

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group</b> < <a href="http://ieee802.org/16">http://ieee802.org/16</a> >		
Title	<b>Proposed Inputs to IEEE 802.18 on IMT-Advanced Requirements (Edited 8F/TEMP/575-E)</b>		
Date Submitted	<b>2007-09-17</b>		
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Re:	Call for Contributions: Proposed Contribution to IEEE 802.18 on IMT-Advanced Requirements, 8/25/2007		
Abstract	For discussion and approval by IEEE 802.16 Working Group and forward to IEEE 802.18 TAG for consideration		
Purpose	To help IEEE 802.16 Working Group to develop a contribution to IEEE 802.18 TAG on IMT-Advanced requirements.		
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## **SWG Radio Aspects**

### **ANNEXES 6, 7 AND 8**

#### **Technology-related matters**

Attached to this document are text elements from SWG Radio Aspects on technological matters addressed in Annexes 6, 7 and 8.

#### **Text elements from SWG Radio Aspects on Technological matters for Annex 6**

##### **Y.Y Technology-related Submission Details for IMT-Advanced Candidate Radio Interface Technologies (RIT)**

The RIT has to be described in a detailed form to get an overview and an understanding of the [architecture, protocol structure, and](#) functionalities of the technical approach. The following table describes the technical parameters needed to ~~characterise~~[characterize](#) the proposal. Proponents should add any supplemental information, as required, for a better assessment of their proposal.

## Radio Interface Technology Description Template

y.y.1	Multiple <a href="#">aAccess</a> <a href="#">mMethods</a>
y.y.2	Modulation <a href="#">sSchemes</a>
y.y.3	Error <a href="#">eControl</a> <a href="#">eCoding</a> <a href="#">sSchemes</a> <a href="#">Error Control Mechanisms</a>
y.y.4	Physical, <a href="#">logical</a> , and <a href="#">transport</a> channel structure and multiplexing
y.y.5	Frame Structure <a href="#">Physical Resource Blocks (Sub-Channelization and Permutation)</a>
y.y.6	Spectrum Capabilities Duplex Methods (Paired and unpaired operation) Flexible Spectrum Use Spectrum Sharing Channel <a href="#">bBandwidth</a> <a href="#">sScalability</a> Supported <a href="#">RF</a> Bands
y.y.7	Support of Advanced/ <a href="#">Multiple</a> Antenna <a href="#">Capabilities Schemes</a>
y.y.8	Link Adaptation and Power Control
y.y.9	RF <a href="#">channel-parameters</a> <a href="#">Requirements</a> <a href="#">Out of Band Emissions</a>
y.y.10	[Scheduling algorithm] ( <a href="#">A baseline scheduling algorithm such as proportional fair (PF) must be defined for the mandatory traffic mixes; e.g., full-buffer data and VoIP, for consistent evaluation of the proposals</a> )
y.y.11	Radio Interface Architecture and Protocol Stack <a href="#">and Packet Framing</a>
y.y.12	Positioning ( <a href="#">Support of Location-Based Service</a> )
y.y.13	Support of Multicast and Broadcast <a href="#">Service</a>
y.y.14	QoS Support and Management
y.y.15	Security Aspects Privacy and Authentication Aspects
y.y.16	Network <a href="#">tTopology</a> <a href="#">and Reference Model</a> <a href="#">Support of Multi-hop Relays</a>
y.y.17	Mobility <a href="#">mManagement</a> and <a href="#">RRM</a> Radio Resource Management Mobility <a href="#">mManagement</a> Radio Resource Management Inter-RAT Mobility[/Interworking] <a href="#">and Handover</a> <a href="#">Intra-RAT Mobility and Handover</a> Reporting, Measurements, and Provisioning Support Connection/Session Management <a href="#">Network Entry/Re-entry</a> <a href="#">Cell Selection and Reselection</a> <a href="#">Dynamic Load Control and Multi-carrier Support</a> <a href="#">Multi-Radio Coexistence</a> <a href="#">Base Station Coordination</a>

y.y.18	Interference <b>m</b> Mitigation within <b>r</b> Radio <b>i</b> Interface
y.y.19	Synchronization
y.y.20	Power <b>e</b> Efficiency
<a href="#">y.y.21</a>	<a href="#">Control Channel Structure</a>
<a href="#">y.y.22</a>	<a href="#">Layer 1 and Layer 2 Overhead Estimation</a>
<a href="#">y.y.23</a>	<a href="#">Measurement and Reporting</a>

## Text elements from SWG Radio Aspects for Annex 7

### z.z Technological matters

The following is the list of criteria and attributes to be used in the evaluations of candidate RITs.

#### Criteria and attributes for candidate RITs

Index	Criteria and attributes	Proponents' comments	Evaluators' comments	Related attributes in Annex 6
<b>Minimum Parameters</b>				
z.z.1	Cell spectral efficiency			
z.z.2	Peak data rate			
z.z.3	Cell edge user throughput			
z.z.4	Latency Control plane latency Transport delay ( <a href="#">Data/User plane latency</a> ) QoS			
z.z.5	Mobility			
z.z.6	Handover Handover Support Handover Interruption Time			
<b>Other parameters for evaluation</b>				
z.z.7	VoIP Capacity			
z.z.8	[Technology complexity]			
z.z.9	Cell Coverage			
z.z.10	<a href="#">e</a> Ecdf of user throughput			
z.z.11	QoS [Editor's note: consideration should be given to including the 4 classes from M.1079 and reference to ITU-T Y.1541]			
z.z.12	Capacity considerations/ Supported user density			

## **Text elements from SWG Radio Aspects on technological matters for Annex 8**

*[Note: this technology-related ITU-R documents list should be updated upon finalisation of the Circular Letter.]*

### **Relevant Recommendations, Reports and documents for Annex 8 (Technology)**

- Recommendation ITU-R M.1036 – Frequency arrangements for implementation of the terrestrial component of International Mobile Telecommunications-2000 (IMT-2000) in the bands 806-960 MHz, 1 710-2 025 MHz, 2 110-2 200 MHz and 2 500-2 690 MHz.
- Recommendation ITU-R M.1768 – Methodology for calculation of spectrum requirements for the future development of the terrestrial component of IMT-2000 and systems beyond IMT-2000.
- Report ITU-R M.2074 – Radio aspects for the terrestrial component of IMT-2000 and systems beyond IMT-2000.
- Report ITU-R M.2078 – Spectrum requirements for the future development of IMT-2000 and IMT-Advanced.
- Report ITU-R M.2079 – Technical and operational information for identifying spectrum for the terrestrial component of future development of IMT-2000 and IMT-Advanced.
- Report/Recommendation ITU-R M.[IMT.SHARING CANDI].
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