficiency through convergence of multiple service networks, into a single multiservice transmission network.

However, a multiservice transmission network should meet the –diverse- requirements from multiple services, both real time and non-real time such. That puts a number of QoS related requirements on the new transport infrastructure.

The course presents the relevant transport network architectures from 'last mile' backhaul transmission to the gigabit backbone core transmission. The combinations of MPLS/IP/Ethernet over radio links, copper and fibre transmission media are explored and exemplified. Additional focus is given to traffic separation and prioritization mechanisms in IP transport networks. The requirements from various traffic types (real time VoIP, internet browsing, IPTV, video streaming, signalling etc.) are presented and mapped onto MPLS/IP and Ethernet levels and their service classifications.

Course Content

- IP Transport networks, general considerations
- Internet Protocol routing, IPv4/v6 addressing and DSCP service differentiation
- Ethernet switching, addressing, VLAN tagging and prioritization
- MPLS switching and VPN implementation options
- Queuing and scheduling configuration options in IP based transport
- Redundancy and fault recovery/rerouting in IP networks
- Network Synchronisation requirement for IP/Ethernet based transport networks, TN

- Layer 2 Ethernet link aggregation
- Layer 1 Ethernet options with Radio Link, Fibre and copper media
- Mobile backhaul TN design
- Transportation of GSM/UMTS traffic and signalling on IP/Ethernet
- Mapping of GSM/UMTS QoS classes on IP/Ethernet
- Protocol support for IP based interfaces in BSS/UTRAN
- Radio Link, RL, with Protected and unprotected Ethernet configurations
- Ethernet SDH/PDH configurations
- Performance management principles
- Multiservice IP/MPLS Back Bone TN

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Who should attend

This course is attended by radio engineers, transmission planners, project managers and O&M support staff who require a better understanding on the quality behaviour, the characteristics and the design principles of IP/Ethernet based transport networks.

Instructor on this course is: Thomas Giarimi, Senior Consultant

Prerequisites

Familiar with mobile networks and the internet protocol suite

Duration

2 days full time.

Ordering information

Request a quote by emailing course ID '2245' to:

admin@memogram.com