



INTERNATIONAL TELECOMMUNICATION UNION

# ITU-T

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

WORLD TELECOMMUNICATION STANDARDIZATION  
ASSEMBLY  
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## **Resolution 76 – Studies related to conformance and interoperability testing, assistance to developing countries, and a possible future ITU Mark programme**

### ***CAUTION !***

### ***PREPUBLISHED RESOLUTION***

This prepublication is an unedited version of a recently approved Resolution. It will be replaced by the published version after editing. Therefore, there will be differences between this prepublication and the published version.

## FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

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## RESOLUTION 76

### **Studies related to conformance and interoperability testing, assistance to developing countries<sup>1</sup>, and a possible future ITU Mark programme**

*(Johannesburg, 2008; Dubai, 2012)*

The World Telecommunication Standardization Assembly (Dubai, 2012),

*recognizing*

- a) that interoperability of international telecommunication networks was the main reason to create the International Telegraph Union in the year 1865, and that this remains one of the main goals in the ITU strategic plan;
- b) that conformity assessment is the accepted way of demonstrating that a product adheres to an international standard and is increasingly important in the context of World Trade Organization members' international standardization commitments under the Agreement on Technical Barriers to Trade;
- c) that Recommendations ITU-T X.290 to ITU-T X.296 specify a general methodology for conformance testing of equipment to Recommendations of the ITU Telecommunication Standardization Sector (ITU-T);
- d) that conformance testing does not guarantee interoperability but would increase the chance of interoperability of equipment conforming to ITU standards;
- e) that very few of the current ITU-T Recommendations identify interoperability or conformance testing requirements;
- f) that Resolution 123 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference instructs the Secretary General and the Directors of the three Bureaux to work closely with each other in pursuing initiatives that assist in bridging the standardization gap between developing and developed countries;
- g) that technical training and institutional capacity development for testing and certification are essential issues for countries to improve their conformity assessment processes, to promote the deployment of advanced telecommunication networks and to increase global connectivity;
- h) that it is not appropriate for ITU itself to enter into certification and testing of equipment and services that many regional and national standards bodies also provide for conformance testing;
- i) that Article 17 of the ITU Constitution, while providing that the functions of ITU-T shall fulfil the purposes of the Union relating to telecommunication standardization, stipulates that such functions are to be performed "bearing in mind the particular concerns of the developing countries";
- j) the excellent results achieved by ITU in implementing the mark for Global Mobile Personal Communications Systems (GMPCS),

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<sup>1</sup> These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

*further recognizing*

that providing for interoperability should be the ultimate aim of future ITU-T Recommendations,

*considering*

- a) that there is an increasing number of complaints that equipment is often not fully interoperable with other equipment;
- b) that some countries, especially the developing countries, have not yet acquired the capacity to test equipment and provide assurance to consumers in their countries;
- c) that increased confidence in the conformance of information and communication technologies (ICT) equipment with ITU-T Recommendations would increase the chances of end-to-end interoperability of equipment from different manufacturers, and would assist developing countries in the choice of solutions;
- d) that the 2012 session of the ITU Council in reviewing the ITU Conformance and Interoperability Business Plan for the long-term implementation of the conformance and interoperability (C&I) programme agreed on an action plan which in particular invited WTSA-12 to identify the appropriate study group to address the sector's activities related to the ITU C&I programme across all study groups,
- e) that the Plenipotentiary Conference adopted Resolution 177 (Guadalajara, 2010);
- f) that the World Telecommunication Standardization Assembly adopted Resolution 76 (Johannesburg, 2008);
- g) that the World Telecommunication Development Conference adopted Resolution 47 (Rev. Hyderabad, 2010);
- h) that the ITU Radiocommunication Assembly adopted Resolution 62 (Geneva, 2012);
- i) the progress reports presented by the Director of the Telecommunication Standardization Bureau to the Council at its 2009, 2010, 2011 and 2012 sessions and to the 2010 Plenipotentiary Conference;
- j) the importance, especially to developing countries, that ITU takes up a leading role in interoperability issues, and that this is an objective expressed by the approval of the Resolutions listed on items d), e), f) and g) that the proposed C&I Programme is intended to address these demands;
- k) the executive summary of the ITU Conformance and Interoperability Business Plan report, highlighting important issues regarding the four pillars of the ITU C&I Programme: 1- Conformance assessment; 2- Interoperability events; 3- Capacity building; and 4- Establishment of test centres in developing countries,

