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| **Radiocommunication Study Groups** |  |
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| **28 June 2011** |
| **English only**  **TECHNOLOGY ASPECTS** |
| Working Party 5A | |
| liaison statement to ITU-R Working party 5D, ITU-T Study groups 12, 15 and 16, and External organizations[[1]](#footnote-1) on  “QUALITY OF SERVICE REQUIREMENTS AND OBJECTIVES  FOR wireless access systems” | |

ITU-R Working Party 5A (WP 5A) would like to thank ITU-R Working Party 5D, ITU-T Study Group 12, Broadband Forum, 3GPP TSGs RAN/SA/CT, and TIA TR-45.5 for their liaison contributions in relation to the work of WP 5A on “Quality of service requirements and objectives for wireless access systems”, under [Question ITU-R 101-4/5](http://www.itu.int/publ/R-QUE-SG05.101/en).

One of the liaison contributions asked for further clarifications on the purpose of the document.

It should be noted that an ITU-R Recommendation is non-binding (i.e., it can be voluntarily applied or not applied) and “recommends specifications, data or guidance, provides a recommended way or ways of undertaking a specified task; or a recommended procedure or procedures for a specified application and which is considered to be sufficient to serve as a basis for international cooperation in a given context in the field of radiocommunications” (Resolution ITU-R 1-5).

In this draft Recommendation, the term ‘requirement’ refers to end-user performance expectations which are non-binding and can be voluntarily used or not used. This is consistent with the usage of “QoS requirements of user/customer” in Recommendation ITU‑T G.1000: “A statement of the level of quality required by the applications of customers/users of a service, which may be expressed non-technically”.

The intent of the proposed new Recommendation is to consolidate the end-user performance requirements and objectives for wireless access systems, as per other Recommendations on Quality of Service, such as:

– [Recommendation ITU-R M.1308](http://www.itu.int/rec/R-REC-M.1079/en) “Evolution of land mobile systems towards IMT‑2000”. This Recommendation provides information on the existing set of requirements and objectives specified in other ITU Recommendations for International Mobile Telecommunications-2000 (IMT-2000). This Recommendation provides guidelines for developers of pre-IMT-2000 systems who intend to evolve their systems towards IMT 2000. The approach of this Recommendation is further expanded in Volume 2 of the Land Mobile Handbook (including Wireless Access) “Principles and Approaches on Evolution to IMT-2000”, available at: <http://www.itu.int/pub/R-HDB-30>. In this handbook it is shown that in the telecommunications field, a combination of *facilities* or *components* (comprising hardware, software and network) constitutes a *system*, which gives rise to a set of *services*. The services may then be put to various *applications* by the user, shown diagrammatically:



With this framework in mind, the draft Recommendation currently being developed by WP 5A is intended to provide guidance on requirements and objectives from the end-user point of view (i.e., the box on the right-hand side), without imposing any choices that operators, manufacturers, partnership projects, and standards development organizations may wish to make when developing service and system requirements.

– [Recommendation ITU-R M.1079](http://www.itu.int/rec/R-REC-M.1079/en) “Performance and quality of service requirements for International Mobile Telecommunications-2000 (IMT-2000) access networks”. This Recommendation defines the speech/data quality and performance requirements for IMT‑2000 access networks taking into consideration the end-to-end requirements. It also defines the connection/session performance, concerning issues such as call set-up time, delay characteristics and handover probability, to be achieved in the IMT-2000 access network that the user will expect in a network of comparable performance to the fixed network.

– [Recommendation ITU-R F.1400](http://www.itu.int/rec/R-REC-F.1400/en) “Performance and availability requirements and objectives for fixed wireless access to public switched telephone network”.

To summarize, the WP 5A draft Recommendation:

– provides guidance on performance requirements from the point of view of the end users’ expectations, not from an implementation or system design perspectives, and which is based on end-to-end requirements from ITU-T;

– applies to fixed, nomadic and mobile public commercial wireless access systems, when the end-user station is within the coverage area.

Based on the proposals in the input liaison contributions the following actions were taken in the update of the document:

Doc. 5A/[615](http://www.itu.int/md/R07-WP5A-C-0615) (ITU-T SG 12): clarified the definition of delay variation by adding the point of reference and increased the threshold values.

Doc. 5A/[624](http://www.itu.int/md/R07-WP5A-C-0624) (Broadband Forum): updated the list of WP 5A contacts.

Doc. 5A/[626](http://www.itu.int/md/R07-WP5A-C-0626) (WP 5D): added the proposed sentence, including the titles of M.1079 and M.2034.

Doc. 5A/[646](http://www.itu.int/md/R07-WP5A-C-0646) (3GPP TSG RAN, SA, CT): accepted some proposals, clarified the meaning of ‘requirements’ and the purpose of the document, did not update the definitions as proposed in Doc. 5A/646 in order to keep the document more readable and aligned with the definitions in Y.1540. Also, the performance thresholds are maintained to keep the document general so that it is applicable to other systems besides 3GPP systems. The table of objectives for the QoS classes from a user perspective has been updated as proposed by 3GPP. As can be seen the revised draft, an additional reference were included to TS 22.105, in part to make it clear that the requirements are from an end-user perspective and not from a traffic management perspective. The reference to TS 23.203was maintained regarding the QCIs.

Doc. 5A/[648](http://www.itu.int/md/R07-WP5A-C-0648) (TIA TR-45.5): adopted most of the proposals except those that are implementation-related because the QoS in the WP 5A draft Recommendation is from the end users’ perspective.

The document is attached electronically for your consideration and comments. We would welcome further contributions to assist WP 5A in completing the draft ITU-R Recommendation.

Working Party 5A is planning to complete the draft Recommendation at its November 2011 meeting for submission to ITU-R Study Group 5.

Working Party 5A looks forward to further collaboration in this area.

The next meeting of Working Party 5A will be held on 8-17 November 2011. Deadline for contributions: 1 November 2011 at 1600 hours UTC.

**Attachment**: [Annex 9 to Document 5A/703](http://www.itu.int/md/choice_md.asp?id=R07-WP5A-C-0703!N09!MSW-E&lang=fr&type=sitems)

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1. 3GPP RAN, 3GPP2, ATIS, BBF, CDG, ETNO, ETSI BRAN, GSMA, IEEE, MEF, TIA, TTA, UMTS Forum, WiMAX Forum, WGA.  
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