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Re:		
Abstract	Report on October 2009 meeting of ITU-R Working Party 5D	
Purpose		
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# ***Report to IEEE 802.16 Working Group on ITU-R WP 5D Meeting #6***

Roger B. Marks

*27 October 2009*

## **Introduction**

Working Party 5D (WP 5D) held its Meeting #6 in Dresden, Germany on 14 -21 October 2009. For reports on the previous four meetings, see IEEE C802.16-08/008, C802.16-08/015, C802.16-08/024r1, C802.16-09/0002, and C802.16-09/0004r1.

IEEE's delegates were Mike Lynch of 802.18 as well as Roger Marks and Jose Puthenkulam of 802.16. Other 802.16 members (including Reza Arefi, Chair of the 802.16 Working Group's ITU-R Liaison Group) participated in the meeting on other delegations.

## **IEEE Contributions**

IEEE had submitted two contributions to this meeting. Both were developed within the 802.16 Working Group. One contribution was related to IMT-2000:

\* ITU-R 5D/529 [IEEE L802.16-09/0074r2]: *Update of Subclause 5.6 in Revision 10 of Recommendation ITU-R M.1457*

One was related to IMT-Advanced:

\* ITU-R 5D/542 [IEEE L802.16-09/010Xr5]: *Submission of a candidate IMT-Advanced RIT based on IEEE 802.16*

## **IMT-2000**

WP 5D was notified by ITU-R staff (in Document 5D/590) that Revision 9 of Recommendation ITU-R M.1457 is administratively complete and has been submitted to Study Group 5 (as Document 5/158) for adoption at its upcoming

meeting of 7-8 December 2009. The Revision 9 draft includes significant updates from IEEE, including reference to IEEE Std 802.16-2009 and addition of an FDD component.

IEEE's submitted [IEEE L802.16-09/0074r2](#) (5D/329: "Update of Subclause 5.6 in Revision 10 of Recommendation ITU-R M.1457") was a proposed update of the IMT-2000 radio interface based on IEEE Std 802.16. The proposal, which referenced IEEE Std 802.16j, was well received as a "Meeting X" declaration of the three-meeting cycle. Further information is expected from IEEE at Meeting X+1 (due 10 February 2010), with final materials due on 2 June 2010 for Meeting X+2. The other IMT-2000 radio interfaces will be updated as well.

**RECOMMENDED ACTION: The 802.16 WG should draft the Meeting X+1 input during Session #64 and have it approved by the IEEE 802 EC.**

For the long term, WP 5D maintains a "roadmap" of future IMT-2000 plans by the various proponents. IEEE has not updated its roadmap for some time. However, considering the fact that development of Revision 10 is underway and no clear approach to Revision 11 is identified, perhaps no roadmap from IEEE is necessary now.

## IMT-Advanced Workshop

IEEE submitted [IEEE L802.16-09/0114r4](#) ("IEEE 802.16 Candidate Proposal for IMT-Advanced") for the [3rd Workshop on IMT-Advanced](#) of 15 October. The document was presented by the 802.16 Working Group Chair. It was one of two technology proposals presented at the workshop. Twelve of the fourteen Independent Evaluation Groups also participated with presentations.

The presentation mentioned the IEEE 802.16m IMT-Advanced Evaluation Group Coordination Meeting planned for 13 January. A number of Evaluation Group participants indicated their interest in attending or intention to attend.

**RECOMMENDED ACTION: The 802.16 WG chair should complete a web site for the IEEE 802.16m IMT-Advanced Evaluation Group Coordination Meeting, including a registration system, and notify the Evaluation Group representatives as soon as possible.**

## IMT-Advanced

This was the first meeting for consideration of IMT-Advanced candidate radio interface technologies (RITs). ITU-R 5D/542 [[IEEE L802.16-09/010Xr5](#)] was IEEE's "Submission of a candidate IMT-Advanced RIT based on IEEE 802.16". This contribution received supporting endorsements. Contribution 5D/ 558 ("Endorsement

of candidate IMT-Advanced RIT based on IEEE 802.16”) recorded the endorsement of the IEEE’s proposal by the WiMAX Forum and 50 companies, thirty of whom were Members of ITU-R or ITU-R Study Group 5. This document was provided to IEEE 802.16 for information by a liaison cc: from the WiMAX Forum (see [IEEE L802.16-09/0120r2](#)). Also, ARIB provided contribution 5D/561(“ARIB’s endorsement of IEEE’s proposal submission under Step 3 of the IMT-Advanced process in document IMT-ADV/2(Rev.1)”), and Korea (in 5D/563) said that it “recognizes the preparation of candidate RITs by 3GPP and IEEE for the IMT-Advanced. These two candidate technologies are expected to meet the IMT-Advanced requirements. In addition, it is anticipated that these technologies will facilitate faster market growth and advanced service, and expedite R&D activities. Therefore, the Republic of Korea supports both candidate RITs for IMT-Advanced.”) In addition, two proposals (see below) contained content that was technically identical to that of IEEE’s proposal.

