



AFRICAN ADVANCED LEVEL TELECOMMUNICATIONS INSTITUTE (AFRALTI)

## TRAINING WORKSHOP OUTLINE

|                      |                                                                                                                              |
|----------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>Title:</b>        | <b>WIRELESS ACCESS TECHNOLOGIES</b>                                                                                          |
| <b>Dates:</b>        | <b>14<sup>th</sup> - 18<sup>th</sup> December 2015</b>                                                                       |
| <b>Duration:</b>     | <b>5 Days</b>                                                                                                                |
| <b>Venue:</b>        | <b>Dar es salaam, Tanzania</b>                                                                                               |
| <b>Tuition Fees:</b> | <b>US\$1,200 per participant from AFRALTI member states and<br/>US\$1,440 per participant from Non-AFRALTI Member States</b> |

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### Target Audience:

Technical personnel work with mobile and Internet service providers, and IT professionals working in the field.

### Pre-requisite/s:

The applicant must have a minimum of diploma in Telecommunication or its equivalent or at least five years experience in IT industry.

### Course Overview:

The participant will learn how mobile technology can be used for wireless access and in particular the LTE and 4G technologies.

### Methodology:

The will be classroom presentations by power points and lab practical. Learning will also be carried out through group discussions and case studies. The carrier aggregation, MIMO/Multi antenna solutions and orthogonal frequency division multiplexing will be considered as the enabling technologies. The course will also cover the use of IP platform for multimedia subsystems, WIMAX, LANS and PANS as access technologies.

The students will learn how to select appropriate technology, design, carry out frequency planning and deploy wireless broadband access system. In addition the course will cover use of Broadband access for Internet, mobile backhails, coexistence with fibre and trunked radio systems.

## Workshop Objectives:

After the course participants will be able to;

- Understand use of mobile technology for wireless access.
- Understand use of IEEE 802.2 and IEEE 802.11 standards for wireless access
- Design and plan for wireless access
- Deploy a broadband wireless access network

## Workshop Contents/Topics:

1. Defining “Fourth Generation” (4G) mobile wireless services
2. Special features.
3. Carrier Aggregation/Wider band Transmission & Spectrum Sharing
4. MIMO/Multi-antenna solutions
5. **LTE-Advanced benefits**
6. Mobile WiMAX 2.0 (IEEE 802.16M)Key Features
7. LTE-Advanced and IEEE 802.16m approach to IMT-Advanced
8. Orthogonal frequency division multiplexing (OFDM
9. Fixed-Mobile Convergence
10. IP Multimedia Subsystem (IMS)
11. Considerations for mobility management in NGN
12. NGMN services
13. Regulation of Next Generation Mobile Broadband
14. IEEE 802.11 WLANS
15. Wireless personal area networking
16. Blue tooth
17. wireless application for trunked radio systems
18. Technology selection
19. Design and network planning
20. Deployment strategies
21. Bandwidth and frequency planning
22. Applications
  - Internet access
  - Mobile backhaul
  - Coexistence with fibre

For more information, please contact us on

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