



## ITU/BDT Arab Regional Workshop on “4G Wireless Systems”

Tunis - Tunisia, 27-29 January 2010



---

### **FINAL REPORT**

#### ***Introduction***

Reference is made to the 2009 CoE Action Plan, which was approved during the 2nd Advisory Committee Meeting (Cairo, March 2009), in order to build up a relevant capacity process for the professionals in the region.

The workshop was postponed to be held in early 2010.

ITU/ARO conducted the workshop on “4G Wireless Systems”, in cooperation with the Centre d'Etudes et de Recherche des Télécommunications (CERT) - Tunisia during the period 27-29 January 2010 at Iberostar Solaria Hotel, Yasmine Hammamet.

#### ***Workshop Description***

The "4G Wireless Systems Workshop was organized jointly by CoE-ARB and CERT. The workshop materials were developed totally by two instructors, except one presentation was prepared by the CoE-ARB Coordinator.

The workshop focused on LTE as a latest standard in the mobile network technology tree, there were seven sessions as follows:

- Evolution path towards 4G.
- Potential and application for broadband services.
- LTE overview: Design targets and Multiple Access Technologies.
- LTE Network Architecture.
- LTE Technology Performance Evaluation.
- Air Link setup in LTE System.
- Mobility and Managements

As well as one presentation in the opening session was given by the CoE-ARB Coordinator on the Center of Excellence in Arab States and ITU Academy.

## *Opening Session*

The workshop was officially open by CERT Director General, Mr. Mohamed Ben Amor, who welcomed the participants. He stated that CERT will not save any effort to support the CoE-ARB activities.

From the Tunisian Ministry of Communication Technologies, Mr. Tarek Kasheda, welcomed the participants and gave some statistics that reflects the progress of ICT in Tunisia.

Mrs. Nefertiti Ali, Coordinator of the CoE, ITU Arab Regional Office, gave a brief speech, welcoming the participants and thanking CERT for hosting the workshop.

Then she introduced the two main instructors; Mr. Lazhar Belhouchet and Mr. Hakim Ebdelli.

## *Participation*

The total of Twenty six (26) participants from nine (9) Countries, namely:

Egypt (3), Libya (1), Morocco (1), Oman (3), Saudi Arabia (3), Sudan (3), Syria (2), Tunisia (9) and UAE (1). There were 3 participants from Algeria (1), Palestine (1) and Sudan (1) registered for the workshop but they didn't participate.

See Annex (1) shows the Final List of Participants.

## *Tutors*

- Mr. Lazhar Belhouchet, Tekalliane Technical Director.
- Mr. Hakim Ebdelli, Mobile Communication Senior Expert.

## *Agenda and Documents*

**Annex (2)** shows **the Agenda**, which was adopted and contained (7) sessions, in addition to panel discussion and evaluation session.

Several important questions have been raised and the participants exchanged experience and knowledge on them.

**Annex (3)** comprises the **List of Documents** submitted in the workshop; all the documents are posted on the following address:

<http://www.itu.int/ITU-D/arb/COE/2010/4G/ListofDocs-Tn.doc>

## *Evaluation and Concluding Session*

A special evaluation form was developed and distributed to evaluate the content, the instructors and the organization before and after the workshop, for improving the future activities.

The following table shows a summary of the results of the evaluation:

Question	Area	Poor 20%	Fair 40%	Good 60%	Very Good 80%	Excellent 100%
	<b>Location</b>					
	The <b>place</b> was suitable and the <b>labs</b> were fully equipped		1	1	17	2
	The <b>organization</b> and the <b>correspondences</b> before the workshop		1	2	7	12
	The <b>organization</b> and the <b>correspondences</b> during the workshop		2	1	6	13
	<b>Workshop Content</b>					
	This workshop has been very <b>interesting</b>		1	2	10	9
	I will be able to <b>apply</b> everything in my work		4	10	5	3
	<i>Everything</i> was <b>new</b>		4	6	10	2
	Everything was <b>very concrete and practical</b>		1	7	12	2
	I <b>understood</b> everything	1		8	10	2
	The <b>practical part</b> was enough and relevant	2	2	7	10	
	The <b>documents and presentations aids</b> were helpful		1	4	15	2
	<b>Workshop Presentation</b>					
	The <b>Instructors</b> have been clear	1	1	5	13	2
	The <b>Instructors</b> have been cooperative		2	1	13	6

### Comments from participants:

The comments from the participants can be briefed as follows:

- They appreciated the work done by the instructors especially Mr. Lazhar Belhouchet.
- The time of the sessions must be longer, and the workshop period must be extended to be 5 days.
- The organization before and during the workshop was perfect.
- Some of them did not like the meeting venue as Al Hammamat is far from the down town.

**The closing session** included a brief speech of Mr. Sami Trimech from CERT, who thanked the participants for their active role during the workshop. Special thanks were addressed to ITU, CERT and the instructors for the successful conduct of the workshop and the participants were awarded participation's certificates.

All Annexes which were mentioned above are available at the website on the following address: <http://www.itu.int/ITU-D/arb/COE/2010/4G/>

# Photos

