

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group</b> < <a href="http://ieee802.org/16">http://ieee802.org/16</a> >
Title	<b>Report from ITU-R Working Party 8F Session of 6-14 August 2006</b>
Date Submitted	<b>2006-09-04</b>
Source(s)	Roger Marks (IEEE 802 WG Chair) <a href="mailto:r.b.marks@ieee.org">r.b.marks@ieee.org</a> NextWave Broadband, Inc.
Re:	
Abstract	This contribution reports on the 6-14 August 2006 session of ITU-R Working Party 8F and associated discussions of IMT, IMT-2000, and IMT-Advanced. It proposes consequent WG activities.
Purpose	To report on ITU-R WP 8F session and propose consequent WG activities.
Notice	This document has been prepared to assist IEEE 802.16. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.
Release	The contributor grants a free, irrevocable license to the IEEE to incorporate material contained in this contribution, and any modifications thereof, in the creation of an IEEE Standards publication; to copyright in the IEEE's name any IEEE Standards publication even though it may include portions of this contribution; and at the IEEE's sole discretion to permit others to reproduce in whole or in part the resulting IEEE Standards publication. The contributor also acknowledges and accepts that this contribution may be made public by IEEE 802.16.
Patent Policy and Procedures	The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures < <a href="http://ieee802.org/16/ipr/patents/policy.html">http://ieee802.org/16/ipr/patents/policy.html</a> >, including the statement "IEEE standards may include the known use of patent(s), including patent applications, provided the IEEE receives assurance from the patent holder or applicant with respect to patents essential for compliance with both mandatory and optional portions of the standard." Early disclosure to the Working Group of patent information that might be relevant to the standard is essential to reduce the possibility for delays in the development process and increase the likelihood that the draft publication will be approved for publication. Please notify the Chair < <a href="mailto:chair@wirelessman.org">mailto:chair@wirelessman.org</a> > as early as possible, in written or electronic form, if patented technology (or technology under patent application) might be incorporated into a draft standard being developed within the IEEE 802.16 Working Group. The Chair will disclose this notification via the IEEE 802.16 web site < <a href="http://ieee802.org/16/ipr/patents/notices">http://ieee802.org/16/ipr/patents/notices</a> >.

# Report from ITU-R Working Party 8F Session of 6-14 August 2006

*Roger Marks*  
*IEEE 802.16 WG Chair*

## Abstract

I attended the ITU-R Working Party 8F session from 6-14 August 2006 in Denver, Colorado, USA.

This is a very brief report on the meetings and some initial recommendations for follow-up. In short, it appears timely for the IEEE 802.16 Working Group begin engagement with WP 8F in two areas: IMT-2000 and IMT-Advanced.

## Background

At Session #44, I discussed issues surrounding the possible development of a new PAR for an advanced IEEE 802.16 air interface. I suggested that the main driver of such an evolution would be the “IMT-Advanced” activities in WP 8F. According to the current WP 8F plans, this would lead to standardization activities, with proposals for standards solicited in 2008 and consensus building through 2009. I suggested that the 802.16 WG would need to act soon if it were to be prepared with a draft in 2008.

At Session #44, José Costa, as the WG’s ITU-R liaison official, offered to discuss the IMT-Advanced process in more detail during the WG’s ITU-R Ad Hoc Committee meeting. The committee’s report, IEEE L802.16-06/016:

[http://ieee802.org/16/liaison/docs/L80216-06\\_016.pdf](http://ieee802.org/16/liaison/docs/L80216-06_016.pdf)

includes a slide set, prepared and presented by Dr. Costa, on “IMT-Advanced Standardization Process.” The slides overview 802.16’s interactions with ITU-R. They also review WP 8F’s “IMT” projects (including both IMT-2000 and IMT-advanced), with additional detail on the plans for IMT-Advanced development.

At Session #44, the WG also approved a liaison contribution to ITU-R WP 8A on “broadband wireless access standards in the mobile service” (IEEE L802.16-06/015). This contribution was copied to WP 8F for information. I attended the WP 8F meeting, as an IEEE delegate, to present the liaison contribution. I stayed for the entire meeting.

