

Working Party 5D

PROCEDURE FOR THE DEVELOPMENT OF DRAFT REVISIONS OF RECOMMENDATION ITU-R M.2012¹

Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-Advanced (IMT-Advanced)

1 Basic principles

considering

- a) Resolution ITU-R 57-1 on the “Principles for the process of development of IMT-Advanced” outlines the essential criteria and principles that will be used in the process of developing the Recommendations and Reports for IMT-Advanced, including Recommendation(s) for the radio interface specification;
- b) that new terrestrial radio interfaces that are developed over time should be considered for inclusion in IMT-Advanced in a timely fashion;
- c) that, to remain relevant and useful to the global community, Recommendation ITU-R M.2012 needs to include the latest and most current revisions of the detailed specifications for the technologies that were designated as meeting the requirements for IMT-Advanced;
- d) that the ongoing work results in the evolution of the technologies, necessitating the revision of standards, following rigorous scrutiny in the responsible organizations.

WP 5D has adopted the following basic principles for developing draft revisions of Recommendation ITU-R M.2012:

- 1) a recurring update (which would typically result in approval of a Revision on a yearly basis, with each revision cycle spanning more than one year) within ITU-R for the formal revision of the Recommendation ITU-R M.2012 is appropriate in order to incorporate the latest and most up to date versions of the detailed specifications in Recommendation ITU-R M.2012;

¹ This procedure for the development of draft revisions of Recommendation ITU-R M.2012 does not apply to the situation specified in Resolution ITU-R 57-1 in which the minimum technical requirements and evaluation criteria are changed, as these will be designated as separately identifiable versions for IMT-Advanced. As such, this procedure specifically refers to Report ITU-R M.2133 (2008), Report ITU-R M.2134 (2008), Report ITU-R M.2135-1 (2009).

- 2) that new proposals for candidate terrestrial radio interface technologies will follow the process used for the initial IMT-Advanced technologies; and
- 3) that the proposed revisions of existing terrestrial radio interface technologies in Recommendation ITU-R M.2012 are addressed according to the process in Section 3 below taking due note of the *considerings* above and the relationship established between the ITU-R and the External Organizations in developing the prior versions.

It should also be noted that specific timing details for a particular Revision will be provided in an IMT/ADV document.

As appropriate, Circular Letters and/or liaisons to announce availability of relevant IMT/ADV documents as well as additional specific details and associated timings will be forthcoming.

2 Revision process in the case of a new proposal for a candidate terrestrial radio interface technology for IMT-Advanced

When a new RIT or SRIT is proposed by an *RIT/SRIT Proponent*, the proposal will follow the process for IMT-Advanced as defined in Document IMT-ADV/2(Rev.1), with the following modifications.

The process will begin at Step 3 (“Submission/reception of the RIT and SRIT proposals and acknowledgement of receipt”). Documents IMT-ADV/2(Rev.1), and Reports ITU-R M.2133 (2008), ITU-R M.2134 (2008), ITU-R M.2135-1 (2009), will apply. For timing purposes, the meeting at which the new proposal is submitted will be considered “Critical Milestone (1)”, the proposal deadline meeting, as defined in the Schedule of Document IMT-ADV/2(Rev.1) in Figure A2-1. Within the process as outlined in Figure A2-1 the specific dates of the schedule will be appropriately decided respecting the steps of the process (approximately four meetings from “Critical Milestone (1)” to the finalization of Step 7 of the process in Document IMT-ADV/2(Rev.1).

A Circular Letter will be released announcing receipt by WP5D of a “complete” candidate technology submission and an invitation for the formation of Independent Evaluation Groups and subsequent submission of Evaluation Reports.

In Step 4, organizations wishing to become independent evaluation groups for the newly proposed candidate technology, are requested to register with ITU-R in advance of the meeting following the issuance of the Circular Letter.

In Step 8, Document IMT-ADV/24(Rev.1) (“Process and the use of Global Core Specification (GCS), references, and related certifications in conjunction with Recommendation ITU-R M.2012”) will apply. The completion of Step 8 will be synchronized with the recurring update of Recommendation ITU-R M.2012. Consequently, after successful completion of Step 7, the new technology can enter the revision cycle for Recommendation ITU-R M.2012 at Y+2A or as late as Y+2B as outlined in Table 1 or 2 for inclusion in the current planned Revision.

3 Revision process in the case of existing IMT-Advanced technologies

Different types of updates can occur: the sub-sections (and their combinations) attempt to cover all possible cases.