*noting*

- a) that conformance and interoperability requirements to support testing are essential components for developing interoperable equipment that is based on ITU-T Recommendations;
- b) that considerable practical experience exists within the ITU-T membership regarding the production of relevant testing standards and the testing procedures on which the actions proposed in this resolution are based;
- c) the need to assist developing countries in facilitating solutions which will exhibit interoperability and reduce the cost of systems and equipment procurement by operators, particularly in the developing countries, whilst improving product quality;

d) that when interoperability experiments or testing have not been performed, users may have suffered from the lack of interconnection performance between equipment from different manufacturers,

*taking into account*

a) that ITU-T has in the past occasionally initiated conformance and interoperability testing, as reported in Supplement 2 to the ITU-T A-series Recommendation;

b) that the ITU standardization resources are limited and interoperability testing requires specific technical infrastructure;

c) that a different set of experts is required for writing test suites, interoperability testing standardization, product development, and product testing;

d) that it is of advantage if interoperability testing is done by users of the standard who were not involved in the standardization process itself, rather than the standardization experts who have written the specifications;

e) that collaboration with external accreditation, conformity assessment and certification bodies is therefore necessary;

f) that forums, consortia and other organizations have already established certification programs,

*resolves*

1 that ITU-T study groups develop the necessary conformance testing Recommendations for telecommunication equipment as soon as possible;

2 that ITU-T Study Group 11 coordinates the sector's activities related to the ITU C&I programme across all study groups and reviews the recommendations in the Conformance and Interoperability Business Plan for the long term implementation of the C&I programme;

3 that ITU-T Recommendations to address interoperability testing shall be progressed as quickly as possible;

4 that ITU-T, in collaboration with the other Sectors as appropriate, shall develop a programme to:

i) assist developing countries in identifying human and institutional capacity-building and training opportunities in conformance and interoperability testing;

ii) assist developing countries in establishing regional or subregional conformance and interoperability centres suitable to perform conformance and interoperability testing as appropriate encouraging cooperation with governmental and non governmental, national and regional organizations and international accreditation and certification bodies;

5 that conformance and interoperability testing requirements shall provide for verification of the parameters defined in the current and future ITU-T Recommendations as determined by the Study Groups developing the Recommendations, and for interoperability testing to ensure interoperability taking into account user needs and in consideration of the market demand, as appropriate,

*instructs the Director of the Telecommunication Standardization Bureau*

1 in cooperation with the Radiocommunication Bureau and the Telecommunication Development Bureau, to continue to conduct as necessary exploratory activities in each region in order to identify and prioritize the problems faced by developing countries related to achieving interoperability of telecommunication/ICT equipment and services;

2 in cooperation with the Director of the Telecommunication Development Bureau based on results of *instructs the Director of the Telecommunication Standardization Bureau 1* above, to implement the action plan agreed by the Council in its session of 2012 (C12/91) as referred to the Report by the ITU Secretary General to the Council 2012 (C12/48) :

3 in cooperation with the Director of the Telecommunication Development Bureau to implement an ITU conformance and interoperability programme for a possible introduction of an ITU Mark in alignment with the Council 2012 decision in C12/91.

4 to involve experts and external entities as appropriate;

5 to submit the results of these activities to ITU Council for its consideration and required actions,

*instructs the study groups*

1 to identify as soon as possible existing and future ITU-T Recommendations that would be candidates for conformance and interoperability testing, taking into account the needs of the membership (e.g. interoperability of next generation network (NGN) and future network (FN) equipment, terminals, audio/video codecs, access and transport network, other key technologies), that are capable of providing end-to-end interoperable services on a global scale, adding to their content, if necessary, specific requirements within their scope;

2 to prepare those ITU-T Recommendations, identified in *instructs the study groups 1* above, with a view to conducting conformance and interoperability tests as appropriate;

3 to cooperate, as appropriate, with interested stakeholders to optimize studies to prepare test specifications especially for those technologies in *instructs the study groups 1* above, taking into account user needs and in consideration of the market demand for a conformity assessment programme,

*invites the Council*

to consider the Director's report referred to in *instructs the Director of the Telecommunication Standardization Bureau 5* above,

*invites Member States and Sector Members*

1 to contribute to the implementation of this resolution;

2 to encourage national and regional testing entities to assist ITU-T in implementing this resolution.