## Meetings

As a first-time attendee in WP 8F, I did not participate in the debate, but I observed many meetings and took time to meet delegates outside the meeting rooms. I informed delegates about the IEEE 802.16 WG and IEEE Std 802.16. I learned that many delegates did not have an accurate understanding about them. I suggested some possible alternatives for interactions, or even collaborations, between IEEE 802.16 and WP 8F. I found that all of the delegates I spoke to were positive about such interactions, and most were encouraging.

## IMT-Advanced

Although I do not intend to report here on all that I learned about the progress of IMT-Advanced, I would characterize the general discussion as very detailed. Overall, I believe that it is accurate to say that the overall plan for the program is roughly in line with the slides presented by Dr. Costa (IEEE L802.16-06/016). The detailed requirements have not taken shape, but target data rates of 100 Mbit/s for mobile terminals and 1 Gbit/s for fixed terminals are fairly well established. In my view, one important area that has not yet been explicitly determined is the delineation between IMT-Advanced and a more advanced version of IMT-2000.

Some of the discussions most relevant to IEEE 802.16 revolved around the WP’s expectations of the role it will play in standardization. Some delegates preferred to have ITU-R do little more than set performance expectations and then judge proposals against those expectations. Others preferred language that would suggest a stronger role for the WP in encouraging harmonization and consensus among various proposals to reduce or control the number of alternatives. Many discussions were held concerning the detailed language in various supporting documents.

In my discussions with delegates, I suggested the possibility that the IEEE 802.16 WG might be willing to work closely with ITU-R during standardization, regularly offering status reports and even drafts for review by ITU-R

and its members, rather than simply submitting a completed standard. I found that the reactions of delegates to this suggestion were positive and encouraging.

## **IMT-2000**

WP 8F is responsible to maintain Recommendation M.1457 (“Detailed Specifications of the Radio Interfaces of IMT-2000”). In accordance with the procedure Circular Letter 8/LCCE/95 (“Update procedure for revisions of Recommendation ITU-R M.1457”), updates can be developed to the five existing specifications, and new radio interface specifications may also be added. Updates are generally prepared annually, but new radio interface specifications have never been added. As I understand, no new radio interface specification has ever been proposed. The process for adding a new radio interface specification is detailed and time-consuming.

Without going into details, I took note of several contributions discussing possible changes to the process for adding new radio interface specifications to M.1457 or suggesting an alternative approach. These had the general goal of ensuring that ITU-R remains current with new innovations, including those fundamentally different from the ones considered during the original development of IMT-2000. Discussion in the meetings involved comments suggesting that Circular Letter 8/LCCE/95 is not known to be problematic and, until new radio interface specifications are proposed as additions to M.1457, no specific barriers can be identified.

Some of these discussions specifically raised the issue of IEEE Std 802.16 as a prospective addition to M.1457. A number of delegates with knowledge of IEEE 802.16 were present at the meetings and were active in discussing this issue.

In my discussions with many administration delegates, many of whom were delegation heads, I asked their views of these discussions and their opinion of a possible proposal for IEEE 802.16 under Circular Letter 8/LCCE/95. All those I spoke to were positive. No delegate specifically advocated that IEEE 802.16 be incorporated, but every delegate encouraged me to submit it for consideration and requested that I do so as soon as possible. All indicated their openness to considering it. In most cases, the delegates know something about IEEE Std 802.16, but very little of the important technical factors and even less about the WG itself. After our discussions, I believed that many of the delegates were even more open.

In discussions concerning the timeline, I found that many delegates would like to see a proposal in time for consideration at the January 2007 session of WP 8F, with additional clarifications to be reviewed in the May 2007 sessions. Some delegates expressed optimism that this would be sufficient, even though Circular Letter 8/LCCE/95 indicates that more sessions might be required to complete the review.

## **Recommendations**

I suggest that the WG consider the possibility of soon opening a new PAR for an advanced version of the IEEE 802.16 air interface. I believe that this PAR should specifically track IMT-Advanced requirements and have the flexibility to inherently adapt to those requirements as they become defined.

I suggest that the WG consider developing a proposal, under Circular Letter 8/LCCE/95, for the inclusion of IEEE Std 802.16 in M.1457.

I have set aside meeting space at Session #45 for ITU-R Ad Hoc Committee meetings.