Updates requiring a modification of the GCS or the DIS

In the case that a proposed update is a revision of an RIT or SRIT that proposes a modification of the GCS or DIS hence requiring a Certification B (section 1, section 2, and section 3, as appropriate), the following must be submitted to WP 5D by the *GCS Proponent*:

- 1) announcement of a proposed update;
- 2) a summary of the proposed update, including the rationale for the proposed update;
- 3) the detailed update, including the compliance templates from Report ITU-R M.2133 (2008) Section 4.2.4, and any related supporting material, given that the full context of the total terrestrial radio interface is considered to be the original submission and any previously approved updates as well as this proposed update.

Working Party 5D can then conclude that the overall **GCS Proponent**'s submitted update material, including the GCS or DIS and the Certifications, is self-consistent and that the proposed Revision continues to meet the IMT-Advanced requirements, in which case the proposed update can proceed through the remaining portion of the update process.

A yearly update process requires that the update begin in the later part of the prior year in order for the cycle to complete in time to submit the draft revision into the Study Group 5 meeting for approval assuming the typical year-end Study Group meeting cycle.

For the case where a GCS is utilized, Table 1 in Annex 1 outlines the update cycle framework, from announcement of the start of the update window until the completion in WP 5D and subsequent submission of the draft revision of Recommendation ITU-R M.2012 to Study Group 5.

Working Party 5D provides opportunity for the **GCS Proponent** and the **Transposition Organization** to provide advanced notification to WP 5D of their coordinated selection of the relevant "Y+2" meeting for the Revised GCS based on their schedules which can result in a window of transposition that can be from approximately 3 to 6 months. The "Y+2" meeting can alternatively for a particular technology update be in either the "Y+2A" or "Y+2B" WP 5D meeting timeframe. In the absence of an advance notification selecting "Y+2A", "Y+2B" will be the assumed selection. Figure 1 provides an illustration of this flexible Y+2 approach for the GCS. It is clarified that in case alternative "Y+2A" is chosen, it is not precluded to revisit the coordinated selection of the relevant "Y+2" between the **GCS Proponent** and the **Transposition Organization**, and opting for alternative "Y+2B", thus submitting a new complete update in Item 7, "Y+2B" meeting timeframe.

For the case where no GCS is utilized, Table 2 in Annex 1 outlines the update cycle framework, from announcement of the start of the update window until the completion in WP 5D and subsequent submission of the draft revision of Recommendation ITU-R M.2012 to Study Group 5.

Updates not requiring a modification of the GCS or DIS:

Scenario 1 - The case of a revised Overview, revised synopsis, or other material in Recommendation ITU-R M.2012 under the purview of the GCS Proponent

In the case that a proposed update is a revision of the Overview, and/or synopsis or other material of an existing RIT or SRIT that does not require a modification of the GCS or DIS, the **GCS proponent** needs to submit to WP 5D:

- 1) announcement of a proposed update;
- 2) a summary of the proposed changes, and the rationale for those changes;
- 3) the detailed changes, and a self-declaration indicating that those changes are consistent with the existing GCS or DIS.

In Scenario 1, no Certification is required. This process should follow the schedule in Table 1 or 2.

Scenario 2 - The case of a new Transposing Organization(s), or removal of a Transposing Organization(s)

In the case that only the *Transposing Organizations* for the RIT or SRIT are changed, **GCS proponent** must re-submit Certification B, Section 2 and/or section 3, as appropriate. This process should follow the schedule in Table 1, starting from meeting Y+2A or Y+2B.

Scenario 3 - The case of update of only a specific set or sets of the transposition references

In the case that only a specific set or sets of transposition references are updated, the relevant Transposing Organization(s) should announce this update to WP 5D: this process should follow the schedule in Table 1, starting from meeting Y+2A or Y+2B. The Transposing Organization(s) must provide at the same time of the announcement the complete update information, including a summary and rationale of the proposed update, the updated specific set or sets of the transposition references, and Certification C. At the same meeting as the announcement by the Transposing Organization (s), the **GCS Proponent** must inform WP 5D of their agreement with the proposed update.

NOTE - Scenarios 2 and 3 are not applicable to the case where a DIS is utilized.

4 Completion of Relevant Business Matters

Recommendation ITU-R M.2012 utilizes references to external material in conjunction with Resolution ITU-R 9-4 following the IMT-Advanced process delineated in documents IMT-ADV/2(Rev.1) and IMT-ADV/24(Rev1) and related correspondence.

