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

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.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

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RESOLUTION 76 (Rev. Geneva, 2022)

Studies related to conformance and interoperability testing, assistance to developing countries[1], and a possible future ITU Mark programme

(Johannesburg, 2008; Dubai, 2012; Hammamet, 2016; Geneva 2022)

The World Telecommunication Standardization Assembly (Geneva, 2022),

recalling

a) that Resolution 123 (Rev. Dubai, 2018) of the Plenipotentiary Conference instructs the Secretary-General and the Directors of the three Bureaux to work closely with each other in order to step up actions intended to reduce the standardization gap between developing and developed countries;

b) that Resolution 200 (Rev. Dubai, 2018) of the Plenipotentiary Conference resolves to reaffirm a shared global vision for the development of the telecommunication/information and communication technology (ICT) sector, including broadband, for sustainable development under the Connect 2030 Agenda, envisaging "an information society, empowered by the interconnected world, where telecommunications/ICTs enable and accelerate social, economic and environmentally sustainable growth and development for everyone";

c) that Article 17 of the ITU Constitution, while providing that the functions of the ITU Telecommunication Standardization Sector (ITU-T) shall fulfil the purposes of the Union relating to telecommunication standardization, stipulates that ITU-T perform such functions "bearing in mind the particular concerns of the developing countries";

d) the efforts and outputs of the ITU-T Conformity Assessment Steering Committee (CASC) under the leadership of ITU-T Study Group 11;

e) Resolution 177 (Rev. Dubai, 2018) of the Plenipotentiary Conference, on conformance and interoperability (C&I),

recognizing

a) that interoperability of international telecommunication networks was the main reason for creating the International Telegraph Union in 1865, and that this remains one of the main goals in the ITU strategic plan;

b) that emerging technologies such as Internet of Things (IoT), International Mobile Telecommunications-2020 (IMT-2020), etc. have increasing requirements for C&I testing;

c) that conformity assessment is the accepted way of demonstrating that a product adheres to an international standard, and conformity assessment continues to be important in the context of World Trade Organization members' international standardization commitments under the Agreement on Technical Barriers to Trade;

d) that conformance testing does not guarantee interoperability but could increase the chance of interoperability of equipment conforming to ITU-T Recommendations, particularly during the development phase;

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[1] These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

e)　　　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;

f)　　　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;

g)　　　that CASC has been set up for the purpose of developing a procedure for the recognition of ITU experts and elaborating detailed procedures for the implementation of a test laboratory recognition procedure in ITU-T;

h)　　　that ITU-T has a Product Conformity Database and is progressively populating it with details of ICT equipment having undergone testing for conformity with ITU-T Recommendations;

i)　　　that the ITU C&I programme contains four pillars namely: 1) conformity assessment, 2) interoperability events, 3) human resource capacity building, and 4) assistance in the establishment of test centres and C&I programmes in developing countries;

j)　　　that providing for interoperability should be an important consideration when developing future ITU-T Recommendations;

k)　　　that testing for conformity with ITU-T Recommendations should help in efforts to address combating counterfeit ICT products;

l)　　　that enhancing Member States' capabilities for conformance assessment and testing and the availability of national and regional conformance assessment testing facilities may help combat counterfeit telecommunication/ICT devices and equipment;

m)　　　that C&I testing can facilitate the interoperability of certain emerging technologies such as IoT and IMT-2020,

　　　considering

a)　　　that Resolution 177 (Rev. Dubai, 2018) recognized further that a decision concerning the implementation of the ITU Mark would be postponed until Pillar 1 (conformity assessment) has reached a more mature stage of development;

b)　　　that there are numerous complaints that equipment is often not fully interoperable with other equipment;

c)　　　that interoperability testing could increase the chances of end-to-end interoperability of equipment from different manufacturers, and would assist developing countries in the choice of solutions;

d)　　　the importance, especially to developing countries, of ITU assuming a leading role in the implementation of the ITU C&I programme, with ITU-T taking lead responsibility for Pillars 1 and 2, and the ITU Telecommunication Development Sector (ITU-D) for Pillars 3 and 4;

e)　　　that the remote testing of equipment and services using virtual laboratories may enable countries, especially those with economies in transition and developing countries, to conduct C&I testing, while at the same time facilitating the exchange of experience among technical experts taking into account the positive results achieved in implementing the ITU pilot project for the creation of such laboratories;

f)　　　priorities of members, especially developing countries, to combat and deter counterfeit devices,

noting

a)   that C&I 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 requirements and the testing procedures on which the actions proposed in this resolution are based;

c)   the need to assist developing countries in facilitating interoperability, which can help in reducing the cost of systems and equipment procurement by operators, particularly in the developing countries, in order to enhance product quality and safety;

d)   that when interoperability experiments or testing are not performed, users may suffer from the lack of interconnection performance between equipment from different manufacturers;

e)   that availability of equipment tested as per ITU-T Recommendations for C&I may provide the basis for achieving a greater choice of solutions, greater competitiveness and more economies of scale,

taking into account

a)   that some ITU-T members carry out testing activities, including ITU-T study group pilot projects, to assess C&I;

b)   that ITU standardization resources are limited, and C&I testing requires specific technical infrastructure;

c)   that a diverse set of expertise is required for developing C&I test suites, C&I testing standardization, product development and product testing;

d)   that it is of advantage if regional and national accreditation and certification bodies conduct the C&I testing;

e)   that collaboration with a range of external conformity assessment bodies (including accreditation and certification) is necessary;