In all, six proposals were received. All were reviewed and judged to be complete. A number of actions followed in conjunction with acknowledgement of the proposals and initiation of evaluation.

It was determined that three of the six proposals were technically identical and could be addressed with a single evaluation. These were grouped together under the title “IEEE Technology”. Acknowledgement statements were prepared (and later uploaded to the [IMT-Advanced web site](#) at the links embedded below) as follows:

- [IMT-ADV/4](#): “Acknowledgement of candidate submission from IEEE under Step 3 of the IMT-Advanced process (IEEE technology)”
  - Reference: 5D/542 (“Submission of a candidate IMT-Advanced RIT based on IEEE 802.16”)
- [IMT-ADV/5](#): “Acknowledgement of candidate submission from Japan under Step 3 of the IMT-Advanced progress (IEEE Technology)”
  - Reference: 5D/544 (“Proposal for candidate radio interface technologies for IMT-Advanced based on IEEE 802.16”)
- [IMT-ADV/7](#): “Acknowledgement of candidate submission from TTA under Step 3 of the IMT-Advanced process (IEEE Technology)”
  - Reference: 5D/560 (“Submission of a candidate IMT-Advanced RIT based on IEEE 802.16”)

It was also determined that the other three of the six proposals were technically identical and could be addressed with a single evaluation. These were grouped together under the title “3GPP Technology.” Acknowledgement statements were prepared as follows:

- [IMT-ADV/6](#): “Acknowledgement of candidate submission from Japan under step 3 of the IMT-Advanced process (3GPP Technology)”

- Reference: 5D/545 (“Proposal for candidate radio interface technologies for IMT-Advanced based on LTE-Advanced”)
- IMT-ADV/8**: “Acknowledgement of candidate submission from 3GPP proponent (3GPP Organization Partners of ARIB, ATIS, CCSA, ETSI, TTA AND TTC) under step 3 of the IMT-Advanced process (3GPP Technology)”
  - Reference: 5D/564 (“Complete submission of 3GPP LTE Release 10 & beyond (LTE-Advanced) under Step 3 of the IMT-Advanced process”)
- IMT-ADV/9**: “Acknowledgement of candidate submission from China (People’s Republic of) under step 3 of the IMT-Advanced process (3GPP Technology)” [Note: The proposal is technically identical to the TDD RIT in IMT-ADV/6 and IMT-ADV/7.]
  - Reference: 5D/580 (“Submission of TD-LTE-Advanced for IMT-Advanced candidate technology”)

**RECOMMENDED ACTION: The 802.16 WG should consider IMT-ADV/4 as the final representation of its IMT-Advanced proposal in future communications.**

Working Party 5D drafted liaison statements to all six proponents and to the evaluations groups. The liaison the proponents includes the liaison to the Independent Evaluation Groups as an attachment.

**RECOMMENDED ACTION: The 802.16 WG chair should post 5D/TEMP/262R2 for WG review, updating it later when the official, edited version is received. The 802.16 WG should review this liaison statement during Session #64, though no specific actions are requested therein.**

Working Party 5D initiated a Correspondence Group on IMT-Advanced evaluation, until June 2010. It includes three topic areas:

- IEEE technology
- 3GPP technology
- communication among Independent Evaluation Groups

Proponents will be requested to designate representatives, who will be granted read and write access as well as a right to copy the Correspondence Group information for the internal work of the proponents.

**RECOMMENDED ACTION: The 802.16 WG chair should post 5D/TEMP/270R2 for WG review, updating it later when the official, edited**

version is received. The 802.16 WG should review this liaison statement during Session #64 and act upon the representative designation request.

## Future Meetings

The meeting schedule is currently as follows:

**WP 5D Meeting # 7      17-24 Feb 2010      Italy**

Key plans:

- *Examination of preliminary Independent Evaluation Group reports*

**WP 5D Meeting # 8      9-16 June 2010      Vietnam**

Key plans:

- *Examination of IMT-Advanced Independent Evaluation Group reports*
- *Finalize the evaluation of technology proposals for IMT-Advanced*
- *Finalize Recommendation ITU-R M.1457 Revision 10*
- *Finalization of Revision 4 of M.1580 and M.1581*
- *Finalize Terminology update*

**WP 5D Meeting # 9      13-20 Oct 2010      China**

Key plans:

- *Finalize the consensus building, take decision on IMT-Advanced and finalize IMT.RADIO*
- *Finalize IMT.SHARING UHF*

## References

IEEE 802.16 liaison documents are available at <<http://ieee802.org/16/liaison>>.