

WORLD TELECOMMUNICATION STANDARDIZATION
ASSEMBLY

New Delhi, 15-24 October 2024

**Resolution 76 – 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, and 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. New Delhi, 2024)

Conformance and interoperability testing, assistance to developing countries, and a possible future ITU Mark programme

(Johannesburg, 2008; Dubai, 2012; Hammamet, 2016; Geneva, 2022; New Delhi, 2024)

The World Telecommunication Standardization Assembly (New Delhi, 2024),

recalling

- a)* that Resolution 123 (Rev. Bucharest, 2022) 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 intended actions and to reduce the standardization gap between developing¹ and developed countries;
- b)* 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";
- c)* the work carried out by ITU-T Study Group 11 on conformance and interoperability (C&I) programmes, including on the Conformity Assessment Steering Committee (CASC);
- d)* Resolution 177 (Rev. Bucharest, 2022) of the Plenipotentiary Conference, on C&I;
- e)* Resolution 47 (Rev. Kigali, 2022) of the World Telecommunication Development Conference, on enhancement of knowledge and effective application of ITU Recommendations in developing countries, including C&I testing of systems manufactured on the basis of ITU Recommendations,

recognizing

- a)* that interoperability of international telecommunication networks is one of the main goals in the ITU strategic plan;
- b)* that emerging technologies such as the Internet of Things and International Mobile Telecommunications-2020 and beyond 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 or technical regulation, and conformity assessment continues to be important in the context of World Trade Organization members' commitments under the Agreement on Technical Barriers to Trade regarding international standardization;

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

- d) that conformance testing does not guarantee interoperability but could increase the chance of interoperability of equipment that conforms to ITU-T Recommendations, in particular during the development phase;
- e) that technical training and institutional capacity development for conformance 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 conformance testing of equipment and services that many regional and national bodies also provide for conformance testing;
- g) that, along with ITU-T Recommendations, there are testing specifications for C&I developed by other conformity assessment bodies and standards-development organizations, forums and consortia;
- h) that CASC has developed a procedure for the appointment of ITU experts, as well as a procedure for recognizing competent testing laboratories;
- i) 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;
- j) that the ITU C&I programme is based on 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;
- k) that testing for conformity with ITU-T Recommendations could 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 products,

considering

- a) that Resolution 177 (Rev. Bucharest, 2022) 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 concerns 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 conformance testing of equipment and services using virtual laboratories may enable countries, in particular 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,

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 conformity and interoperability, which can help in reducing the cost of systems and equipment procurement by operators, in particular in developing countries;

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 that it would be beneficial if regional and national accreditation and certification bodies and accredited testing laboratories conducted the C&I testing, with the involvement of the ITU C&I programme;

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 duly recognized regional and national accreditation and certification bodies accredit testing laboratories and third-party certification bodies to certify C&I test results;

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 C&I testing and certification programmes,

resolves

- 1 to continue working on the pilot projects that encourage conformity assessment with ITU-T Recommendations, in order to gain experience and identify requirements and methodologies in the development of test suites;
- 2 that ITU-T Study Group 11 continue to undertake activities within the C&I programme, including pilot projects on conformance/interoperability testing, and coordinate the Sector's activities related to the ITU C&I programme across all ITU-T study groups;
- 3 to continue working with accreditation bodies to recognize testing laboratories with competence in conformance testing in accordance with ITU-T Recommendations;
- 4 to encourage collaboration with other organizations active in C&I and conformance testing programmes;
- 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, including federated testbeds;
- 8 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*) of this resolution,

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, in particular in developing countries, and share necessary information and recommendations to avoid losses, based on best practices;
- 2 to collaborate at regional level (in particular 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;
- 3 to develop technical skills and institutional capacity for C&I testing;
- 4 to strengthen initiatives for technical training and institutional capacity building in developing countries by supporting testing centres and conducting hands-on training and workshops on C&I testing,

instructs the Director of the Telecommunication Standardization Bureau

- 1 in collaboration with the Director of the Telecommunication Development Bureau (BDT), to continue consultations in all regions, taking into consideration the needs of each region, on implementation of the action plan endorsed by the ITU Council;
- 2 to support the Director of BDT in human capacity building and assistance in order to establish testing facilities in developing countries;
- 3 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;
- 4 considering *resolves* 8 of this resolution, to accelerate the implementation of Pillar 1 of the ITU C&I programme, so as to ensure gradual and smooth accomplishment of the other three pillars and the possible implementation of the ITU Mark;
- 5 in collaboration with the Director of BDT, and in consultation with each region, to continue implementing the ITU C&I programme, including the testing laboratory database and informative pilot conformity product database, identifying product conformance and origin;
- 6 to publish an annual plan of C&I activities which could attract more members' participation;
- 7 to facilitate implementation of the ITU-T C&I testing laboratory recognition procedure;
- 8 to facilitate the interoperability testing events in order to achieve the interoperability of equipment conforming to ITU-T Recommendations;
- 9 to maintain the ITU C&I portal, which highlights outcomes on the implementation of the ITU C&I programme, allowing members to continually assess the effectiveness of initiatives developed by ITU and to contribute towards its improvement,

instructs the study groups of the ITU Telecommunication Standardization Sector

- 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 C&I test suites 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

1 to maintain the procedure to appoint ITU-T technical experts for involvement in the testing laboratories' assessment teams of existing conformity assessment programmes, for the assessing/checking of the competence of testing laboratories;

2 to maintain a procedure for recognizing testing laboratories competent to test conformance according to ITU-T Recommendations, in collaboration with existing accreditation bodies,

invites the Director of the Telecommunication Standardization Bureau in collaboration with the Director of the Telecommunication Development Bureau

to collaborate with Member States and Sector Members in order to assist in the development and deployment of virtual laboratories to carry out remote testing in developing countries,

invites Member States, Sector Members and Associates

- 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 and the Testing Laboratory Database;
 - iv) encouraging small and medium enterprises to be involved in C&I activities;
- 2 to encourage national and regional C&I entities to assist ITU-T in implementing this resolution;
- 3 to promote the use of C&I by organizations/enterprises.