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| **Radiocommunication Study Groups** |  |
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| **12 November 2014** |
| **English only** |
| Working Party 5D |
| Submission and evaluation process and consensus building for future development of IMT-2000 |
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This document describes the process and activities identified for the future development of the IMT-2000 terrestrial components radio interface Recommendations.

Foreword

The update process for IMT-Advanced technologies defined in Recommendation [ITU-R M.2012](http://www.itu.int/rec/R-REC-M.2012/en) was developed in 2012[[1]](#footnote-1) and was based on the philosophies used for the update process for the IMT‑2000 technologies in Recommendation [ITU-R M.1457](http://www.itu.int/rec/R-REC-M.1457/en), while incorporating the principles of Resolution ITU-R 57-1 and various administrative improvements and clarifications.

The previous update procedure/process for IMT-2000[[2]](#footnote-2) developed in 2001 has served well for more than 10 years of updates, however there are a number of advantages to moving to a common procedural approach for both IMT-Advanced and IMT-2000 updates.

It was determined that the update process developed for IMT-Advanced could be utilized with some minor modifications as the procedure for future updates to IMT-2000 replacing the current Recommendation ITU-R M.1457 update procedure as was defined in Circular Letter 8/LCCE/95. The philosophy is to keep the revised Recommendation ITU-R M.1457 update process as close as possible to the IMT-Advanced update process, in order to incorporate the improvements introduced for IMT-Advanced also for the Recommendation ITU-R M.1457 update.

The relevant External Organizations also supported a move to similar processes/procedures for both IMT-Advanced and IMT-2000.

It is noted that the change to the update process for Recommendation ITU-R M.1457 as identified in this Document IMT-2000/1(Rev.1), administratively eases the work within all the organizations and also within the ITU-R.

# 1 Time schedule

The time schedule described below applies generically to the invitation for new candidate Radio Interface Technologies (RITs –also known as Radio Transmission Technologies -RTTs) or set of Radio Interface Technologies (SRITs –also known as set of Radio Transmission Technologies - SRTTs). Subsequent time schedules will be decided according to the submissions of proposals.

Submission of proposals may begin at any time subsequent to an appropriate -announcement for a specific revision of Recommendation ITU-R M.1457. The evaluation of a proposed new radio interface technology by the evaluation groups and the consensus-building process will be performed throughout the defined time period and thereafter. The detailed generic schedule can be found in Figure A2-1.

Figure A2-1

Generic Schedule for the development of new radio interfaces of IMT-2000 in
Recommendation ITU-R M. M.1457[[3]](#footnote-3)

**Steps in radio interface development process:**

Step1 and 2

**No.1**

**No.2**

**No.3**

**No.4**

**No.5**

**No.6**

**No.7**

**No.8**

**No.9**

Step 3

(0)

(1)

(20 months)

Step 4

(8 months)

(16 months)

(2)

Steps 5,6 and 7

(3)

Steps 8

(4)

(12 months)

(20 months)

WP 5D

meetings

Step 1: Issuance of the Announcement

Step 2: Development of candidate RITs and SRITs

Step 3: Submission/Reception of the RIT and SRIT

proposals and acknowledgment of receipt

Step 4:Evaluation of candidate RITs and SRITs

by evaluation groups

Step 5: Review and coordination of outside evaluation activities

Step 6: Review to assess compliance with minimum requirements

Step 7: Consideration of evaluation results, consensus building

and decision

Step 8: Development of radio interface Recommendation(s)

**Critical milestones in radio interface development process:**

(0): Issue an invitation to propose RITs

Meeting No. 1

(1): ITU proposed cut off for submission

Meeting No. 6

of candidate RIT and SRIT proposals

(2): Cut off for evaluation report to ITU

Meeting No. 8

(3): WP 5D decides framework and key

Meeting No. 9

characteristics of IMT-Advanced RITs and SRITs

(4): WP 5D completes development of radio

Meeting No. 10

interface specification Recommendations

**Year 1**

**Year 2**

**Year 3**

**No.10**

**Year 4**

# 2 Process

## 2.1 General

Historically the principles for the process of development of IMT-2000 was provided in Circular Letters 8/LCCE/47 and 8/LCCE/95 which outline the essential criteria and principles that are used in the process of developing the Recommendations and Reports for IMT-2000, including Recommendation(s) for the radio interface specification. While certain specific aspects of Circular Letters 8/LCCE/47 and 8/LCCE/95 are superseded by this current document, the general concepts continue to apply.

## 2.2 Detailed procedure

The detailed procedure is illustrated in Figure A2-2 and is described below. Some activities are external to ITU-R and others are internal.