IMT-ADV/24(Rev1) in Section III also outlines criteria and obligations for the **GCS Proponent** and the *Transposing Organizations* particularly with regard to complying with Resolution ITU-R 9-4.

It is critical to the successful conclusion of the Revisions of Rec. ITU-R M.2012 that the necessary business and administrative matters outlined in IMT-ADV/24(Rev1) and Resolution ITU-R 9-4, including the Guidelines associated with Resolution ITU-R 9 (Liaison and collaboration with other organizations) and the **GCS Proponents** and the *Transposing Organizations* be completed.

As appropriate, the Radiocommunication Bureau should contact the **GCS Proponents** and the *Transposing Organizations* to put these necessary business and administrative arrangements in place in due time, not later than the deadline established for Item 9 in Table 1 or Item 8 in Table 2.

The following links provide further background on this point.

- ITU-R Resolution 9-4: <http://www.itu.int/pub/R-RES-R.9-4-2012>.
- Guidelines for the contribution of material of other organizations to the work of the Study Groups and for inviting other organizations to take part in the study of specific matters: <http://www.itu.int/oth/ROA01000002/en>.

5 References

Document IMT-ADV/2(Rev.1) (“Submission and evaluation process and consensus building”).

Document IMT-ADV/24(Rev.1) (“Process and the use of Global Core Specification (GCS), references, and related certifications in conjunction with Recommendation ITU-R M.2012”).

Recommendation ITU-R M.2012 (“Detailed specifications of the terrestrial radio interfaces of IMT-Advanced”).

Report ITU-R M.2133 (2008) (“Requirements, evaluation criteria and submission templates for the development of IMT-Advanced”).

Report ITU-R M.2134 (2008) (“Requirements related to technical performance for IMT-Advanced radio interface(s)”).

Report ITU-R M.2135-1 (2009) (“Guidelines for evaluation of radio interface technologies for IMT-Advanced”).

ANNEX 1

TABLE 1

Framework of a Revision Cycle for updates of existing technologies in Recommendation ITU-R M.2012 applicable to Section 3 in case when a GCS is utilized

Item	Entity	Meeting designation & timeframe	Action/Deliverable/Milestone
1	WP 5D	Meeting “Y-1” or earlier (Approximately February prior year or earlier)	Communiqué to <i>GCS Proponent, Transposing Organizations, and relevant External Organizations</i> announcing the next revision of Rec. ITU-R M.2012 and providing the detailed timelines for the revision.
2	<i>Existing GCS Proponent</i>	Meeting “Y” (Approximately June prior year)	Delivery to ITU-R by existing <i>GCS Proponent</i> of the initial announcement that a revision to a particular RIT or SRIT will be proposed.*
3	WP 5D	Meeting “Y” (Approximately June of prior year)	WP 5D review of submitted materials and opportunity for responding to <i>GCS Proponents</i> .
4	<i>Existing GCS Proponent</i>	Meeting “Y+1” (Approximately October of prior year)	Delivery to ITU-R by the <i>GCS Proponent</i> of further information, including a summary and rationale of the proposed update.*
5	WP 5D	Meeting “Y+1” (Approximately October of prior year)	WP 5D review of submitted materials and opportunity for responding to <i>GCS Proponents</i> .

* Required in case of an update of the GCS or in the case of a revised Overview, revised synopsis, or other material in Recommendation ITU-R M.2012 under the purview of the *GCS Proponent*.

Item	Entity	Meeting designation & timeframe	Action/Deliverable/Milestone
6	<p><i>Existing GCS Proponent or Existing Transposing Organization (Scenario 3 only)</i></p>	<p>Meeting “Y+2A” Alternative 1 (Approximately February of current revision year)</p>	<p><i>Case requiring a modification of the GCS</i> Delivery to ITU-R by the GCS Proponent of the detailed update, including the compliance templates 4.2.4 from Report ITU-R M.2133 (2008) and any related supporting material for the proposed update to Rec. ITU-R M.2012, given that the full context of the total terrestrial radio interface is considered to be the original submission and any previously approved updates as well as this proposed update.</p> <p>Delivery to ITU-R by the GCS Proponent of the revised/updated GCS.</p> <p>Delivery to ITU-R of Certification B (section 1, section 2, and section 3, as appropriate) by GCS Proponents.</p> <p><i>Cases not requiring a modification of the GCS</i> Scenario 1 - Case of a revised Overview, synopsis, or other material in Rec. ITU-R M.2012: Delivery to ITU-R by the GCS Proponent of the update of the associated material and a self-declaration indicating that those changes are consistent with existing GCS.</p> <p>Scenario 2 - Case of a new Transposing Organization(s) or removal of a Transposing Organization(s) Delivery to ITU-R of Certification B, section 2, and/or section 3, by GCS Proponents.</p> <p>Scenario 3 – Case of update of only a particular set or sets of the transposition references Delivery to ITU-R by the Transposing Organization of the complete update information, including a summary and rationale of the proposed update, the updated specific set or sets of the transposition references, and Certification C. At the same meeting as the announcement by the Transposing Organization (s), the GCS Proponent must inform WP 5D of their agreement with the proposed update.</p>