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

resolves

1   to continue working on the pilot projects that encourage conformity with ITU-T Recommendations, in order to gain experience and identify requirements and methodologies in the development of test suites;

2   that Study Group 11 continue to coordinate the Sector's activities related to the ITU C&I programme across all study groups;

3   that Study Group 11 continue to undertake activities within the C&I programme, including pilot projects on conformance/interoperability testing;

4   to continue working with accreditation bodies to recognize testing laboratories with competence to test in accordance with ITU-T Recommendations;

5   to encourage collaboration between ITU-T and ITU-D on the four pillars of the ITU C&I programme, each according to its responsibilities;

6   that conformance 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 take into account user needs and consider market demand, as appropriate;

7   to continue to develop a set of methodologies and procedures for remote testing using virtual laboratories;

8   that ITU-T could hold interoperability testing events as needed to promote the interoperability of equipment conforming to ITU-T Recommendations;

9   that ITU, being a world standardization body, can address the impediments to harmonization and growth of worldwide telecommunications and promote the visibility of ITU standards (ensure interoperability), by means of having an ITU testing mark regime, taking into account the technical and legal implications, if any, and/or any revenue-generating possibilities, and taking into consideration *recognizing f)*,

invites Member States and Sector Members of the ITU Telecommunication Development Sector

1   to evaluate and assess the risks and various costs resulting from the lack of C&I tests, particularly in developing countries, and share necessary information and recommendations to avoid losses, based on best practices;

2   to collaborate at regional level (especially developing countries) on the establishment of C&I test facilities through having different testing facilities located in different countries and making use of mutual recognition agreements and arrangements,

instructs the Director of the Telecommunication Standardization Bureau

1   to continue consultations and assessment studies in all regions, taking into consideration the needs of each region, on implementation of the action plan endorsed by the ITU Council, including, in collaboration with the Director of the Telecommunication Development Bureau (BDT), the recommendations on human capacity building and assistance in the establishment of test facilities in developing countries;

2   to implement the action plan agreed by the Council at its 2012 session and revised at its 2014 session, in cooperation with the Director of BDT;

3   considering *resolves* 9, to accelerate the implementation of Pillar 1, so as to ensure gradual and smooth accomplishment of the other three pillars and the possible implementation of the ITU Mark;

4   to continue implementing the ITU C&I programme, including the testing laboratory database and informative pilot conformity product database, identifying product conformance and origin, in cooperation with the Director of BDT, and in consultation with each region;

5   to publish an annual plan of C&I activities which could attract more members' participation;

6   to facilitate the development and implementation of an ITU-T C&I test laboratory recognition procedure;

7   to involve experts and external entities as appropriate;

8   to provide progress reports on the activities carried out under the action plan to the Council for its consideration and required actions;

9   to facilitate the interoperability testing events in order to achieve the interoperability of equipment conforming to ITU-T Recommendations,

instructs the study groups

1   to accelerate accomplishing the pilot projects started by ITU-T study groups and continue to identify existing ITU-T Recommendations that are candidates for C&I testing, taking into account the needs of the membership, and 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 the ITU-T Recommendations identified in *instructs the study groups* 1 above, with a view to conducting C&I tests as appropriate;

3   to continue and enhance cooperation, as appropriate, with interested stakeholders, including other standards-development organizations, forums and consortia, in order to optimize studies to prepare test specifications, taking into account user needs and in consideration of the market demand for a conformity assessment programme;

4   to submit to CASC a list of ITU-T Recommendations which could be candidates for the certification scheme, taking into account market needs,

instructs the ITU Telecommunication Standardization Sector Conformity Assessment Steering Committee

to study and define an ITU procedure to recognize testing laboratories that are competent to test according to ITU-T Recommendations, in collaboration with existing accreditation bodies,

invites the ITU Council

to consider the Director's report referred to in *instructs the Director of the Telecommunication Standardization Bureau* 8 above,

invites Member States and Sector Members

1   to contribute to the implementation of this resolution by, including, but not limited to:

i)   actively providing requirements for testing activities on C&I through contributions to related study groups;

ii)   considering potential collaboration on future C&I activities;

iii)   contributing to the Product Conformity Database;

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