Report of the meeting of the ITU-R liaison group during Session #54

Abstract
The activities of the ITU-R Liaison Group include:
1) ITU-R WP 5A on IEEE 802.16 in Mobile and Fixed Service frequency bands.
2) ITU-R WP 5D on IEEE 802.16 in IMT (including IMT-2000 and IMT-Advanced).

Purpose
Approve the proposed actions to contribute to ITU-R.

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Report of the meeting of the ITU-R liaison group during Session #54
José Costa (ITU-R Liaison Official)

1. Introduction

At the opening plenary of Session #54 of the IEEE 802.16 WG the ITU-R Liaison Official presented an overview of the input liaison statements and contributions received, including reserved numbers for contributions, and the draft agenda for the ITU-R Liaison Group meeting.

The IEEE 802.16 WG passed the following motion:
“To authorize the ITU-R Liaison Group to draft documents regarding contributions to ITU-R as needed, tentatively approve them on behalf of the WG (subject to confirmation at the 802.16 Closing Plenary), and submit them for 802.18 review.”

2. Documents considered

Input Liaison Statements (4):

- **IEEE L802.16-08-003**

- **IEEE L802.16-08-004**
  Liaison statement from ITU-R WP 5D: Request for clarification on OFDMA TDD WMAN BS and MS ACS values (2008-02-27)

- **IEEE L802.16-08-005**

- **IEEE L802.16-08-008**
  IMT-Advanced Circular Letter (2008-03-10)

Input contributions (7):

- **C80216-08_001.doc**
  Proposed contribution to ITU-R Working Party 5D on ‘Revision of M.1457 Introduction’
  Roger Marks, NextWave Wireless Inc.

- **C80216-08_002.doc**
  Proposed contribution to ITU-R WP 5D on ”Update of Subclause 5.6 of Rec. ITU-R M.1457”
  Roger Marks, NextWave Wireless Inc.

- **C80216-08_003.doc**
  Proposed contribution to ITU-R Working Party 5D on ”Revision of M.1457 Administrative Procedures”
  Roger Marks, NextWave Wireless Inc.

- **C80216-08_004.doc**
  Proposed contribution to ITU-R WP 5D on ”Comments on IMT-Advanced Circular Letter”
  Roger Marks, NextWave Wireless Inc.

- **C80216-08_005.doc**
  Information relevant to liaison statement L802.16-08/004 from ITU-R Working Party 5D on ACS values
  Roger Marks, NextWave Wireless Inc.
3. **Results of the ITU-R Liaison Group meeting**

The ITU-R liaison group met from 16:45 to 18:15 hours on Monday, 17 March 2008, from 08:02 to 18:08 hours on Tuesday, 18 March 2008; from 13:00 to 18:00 hours on Wednesday, 19 March 2008, and from 08:08 to 12:08 hours on Thursday, 20 March 2008, in Orlando, FL, USA, chaired by José Costa. About 14 people participated.

The draft agenda for the meeting was adopted:

1. Opening remarks
2. Approval of the draft agenda
3. Consideration on input liaison statements
4. Consideration of input contributions
5. Development of draft ITU-R contributions for consideration by 802.16 and 802.18
6. ITU-R liaison group work plan for future 802.16 sessions
7. Other business

### 3.1 Output documents (8)

**L80216-08_010d0.doc**

This contribution proposes changes in Section 4 of the ITU-R/IMT-Advanced/IMT.TECH document, as presented in Document 5D/TEMP/28.

**L80216-08_011d0.doc**

This contribution proposes changes in Sections 5 and 6 of the ITU-R/IMT-Advanced/IMT.TECH document, as presented in Document 5D/TEMP/28.

**L80216-08_012d0.doc**


**L80216-08_013d0.doc**

Draft Contribution to ITU-R WP 5D on Revision of M.1457 Introduction.

**L80216-08_014d0.doc**

Draft contribution to ITU-R on Revision of M.1457 Administrative Procedures.

**L80216-08_015d0.doc**

Draft contribution to ITU-R on request for clarification on Steps 2 and 3 of the submission and evaluation process for IMT-Advanced.

**L80216-08_016d0.doc**

[Draft] Liaison Statement to WiMAX Forum on the ITU-R WP 5D Liaison Statement to IEEE and WiMAX Forum on ACS.

