


Vendor: .iSPLOTY	System: 
Level: Intermediate	Duration: 2 days
Course Title: <h1>5G System Overview</h1>	

Description:

This training is an excellent choice for engineers who have already gained experience with previous generations of mobile technology and begun to work with the new 5G system. Training maintains an appropriate balance between the topics related to 5G CN, NG-RAN (radio part) and 5G based teleservices, giving the opportunity to understand the system as a whole. This training also provides required background knowledge needed to fully participate in more advanced training sessions focused on particular subsystem or network element issues.

Target audience:

The course is intended for 5G system technical staff and their management.

Contents:

Introduction

3GPP mobile network evolution, 5G system performance, use cases

Architecture

Core Network architecture: AMF, SMF, UPF, UDM, AUSF, PCF, AF, interfaces; Radio Access architecture: gNB, ng-eNB, eNB, X2 and Xn interfaces, Multi-RAT Dual Connectivity (MR-DC), network slicing, network function virtualisation, geographical network structure, Multi-Access Edge Computing (MEC), subscriber related identities, roaming

PDU sessions & QoS

PDU sessions and QoS flows, PDU session types, QoS parameters, reflective QoS

Traffic Cases

NAS and RRC protocol states, Registration, PDU session establishment, QoS flow establishment / PDU session modification, Radio Connection Release, Service Request, Paging, mobility procedures, interworking with LTE and WiFi

Security

User identity confidentiality; Authentication and Key Agreement (AKA); NAS, RRC and user data ciphering and integrity protection, mobile equipment identification

NG-RAN

CP-OFDMA, frame structure, MIMO enhancements, higher order modulation, link adaptation, , frequency bands and bandwidths, RAN centralisation, inter-node coordination, Carrier Aggregation (CA), Dual Connectivity (DC)

Multi-RAT Dual Connectivity

MR-DC types: NR-DC, EN-DC, NGEN-DC, NE-DC, bearer types, traffic cases

Prerequisites:

The participants should have general technical telecommunications/computer science knowledge on a degree level. Knowledge about LTE is very useful.

Training method:

Lectures and multimedia presentations.