GPRS-EDGE
NCN-EG-02
Course Outline for GPRS-EDGE
Course Description:

2G and GPRS/EDGE Fundamentals, Architecture, Working principle and Implementation and maintenance of the data network. This training will help to gain an excellent knowledge on data network and its various divisions such as, Radio Network, Transmission and Core Network. On other hand, the audience may also get adequate knowledge related to Network planning and marketing associated with GPRS/EDGE network

Target Audience:

The target audience for this course includes:

- Professionals with hands on experience on GSM network
- Application Developers

Delivery Method:

The delivery will be instructor-led classroom training with extensive practical case studies, interactive discussions and Q&A / quiz sessions

Course Material:

The course material will be in the form of hardcopy notes

Pre-requisites:

The participants are expected to have prior knowledge of:

- Basic knowledge of GSM Networks

Duration: **2 Days**
Course Content:

Day 1:

GSM History and Architecture

- GSM evolution
- Network Architecture
- Difference between CS and PS network
- GSM entities HLR, AUC, VLR, EIR
- Radio network (BTS and BSC nodes)
- Circuit switched subsystem (MSC)
- Packet switching (SGSN and GGSN)

Throughput improvement techniques for various data network

- Adaptive digital modulation
- Adaptive coding
- Hybrid ARQ
- Adaptive power control
- OVSF during DS-SS

Data call in GSM network

- Additional requirements for data network
- GPRS architecture
- Modulation techniques in GPRS and EDGE
- Different coding schemes

Registration process in GPRS

- GPRS attach/detach
- PDP context activation
- Location area update
- SGSN functions

Channels

- Physical and Logical channels
- Signalling channel in GSM and GPRS
- Traffic channels for CS and PS
Day 2

Network report analysis

- Analysis of BSC, SGSN and GGSN Reports
- Analysis of Radio Network Reports
- KPI of data network

GPRS classes, interface and protocol

- Class A, Class B and Class C hardware
- Gb and Gn interfaces
- IP, Frame relay and GTP

GPRS Traffic planning and Management

- Erlang theory and traffic calculation
- Time Slot management in GSM Carrier
- Practical cases and various live network scenarios
- Value chain in GPRS system

Operation and maintenance of GPRS network

- GSM standards and factor impacting the speed for the GPRS/EDGE
- Trouble shooting GPRS/EDGE nodes
- Failure Causes of GPRS/EDGE which comes on Handset

GPRS/EDGE applications and Indian market study

- EDGE handsets and NGN services
- Challenges in market
- Impact of 3G over EDGE
- Drawback for GSM operators to provide mobile broadband
Contact Us

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