**L80216-08_017d0.doc**

Draft Liaison Contribution to ITU-R WP 5D "Request for clarification on the formula in the WP 5D liaison statement on OFDMA TDD WMAN BS AND MS ACS values".
3.2 Summary of discussions and proposed motions

3.2.1 IMT-Advanced Minimum Requirements

On the basis of input contribution IEEE C802.16-08/006r1 a draft liaison statement to 802.18 on IMT-Advanced minimum requirements was prepared, tentatively approved, and transmitted to 802.18 (Doc. L802.16-08/010d0).

Motion: "To confirm the approval of IEEE L802.16-08/010d1, subject to agreement by an ad hoc group (to include Anna Tee and Jose Puthenkulam) and representatives of 802.11, on Sections 4.4 and 4.8 of the document, and authorize the WG Chair to follow up with 802.18 and support an associated motion at the 802 EC as required."

3.2.2 Descriptions of Technological Aspects

On the basis of input contribution IEEE C802.16-08/007 a draft liaison statement to 802.18 on the description of technology aspects was prepared, tentatively approved, and transmitted to 802.18 (Doc. L802.16-08/011d0).

Motion: "To confirm the approval of IEEE L802.16-08/011d0 and authorize the WG Chair to follow up with 802.18 and support an associated motion at the 802 EC as required."

3.2.3 Update of Subclause 5.6 of Rec. ITU-R M.1457

On the basis of the ITU-R WP 5D liaison statement in IEEE L802.16-08/003 and input contribution IEEE C802.16-08/002 a draft contribution to ITU-R WP 5D was prepared, tentatively approved, and transmitted to 802.18 (Doc. L802.16-08/012d0). The intent is to notify WP 5D about IEEE 802.16 plans to update the OFDMA TDD WMAN specification for revision 9 of Recommendation ITU-R M.1457.

Motion: "To confirm the approval of IEEE L802.16-08/012d0 and authorize the WG Chair to follow up with 802.18 and support an associated motion at the 802 EC as required."

3.2.4 Revision of M.1457 Introduction

On the basis of input contribution IEEE C802.16-08/001 a draft contribution to ITU-R WP 5D was prepared, tentatively approved, and transmitted to 802.18 (Doc. L802.16-08/013d0). The intent is to remove obsolete text from the “Introduction” section of Recommendation ITU-R M.1457, specifically the reference to third generation systems and Recommendation ITU-R M.1455 that has been suppressed. One participant expressed concern that by doing so there would be not enough information to characterize the IMT-2000 radio interfaces in Recommendation ITU-R M.1457.

Motion: "To confirm the approval of IEEE L802.16-08/013d0 and authorize the WG Chair to follow up with 802.18 and support an associated motion at the 802 EC as required."

3.2.5 Revision of M.1457 Administrative Procedures

On the basis of input contribution IEEE C802.16-08/003 a draft contribution to ITU-R WP 5D was prepared, tentatively approved, and transmitted to 802.18 (Doc. L802.16-08/014d0). The intent is to clarify the administrative procedures for the update of Recommendation ITU-R M.1457.

Motion: "To confirm the approval of IEEE L802.16-08/014d0 and authorize the WG Chair to follow up
3.2.6 Clarification of the submission and evaluation process for IMT-Advanced

On the basis of IEEE L802.16-08/008 and input contribution C802.16-08/004, a draft contribution to ITU-R WP 5D was prepared, tentatively approved, and transmitted to 802.18 (Doc. L802.16-08/015d0). The intent is to clarify Steps 2 and 3 on the submission and evaluation process for IMT-Advanced.

**Motion:** "To confirm the approval of IEEE L802.16-08/015d0 and authorize the WG Chair to follow up with 802.18 and support an associated motion at the 802 EC as required."

3.2.7 Clarification on OFDMA TDD WMAN Base Station and Mobile Station ACS values

On the basis of a liaison statement from ITU-R WP 5D requesting clarification of ACS values (Document IEEE L802.16-08/005) and input contribution IEEE C802.16-08/005 it was decided to work with the WiMAX Forum to develop a response to ITU-R. A draft liaison statement to the WiMAX Forum was prepared (L802.16-08/016d0) and a draft liaison contribution to ITU-R WD 5D was also prepared (L802.16-08/017d0) to seek clarification on the formula used.

**Motion:** "To approve IEEE L802.16-08/016d0 and authorize the WG Chair to send it to the WiMAX Forum."

**Motion:** "To confirm the approval of IEEE L802.16-08/017d0 and authorize the WG Chair to follow up with 802.18 and support an associated motion at the 802 EC as required."

