



Training course outline

ITU and Advanced Level Telecom Training Centre

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| Title | 5G Mobile data – The Beginning of AI Smart Society |
| Modality | Online Instructor Led |
| Dates | 12-23 September 2022 |
| Duration | 2 Weeks |
| Registration deadline | 11 September 2022 |
| Training fees | 100 USD per participant |
| Description | This online training course aims to support participants to understand the concepts of ubiquitous connectivity according to the target set by the Broadband Commission for Sustainable Development 2025, key considerations of the current and future ecosystem of the mobile data including 5G Mobile data core/aggregation/access network, technological development of 3GPP and non 3GPP and key features of 5G new radio. |
| Code | 22OI27827ASP-E |

1.LEARNING OBJECTIVES

This online training course aims to equip participants with an understanding of:

- AI Smart Society in the digital economy including telecom networks, digital governments, industry verticals, platforms, and devices.
- Policy and regulatory ecosystem necessary to support national of AI Smart Society planning and implementation;
- Smart Society concept, smart power requirements etc, ,Industry 4.0;
- Virtualisation (SDN/NFV) ;
- Cellular IoT Air Interface
- 3GPP Vs Non-3GPP IoT Application in Smart Society
- Transport Requirement in AI Smart Society : Core and Access network ;
- Infrastructure of core data network and security aspects;
- 3GPP Technologies: Recommendations & Standards;
- IMT spectrum management for wireless broadband & 5G deployment.
- 5G : A case Study (AI Smart Society)



2. LEARNING OUTCOMES

- Concept of the ubiquitous connectivity according to Broadband Commission for Sustainable Development 2025 Targets.
- Key considerations of the current ecosystem of the Mobile data and will able to manage in future generations of 5G Mobile data Core/ Aggregation / Access network.
- The technological development of 3GPP and non 3GPP.
- Roles of mobile network infrastructure including backhaul, mid haul and front haul.
- Key features of 5G NR

3.TARGET POPULATION

This training is primarily targeted at executives, managers, engineers and technical staff from regulators, policy makers, telecom operators, and academia and government organizations.

4.ENTRY REQUIREMENTS

Any Graduate/Diploma in Electronics, IT / Telecommunication, Electrical, Computer science and Electrical may apply for this course.

No prior knowledge or qualification in converged network is required; however it is important for participants to be working for a regulator, or in the ICT/Telecoms sector as a provider or consultant. Students in the Engineering or ICT related courses could also be considered.

5.TUTORS/INSTRUCTORS

| S.No. | NAME OF TUTOR(S)/ INSTRUCTOR(S) | Position | CONTACT DETAILS |
|-------|---------------------------------|---|--|
| 1. | Sh. Arun Kumar Sharma | Chief General Manager, ALTTC, BSNL, Ghaziabad, India | cgm_alttc@bsnl.co.in cgmalttc@gmail.com + 911202755121 |
| 2. | Sh. Pratap Narayan Dohare | General Manager (Zonal-North) ALTTC, BSNL, Ghaziabad, India | doharepratap@gmail.com + 911202704638 |
| 3. | Mr A K Jha | AGM (EB), ALTTC, BSNL Ghaziabad, India | sdebd2010@gmail.com +919412739258 |
| 4. | Mr. Abhay Gupta | Assistant General Manager, ALTTC, Ghaziabad, India | abhaybpl@gmail.com +91 9412739319 |
| 5. | Mr. Rajesh Kumar | Assistant General Manager, ALTTC, Ghaziabad, India | rajeshbsnl@gmail.com +91 9412739333 |
| 6. | Mr. Sanjay Kumar | Assistant General Manager, ALTTC, Ghaziabad, India | girisanju@gmail.com +91 9412739313 |
| 7. | Mr. Nikunj Goel | Assistant General Manager, ALTTC, Ghaziabad, India | nikunjgoelin@yahoo.com +91 9412739309 |



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| 8. | Mr. Manoj Kumar | Assistant General Manager, ALTTC, Ghaziabad, India | manoj_nagar@hotmail.com +91 9412774494 |
| 9. | Mr.Sandeep Singh | Assistant Director, ALTTC, Ghaziabad, India | sandeepalttc@bsnl.co.in +91 9463502525 |

6. TRAINING COURSE CONTENTS

Module 1: 5G Mobile data – The Beginning of AI Smart Society: Basic Technology prospects

- Why 5G Mobile data in AI Smart Society : Need, and Benefits.
- 5G Mobile data Security Guidelines and Assessment
- Mobile IoT: 3GPP standardized technologies for licensed mobile spectrum.
- Drivers and inhibitors of IoT and 5G.
- Use Cases in AI smart Society.

Module 2: 5G Mobile data – The Beginning of AI Smart Society : Advance technology and Regulatory Perspective

- Policy considerations related to 5G data. Making Smart society.
- The policy and regulatory implications of IoT.
- 3GPP Standardisation & Evolution towards IoT
- Mobile IoT technologies: LTE-M, EC-GSM-IoT, NB-IoT and 5G IoT.
- Spectrum Management and standards for Wireless Broadband
- 5G Mobile data with 5G-NR(mMTC)

7. TRAINING COURSE SCHEDULE

| Week | Module Title | Topics |
|------|---|---|
| 1 | Module 1: 5G Mobile data – The Beginning of AI Smart Society: Basic Technology prospects | <ul style="list-style-type: none">• Why 5G Mobile data in AI Smart Society : Need, and Benefits.• 5G Mobile data Security Guidelines and Assessment.• Drivers and inhibitors of IoT and 5G.• Industry 4.0• Use Cases in AI smart Society. |
| | | Discussion / Forum |
| | | Chat Session |
| | | Quiz 1 |
| 2 | Module 2: 5G Mobile data – The Beginning of AI Smart Society : Advance technology and Regulatory Perspective | <ul style="list-style-type: none">• Policy considerations related to 5G data. Making Smart society.• The policy and regulatory implications of IoT.• 3GPP Standardisation & Evolution towards IoT• Mobile IoT technologies: LTE-M, EC-GSM-IoT, NB-IoT and 5G IoT.• Spectrum Management and standards for Wireless Broadband• 5G Mobile data with 5G-NR(mMTC) |
| | | Discussion / Forum |
| | | Chat Session |
| | | Quiz 2 |



8.METHODOLOGY (Didactic approach)

Course materials: Each week one module will be discussed and the relevant course material will be made available on the website.

Online Discussion Forums: Participants are expected to participate actively in discussion forums on selected topics throughout the week.

Chat sessions: Chat sessions will be conducted in real time every week where discussions would be held with the instructor (s) on a particular topic. Participants are encouraged to join the discussion and exchange points of view.

Quizzes: Two mandatory quizzes will be held during the course. Course evaluation and feedback would be done at the end of the course and is a part of the mandatory activity.

9.EVALUATION AND GRADING

The assessment of the participants shall be based on the time spent on the training and the following parameters:

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| Quiz # 1 | 25% |
| Quiz # 2 | 25% |
| Individual Assignment: | 20% |
| 2 Chat Sessions (10% per session)(each Thursday) | 20% |
| 2 Discussion Forum (5% per forum) | 10% |
| Total Evaluation: | 100% |

10.TRAINING COURSE COORDINATION

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