Item	Entity	Meeting designation & timeframe	Action/Deliverable/Milestone
7	<p>Existing GCS Proponent or Existing Transposing Organization (Scenario 3 only)</p>	<p>Meeting “Y+2B” Alternative 2 (Approximately June of current revision year)</p>	<p><i>Case requiring a modification of the GCS</i> Delivery to ITU-R by the GCS Proponent of the detailed update, including the compliance templates 4.2.4 from Report ITU-R M.2133 (2008) and any related supporting material for the proposed update to Rec. ITU-R M.2012, given that the full context of the total terrestrial radio interface is considered to be the original submission and any previously approved updates as well as this proposed update.</p> <p>Delivery to ITU-R by the GCS Proponent of the revised/updated GCS.</p> <p>Delivery to ITU-R of Certification B (section 1, section 2, and section 3, as appropriate) by GCS Proponents.</p> <p><i>Cases not requiring a modification of the GCS</i> <i>Scenario 1 - Case of a revised Overview, synopsis, or other material in Rec. ITU-R M.2012:</i> Delivery to ITU-R by the GCS Proponent of the update of the associated material and a self-declaration indicating that those changes are consistent with existing GCS.</p> <p><i>Scenario 2 - Case of a new Transposing Organization(s) or removal of a Transposing Organization(s)</i> Delivery to ITU-R of Certification B, section 2, and/or section 3, by GCS Proponents.</p> <p><i>Scenario 3 – Case of update of only a particular set or sets of the transposition references</i> Delivery to ITU-R by the Transposing Organization of the complete update information, including a summary and rationale of the proposed update, the updated specific set or sets of the transposition references, and Certification C. At the same meeting as the announcement by the Transposing Organization (s), the GCS Proponent must inform WP 5D of their agreement with the proposed update.</p>

Item	Entity	Meeting designation & timeframe	Action/Deliverable/Milestone
8	WP 5D	Meeting “Y+2A” or “Y+2B” (Approximately February or June of current revision year)	<p>WP 5D performs a review of the submitted material and reaches its conclusion on the acceptability of the proposed update for inclusion in the draft revision of Rec. ITU-R M.2012.</p> <p>WP 5D finalizes and agrees the specific technology update in the draft revision of Rec. ITU-R M.2012 (not necessarily including the detailed transposition references).</p> <p>WP 5D liaison of the WP 5D agreed draft Revision of Rec. ITU-R M.2012 to the relevant GCS Proponents and Transposing Organizations for their use in developing their inputs of the detailed references.</p> <p>Note: In any event, the WP 5D meeting (“Y+2B”) will finalize the entirety of the preliminary WP 5D agreed draft revision of Rec. ITU-R M.2012 for all updated technologies (not necessarily including the detailed transposition references).</p>
9	<i>Transposing Organizations</i>	Due to ITU-R approximately one month prior to the subsequent Meeting (Approximately September of current revision year)	<p>Delivery to ITU-R of transposition references by <u>each</u> Transposing Organization for incorporation into the WP 5D preliminary agreed draft revision of Rec. ITU-R M.2012.</p> <p>Delivery to ITU-R of Certification C by <u>each</u> Transposing Organization.</p> <p>Completion of relevant business matters and indication of compliance with ITU policy on IPR, as appropriate</p> <p><i>This Item9 does not apply to case of a Scenario 1 update.</i> <i>In case of Scenario 3, Item 9 does not apply because the Transposing Organization would have already provided the complete information by meeting “Y+2A” or “Y+2B”</i></p>
10	Radiocommunication Bureau	Prior to the subsequent meeting	The Radiocommunication Bureau is requested to provide to WP 5D a document that incorporates the transposition references
11	WP 5D	Subsequent Meeting (Approximately October of current revision year)	<p>WP 5D performs a final quality and completeness check of the draft revision of Rec. ITU-R M.2012.</p> <p>WP 5D forwards to Study Group 5 the Revision of Rec. ITU-R M.2012.</p>
12	Radiocommunication Bureau	(Approximately November/December of current revision year)	Submission by Counsellor for SG 5 of completed draft revision of Rec. ITU-R M.2012 (with all transposition references) to SG 5, based on currently anticipated SG 5 meeting schedule.

