Deep dive into 5G Open Ran Technology

5G Open Ran course

The objective of this course is to provide a technical overview of Open RAN and specifically O-RAN from the O-RAN Alliance.

We start from understanding Types of Ran existing, DRAN, VRAN, CRAN, then we focus on the ecosystem, and drivers of Open Ran before deeping dive into the O-RAN architecture and terminology, central functions and concepts like SMO, Non-RT RAN Intelligent Controller, Near-RT RAN Intelligent Controller, O-CU, O-DU, O-RU and O-Cloud.

Relevant interfaces are described, with a focus on Rakuten and Dish Operators which are early adopter of Open Ran Architecture

In order for the attendant to fully understand the content of this topic and to gain a further insight into the 5G RAN design, it is also recommended to have prior attended following courses with 5GWorldPro

- **5G New Radio Advanced Training**

Who would benefit:

This course is designed for technical and non-technical engineers that have a basic knowledge of 5G NG-RAN architecture and needing a solid foundation for understanding the principles of 5G Open Ran technology

Training description

1) Introduction to Open RAN

1. What is Open RAN
2. Understanding Classical and Distributed RAN (D-RAN)
3. Equipments from traditional vendors (BBU & Boards)
4. C-RAN or Centralised RAN)
5. V-RAN or Virtualizes RAN
6. Evolution towards Open RAN

2) Open RAN groups and ecosystem

1. Open RAN Groups & Initiatives
2. Telecom Infra Project
3. ORAN Alliance
4. Open Ran players & Ecosystem
5. Open Ran Trials & deployments

3) Deep dive into O-RAN Architecutre

1. RU/CU/DU Split
2. Oran Architecture
3. Service Management and Orchestration Framework (SMO)
4. RAN Intelligent Controller (RIC)
5. O-Cloud, O-CU, O-DU, O-RU

4) O-RAN Split Options (8 options)

1- Different RAN split options
2- Which Option split to consider
3- Relevant interfaces in O-RAN architecture

5) Open Ran drivers, challenges & Use cases

1. Open RAN drivers
2. Open RAN challenges
3. The 7 benefits of Open ran
4. Open RAN Use cases (Trafic steering, Qos Optimization, Massive Mimo Optimization)

6) Focus on Rakuten & Dish Open Ran deployments

1. New Telco Models

2. Cloud service models and focus on Telco

3. Focus on Rakuten 5G Open Ran Deployment

4. Focus on in Dish Network 5G Open Ran