3.2.8 Update of Recommendation ITU-R M.1801

A liaison statement from ITU-R WP 5A (IEEE L802.16-08/005) asked for input for the update of Recommendation ITU-R M.1801 on BWA standards in the mobile service. The ITU-R Liaison Group plans to develop a response to this request for completion at the July 2008 session of IEEE 802.16.

3.2.9 Development of a Handbook on the Deployment of BWA systems

ITU-R WP 5A (Rapporteur Group on Land Mobile Handbook, including Wireless Access) is developing a handbook to provide practical guidance on the Deployment of BWA systems. It was noted that although IEEE 802.16 does not have material of that nature readily available, the members of IEEE 802.16 may be in a better position to provide contributions directly to the Rapporteur Group to facilitate and stimulate the deployment of BWA systems (Contact the ITU-R Liaison Official for further information).

3.2.10 Plans for the preparation of an IEEE 802 radio interface technology for IMT-Advanced

Roger Marks reported on a meeting held by 802.18 to discuss the IEEE 802 IMT-Advanced technology proposal process (http://ieee802.org/secmail/msg10470.html).

3.2.11 Future work

The timeline of relevant ITU-R and IEEE events shown on Table 1 below was reviewed and comments were added to the table to show the planned work at future meetings of the ITU-R Liaison Group. The timeline being developed within 802.18 was also discussed and it was agreed that 802.16 should plan to complete the submission for IMT-Advanced by the July 2009 meeting, and planning also the possibility of a joint/collocated meeting of the interested 802 working groups in September 2009.
### Table 1

Relevant ITU-R and IEEE Events

<table>
<thead>
<tr>
<th>Group/Event</th>
<th>#</th>
<th>Start</th>
<th># days</th>
<th>End</th>
<th>Location</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEEE 802.16</td>
<td>54</td>
<td>17-Mar-08</td>
<td>4</td>
<td>20-Mar-07</td>
<td>Orlando, FL, USA</td>
<td>Session information</td>
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<td>21-Mar-08</td>
<td>Orlando, FL, USA</td>
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<td>IEEE 802.16</td>
<td>55</td>
<td>12-May-08</td>
<td>4</td>
<td>15-May-08</td>
<td>Macau, China</td>
<td>- Consider the ACS liaison from WF</td>
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<td></td>
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<td></td>
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<td>- Consider results of WP 5D correspondence activities (minimum requirements, channel models, …) and contribute as required.</td>
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<td></td>
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<td></td>
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<td>- Plan second contribution for M.1457 Rev. 9.</td>
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<tr>
<td>IEEE 802.16</td>
<td></td>
<td>12-May-08</td>
<td>5 (4?)</td>
<td>16-May-08</td>
<td>Jacksonville, FL</td>
<td>- Potential for IEEE 802.16 participation in 802.18 activity to approve contribution(s) to WP 5D.</td>
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<td>WP 5D contr. due:</td>
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<td></td>
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<td>17-Jun-08</td>
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<td>ITU-R WP 5D</td>
<td>2</td>
<td>24-Jun-08</td>
<td>8</td>
<td>1-Jul-08</td>
<td>Dubai, UAE</td>
<td>- Response to WP 5A on M.1801</td>
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<td>- Consider June 08 WP 5D results and prepare contributions as required.</td>
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<td>- Draft ACS liaison to WP 5D</td>
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<td>- Prepare second contribution for M.1457 Rev. 9.</td>
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<td>IEEE 802.16</td>
<td>57</td>
<td>16-Sep-08</td>
<td>4</td>
<td>19-Sep-08</td>
<td>Kobe, Japan</td>
<td>- Need for ITU-R Liaison Group meeting in September 2008 is not currently anticipated.</td>
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<td>- No time for IEEE 802 EC correspondence activity to approve contribution(s) to WP 5D.</td>
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<td>15-Oct-08</td>
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<td>06-Nov-08</td>
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<td>3-Nov-08</td>
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<td>2</td>
<td>10-Nov-08</td>
<td>2</td>
<td>11-Nov-08</td>
<td>Geneva, CH</td>
<td>- Consider SG 5 results</td>
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<td>- Plan for the IMT-Advanced submission in 2009</td>
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<td>5</td>
<td>14-Nov-08</td>
<td>Dallas, TX</td>
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### 4. Closing

The ITU-R Liaison Official thanked all the participants for their work during the meeting.