Item	Entity	Meeting designation & timeframe	Action/Deliverable/Milestone
13	Study Group 5	(Approximately November/December of current revision year)	Study Group 5 considers adoption of the revision of Rec. ITU-R M.2012 for forwarding to Member States for approval.

TABLE 2

Framework of a Revision Cycle for updates of existing technologies in Recommendation ITU-R M.2012 applicable to Section 3 in case where a GCS is not utilized

Item	Entity	Meeting designation & timeframe	Action/Deliverable/Milestone
1	WP 5D	Meeting “Y-1” or earlier (Approximately February prior year or earlier)	Communiqué to <i>GCS Proponent</i> , and relevant <i>External Organizations</i> announcing the next revision of Rec. ITU-R M.2012 and providing the detailed timelines for the revision.
2	<i>Existing GCS Proponent</i>	Meeting “Y” (Approximately June prior year)	Delivery to ITU-R by existing <i>GCS Proponent</i> of the initial announcement that a revision to a particular RIT or SRIT will be proposed.
3	WP 5D	Meeting “Y” (Approximately June of prior year)	WP 5D review of submitted materials and opportunity for responding to <i>GCS Proponents</i> .
4	<i>Existing GCS Proponent</i>	Meeting “Y+1” (Approximately October of prior year)	Delivery to ITU-R by the <i>GCS Proponent</i> of further information, including a summary of the proposed update and the rationale for the proposed update.
5	WP 5D	Meeting “Y+1” (Approximately October of prior year)	WP 5D review of submitted materials and opportunity for responding to <i>GCS Proponents</i> .

Item	Entity	Meeting designation & timeframe	Action/Deliverable/Milestone
6	<i>Existing GCS Proponent</i>	Meeting “Y+2B” (Approximately June of current revision year)	<p><i>Case requiring a modification of the DIS</i> Delivery to ITU-R by the GCS Proponent of the detailed update, including the compliance templates 4.2.4 from Report ITU-R M.2133 (2008) and any related supporting material for the proposed update to Rec. ITU-R M.2012, given that the full context of the total terrestrial radio interface is considered to be the original submission and any previously approved updates as well as this proposed update.</p> <p>Delivery to ITU-R by GCS Proponent of the revised/updated DIS.</p> <p>Delivery to ITU-R of Certification B (section 1) by GCS Proponents.</p> <p><i>Scenario 1 Case of a revised Overview, synopsis, or other material in Rec. ITU-R M.2012 not requiring a modification of the DIS</i> Delivery to ITU-R by the GCS Proponent of the update of the associated material and a self-declaration indicating that those changes are consistent with existing DIS.</p>
7	WP 5D	Meeting “Y+2B” (Approximately June of current revision year)	<p>WP 5D performs a review of the submitted material and reaches its conclusion on the acceptability of the proposed update for inclusion in the draft revision of Rec. ITU-R M.2012.</p> <p>WP 5D finalizes and agrees the specific technology update in the draft revision of Rec. ITU-R M.2012.</p> <p>WP 5D liaison of the WP 5D agreed draft revision of Rec. ITU-R M.2012 to the relevant GCS Proponents.</p>
8	GCS Proponents	Due to ITU-R approximately one month prior to the subsequent Meeting (Approximately September of current revision year)	Completion of relevant business matters and indication of compliance with ITU policy on IPR, as appropriate
9	WP 5D	Subsequent Meeting (Approximately October of current revision year)	<p>WP 5D performs a final quality and completeness check of the draft revision of Rec. ITU-R M.2012.</p> <p>WP 5D forwards to Study Group 5 the revision of Rec. ITU-R M.2012.</p>
10	Radiocommunication Bureau	(Approximately November/December of current revision year)	Submission by Counsellor for SG 5 of completed draft revision of Rec. ITU-R M.2012 to SG 5, based on currently anticipated SG 5 meeting schedule.

Item	Entity	Meeting designation & timeframe	Action/Deliverable/Milestone
11	Study Group 5	(Approximately November/December of current revision year)	Study Group 5 considers adoption of the revision of Rec. ITU-R M.2012 for forwarding to Member States for approval.

FIGURE 1
 Flexible Y+2 GCS Timing Illustration