Figure A2-2

IMT-2000 terrestrial component radio interface development process

Step 1

Announcement to invite

proposals for radio interface

technologies and

evaluations

Step

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Development of candidate

radio interface technologies

Step 5

Review and coordination of

outside evaluation activities

Step 6

Review to assess

compliance with minimum

requirements

Step 7

Consideration of evaluation

results, consensus building,

and decision

Descriptions of proposed radio

interface technologies and

evaluation Reports

Step 8

Development of Revision of

Rec. M.1457

Radio interface specifications

(Rec. M.1457), sufficiently detailed

to enable worldwide compatibility

Step 9

Implementation of

Recommendation

Step 4

Evaluation of candidate radio

interface technologies by

independent evaluation groups,

grouping of the technologies

through consensus building

Coordination between evaluation groups

ITU

-

R

Outside ITU

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R

Step 3

Submission/Reception of the

RIT and SRIT proposals and

acknowledgement of receipt

-

Step 1 – Announcement to invite proposals for radio interface technologies and evaluations, or revision to existing radio interface technologies

The ITU-R through an appropriate means, invites the submission of new candidate RITs or SRITs addressing the terrestrial component of IMT-2000.

The ITU-R through an appropriate means also invites subsequent submission of evaluation Reports on these candidate RITs or SRITs by registered evaluation groups in addition to the initial evaluation Report endorsed by the proponent in the case of submission of new candidate RITs
or SRITs.

Step 2 – Development of candidate RITs or SRITs

In this step, which is typically external to ITU-R, candidate terrestrial component RITs or SRITs are developed to satisfy the minimum technical requirements and evaluation criteria of IMT-2000 currently in force as defined in Document IMT-2000/4, in particular Circular Letter 8/LCCE/47 and its Attachments.

An RIT needs to fulfil the minimum requirements for at least one test environment as per Doc. IMT-2000/4 specifically Circular Letter 8/LCCE/47.

Step 3 – Submission/reception of the RIT and SRIT proposals and acknowledgement of receipt

The proponents of RITs or SRITs may be Member States, Sector Members, and Associates of ITU‑R Study Group 5, or other organizations in accordance with Resolution ITU-R 9-4.

The submission of a new candidate RIT or SRIT must include completed templates (these templates are provided in Document IMT-2000/4 specifically Circular Letter 8/LCCE/47 and its Attachments), together with any additional inputs which the proponent may consider relevant to the evaluation.

The entity that proposes a candidate RIT or SRIT to the ITU-R (the proponent) shall include with it either an initial self-evaluation or the proponents’ endorsement of an initial evaluation submitted by another entity. The submission will not be considered complete without an initial self-evaluation or the proponents’ endorsement of an initial evaluation submitted by another entity.

Proponents and IPR holders should indicate their compliance with the ITU policy on intellectual property rights (see Annex 1 of Resolution ITU-R 1-6), as specified in the Common Patent Policy for ITU‑T/ITU-R/ISO/IEC available at <http://www.itu.int/ITU-T/dbase/patent/patent-policy.html>.

The Radiocommunication Bureau (BR) receives the submission of technical information on
the candidate RITs and SRITs and acknowledges its receipt[[4]](#footnote-4).

Submissions should be addressed to the Counsellor for ITU-R Study Group 5, Mr. Sergio Buonomo (sergio.buonomo@itu.int). These submissions will be prepared as inputs to ITU-R Working Party 5D (WP 5D) and will also be made available on the ITU web page for the IMT-2000.

Step 4 – Evaluation of candidate RITs or SRITs by evaluation groups

Candidate RITs or SRITs will be evaluated. The ITU-R membership, standards organisations, and other organizations are invited to proceed with the evaluation. Organizations wishing to become independent evaluation groups are requested to register with ITU-R[[5]](#footnote-5) as outlined in the appropriate announcement. The evaluation groups are kindly requested to submit evaluation Reports to the ITU‑R. The evaluation Reports will be considered in the development of the ITU-R Recommendation describing the radio interface specifications.

The evaluation guidelines are provided in relevant Recommendations on IMT-2000 currently in force (specifically, Recommendation [ITU-R M.1225](http://www.itu.int/rec/R-REC-M.1225/en)[[6]](#footnote-6)).

If necessary, additional evaluation methodologies may be developed by each independent evaluation group to complement the evaluation guidelines in the relevant recommendations. Any such additional methodology should be shared between evaluation groups and sent to the BR for information to facilitate consideration of the evaluation results by ITU-R.

Coordination between evaluation groups is strongly encouraged to facilitate comparison and consistency of results, to assist ITU-R in developing an understanding of differences in evaluation results achieved by the independent evaluation groups and to form some preliminary consensus on the evaluation results. Consensus building is encouraged, such as grouping and/or syntheses by proponents in order to better meet the requirements of IMT-2000.

