5G Basics

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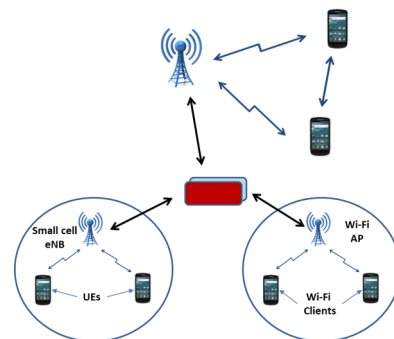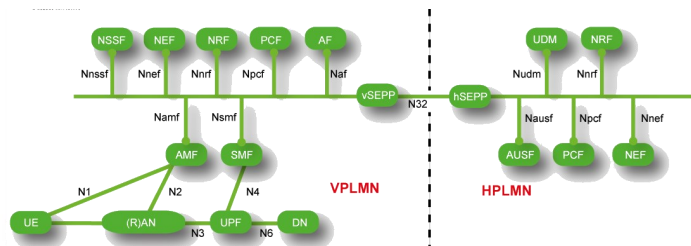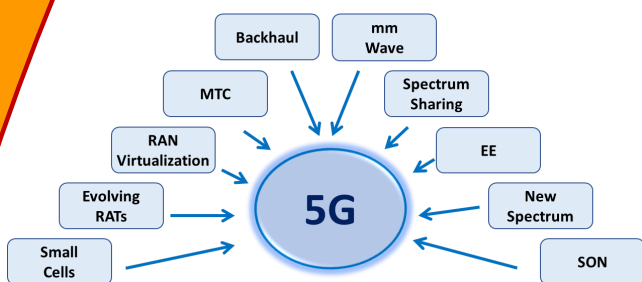
5G is a set of evolved mobile wireless network technologies. 5G provides ability to share data any where, anytime by anyone. The aim of 5G is to build on the maturity that telecom systems have already reached; 5G will bring the evolved versions of existing radio-access, cloud and core technologies together to cater for more traffic, more devices and more types of devices, with different operating requirements and different use cases.
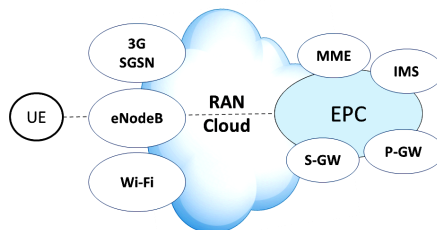
5G aims to significantly improve parameters like Traffic capacity, Data Throughput, Data Integrity, Latency Energy Consumption by deploying technologies like small cells, Machine Type Communications, RAN Virtualization, Millimetric RATs etc.

This course is designed to help participants to have a clear knowledge on 5G mobile communications and will be useful for all 5G stakeholders in taking up tasks / role in this fast-evolving arena including taking up advanced level training in one or several 5G technologies

Course Contents

- **5G – Introduction, Driving factors**
  - Historical trend of wireless communications
  - 5G Architecture
- **5G Data Network**
  - IOT and context awareness
  - Re-configuring Network and Virtualization support
  - Mobility
  - Quality of Service Control
- **5G – Small cells**
  - Smalls cell – Introduction
  - Multi antenna Techniques
  - Mobile Data demand vs capacity
  - Small cell challenges
- **Next Generation Networks**
  - Cooperative Diversity, Relaying Strategies
  - Performance Evaluation
- **Mobile Clouds**
  - Mobile cloud – Introduction
  - Mobile cloud enablers
- **5G – Cognitive radios**
  - Cognitive Radio – Introduction
  - Spectrum Optimization
  - Carrier aggregation
  - Energy efficiency
- **5G – Wireless Spectrum Optimization**
  - Spectrum Management
  - White Space Technology and its Applications

Course Contents .. contd

- **5G – Broadcast, Broadband**
  - BC-BB Architecture and convergence
- **5G – Security**
  - Security issues, Challenges in UE, Access / Core Networks and PDNs
- **5G – SON**
  - Need for SON
  - SON Architecture

Training Duration

- 40 hrs.

For more details :

- Visit our website : https://www.vigven.com/browse/training-programs
- Or Post a message to : training@vigven.com

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