Each evaluation group will Report its conclusions to the ITU-R. Evaluation Reports should be addressed to the Counsellor for ITU-R Study Group 5, Mr. Sergio Buonomo (sergio.buonomo@itu.int). The evaluation Reports will be prepared as inputs to WP 5D and will also be made available on the ITU web page for the IMT-2000 evaluation process ([http://www.itu.int/ITU-R/go/rsg5-IMT-2000/](http://www.itu.int/ITU-R/go/rsg5-imt-2000/)).

The technical requirements and evaluation criteria for IMT-2000 are subject to reviews which may introduce changes to the technical requirements and evaluation criteria for IMT-2000.

Step 5 – Review and coordination of outside evaluation activities

WP 5D will act as the focal point for coordination between the various evaluation groups. In this step, WP 5D monitors the progress of the evaluation activities, and provides appropriate responses to problems or requests for guidance to facilitate consensus building.

Step 6 – Review to assess compliance with minimum requirements

In this step WP 5D makes an assessment of the proposal as to whether it meets the minimum technical requirements and evaluation criteria of the IMT-2000 currently in force as defined in Document IMT-2000/4, in particular Circular Letter 8/LCCE/47 and its Attachments.

Such a qualified RIT/SRIT will go forward for further consideration in Step 7.

According to the decision of the proponents, earlier steps may be revisited to complement, revise, clarify and include possible consensus-building for candidate RITs or SRITs including those that initially do not fulfil the minimum requirements of IMT-2000.

WP 5D will prepare a document on the activities of this step and assemble the reviewed proposals and relevant documentation. WP 5D will keep the proponents informed of the status of the assessment.

Such documentation and feedback resulting from this step can facilitate consensus building that might take place external to the ITU-R in support of Step 7.

Step 7 – Consideration of evaluation results, consensus building and decision

In this step WP 5D will consider the evaluation results of those RITs or SRITs that have satisfied the review process in Step 6.

Consensus building is performed with the objective of achieving global harmonization and having the potential for wide industry support for the radio interfaces that are developed for IMT-2000. This may include grouping of RITs or modifications to RITs to create SRITs that better meet the objectives of IMT-2000.

An RIT or SRIT will be accepted for inclusion in the standardization phase described in Step 8 if, as the result of deliberation by ITU-R, it is determined that the RIT or SRIT meets the requirements of IMT-2000 as expressed in document IMT-2000/4, specifically Circular Letter 8/LCCE/47.

Step 8 – Development of radio interface Recommendation(s)

In this step a (set of) IMT-2000 terrestrial component radio interface Recommendation(s) is developed within the ITU-R on the basis of the results of Step 7, sufficiently detailed to enable worldwide compatibility of operation and equipment, including roaming[[7]](#footnote-7).

This work may proceed in cooperation with relevant organizations external to ITU in order to complement the work within ITU‑R, using the principles set out in Resolution ITU-R 9-4.

Step 9 – Implementation of Recommendation(s)

In this step, activities external to ITU-R include the development of supplementary standards
(if appropriate), equipment design and development, testing, field trials, type approval
(if appropriate), development of relevant commercial aspects such as roaming agreements, manufacture and deployment of IMT-2000 infrastructure leading to commercial service.

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1. See Circular Letter [5/LCCE/2](http://www.itu.int/md/R00-CCV-CIR-0002/en) Addendum 5, (30 January 2012) and Document
IMT-ADV/25(Rev.1). [↑](#footnote-ref-1)
2. See Circular Letters 8/LCCE/47 & Addenda (4 April 1997 thru 26 May 1998) and 8/LCCE/95 Annex 1, (28 March 2001). [↑](#footnote-ref-2)
3. Timing may vary and it will be indicated in the announcements for the specific revisions of Recommendation ITU-R M.1457. [↑](#footnote-ref-3)
4. Provides the confirmation to the sender that the submission was received by the BR and that
the submission will be forwarded to WP 5D for subsequent consideration. [↑](#footnote-ref-4)
5. Evaluation group registration forms are available at:
[http://www.itu.int/ITU-R/go/rsg5-IMT-2000/](http://www.itu.int/ITU-R/go/rsg5-imt-2000/). [↑](#footnote-ref-5)
6. Note that the table and text given in Document IMT-2000/4 specifically Attachment 7 of Circular Letter 8/LCCE/47 supersedes Table 1 and its subsequent text in Annex 2, section 1, of Recommendation ITU-R M.1225. [↑](#footnote-ref-6)
7. Currently the IMT-2000 Radio Interface Specifications are contained in Recommendation ITU‑R M.1457. [↑](#footnote-ref-7)