

PLENARY MEETING

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Report by the Secretary-General

IMPLEMENTATION OF THE CONFORMANCE AND INTEROPERABILITY (C&I) PROGRAMME

Summary

This document summarizes the status of implementation of ITU's Conformance and Interoperability (C&I) programme since PP-10. The document contains also updates from the TSB Director and the BDT Director since the Council May 2014 session.

Action required

PP-14 is invited **to note** the report.

References

PP [Resolution 177 \(Guadalajara, 2010\)](#); [WTSA Resolution 76 \(Dubai, 2012\)](#);
[WTDC Resolution 47 \(Dubai, 2014\)](#); RA [Resolution ITU-R 62 \(Geneva, 2012\)](#)
Website "[ITU Conformance and interoperability Portal](#)"; [C12/48](#); [C13/24\(Rev.1\)](#);
[C14/24\(Rev.1\)](#);

1 Introduction

- 1.1 Resolution 177 (Guadalajara, 2010) on Conformance and Interoperability (C&I) was adopted at PP-10 following the adoption of Resolution 76 by WTSA-08 (updated at WTSA-12) and Resolution 47 of WTDC-10 (updated at WTDC-14). Resolution ITU-R 62 was adopted by RA in 2012.
- 1.2 The ITU C&I programme mandated by Resolution 177 (Guadalajara, 2010) is based on four pillars: Pillar 1: Conformity assessment; Pillar 2: Interoperability events; Pillar 3: Capacity building; and Pillar 4: Assistance in the establishment of test centres and C&I programmes in developing countries.
- 1.3 [Actions of Pillar 1 and 2](#) are led by the Telecommunication Standardization Bureau (TSB), [actions of Pillar 3 and 4](#) by the Telecommunication Development Bureau (BDT). ITU-R continues to collaborate with, and provide information when requested by, ITU-T and ITU-D on C&I testing.
- 1.4 WTSA-12 tasked ITU-T Study Group 11 (SG11) to coordinate ITU-T activities related to the ITU C&I programme across all ITU-T study groups. ITU-T SG11 created a Working Party "C&I testing" and revised the terms of reference of the Joint Coordination Activity on C&I Testing (JCA-CIT).
- 1.5 Following the presentation of a business plan by KPMG, a consultancy, Council 2012 agreed on a C&I action plan, updated at Council 2013 ([C13/24\(Rev.1\)](#)) and Council 2014 ([C14/24\(Rev.1\)](#)).
- 1.6 WTDC-14 outcomes on C&I:
- The Dubai Declaration recognized that C&I of telecommunication/ICT equipment and systems can increase market opportunities and reliability and encourage global integration and trade.
 - Resolution 47 was amended, reaffirming the importance of collaboration and coordination among the three ITU Bureaux in implementing the ITU C&I programme.
 - The new ITU-D Study Group 2 (SG2), [Question 4/2](#) "Assistance to developing countries for implementing conformance and interoperability programmes" for the ITU-D study period 2014-2018 was approved with the following mandate: "Studies of various issues related to conformance and interoperability are to be reported, and among others the description of the technical, legislative and regulatory framework that would be needed to implement appropriate C&I programmes by developing countries." Envisaged outputs are available at <http://www.itu.int/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ04.2&stg=2>.
 - C&I is also part of the Outcomes of Objective 2, Output 2.2 of the Dubai Action Plan, focusing on the following issues: a) Educating technicians, policy-makers; b) providing assistance to developing countries in the establishment of national, regional or subregional C&I programmes; c) [Preparing guidelines](#).

2 Pillar 1 – Conformity Assessment

- 2.1 Conformity assessment (CA), as defined in ISO/IEC 17000, is "*the demonstration that specified requirements relating to a product, process, system, person or body are fulfilled.*" There are basically [three types of CA](#): 1st party CA (manufacturer's self-declaration-of-conformity (SDoC)), 2nd party CA (user, e.g. purchaser) and 3rd party CA.
- 2.2 Due to the broad scope of ITU-T Recommendations, a one-size-fits-all CA type for those ITU-T Recommendations which are suitable to CA is unlikely, i.e., there may be the need for 1st, 2nd or 3rd party CA or a combination thereof.

2.3 ITU-T SG11 developed and maintains a [living list of Recommendations on key technologies](#) suitable for C&I testing, and a [reference table of ITU-T Recommendations](#) which are under ICT industry testing practice based on feedback/inputs from other ITU-T study groups.

2.4 At its November 2013 meeting, ITU-T SG11 launched a conformance testing [pilot project](#) on “network management interface related Recommendations (ITU-T M.3170 series)” in collaboration with ITU-T SG2 to gather ‘hands-on’ CA experience to collaborate with a voluntary testing lab. ITU-T SG11 also established a Correspondence Group on “Collaboration between ITU-T and testing laboratories for ITU C&I programme” to discuss an ITU testing laboratories recognition procedure. The correspondence group proposes that ITU collaborate with existing CA schemes (including but not limited to IECEE, ILAC, etc.)

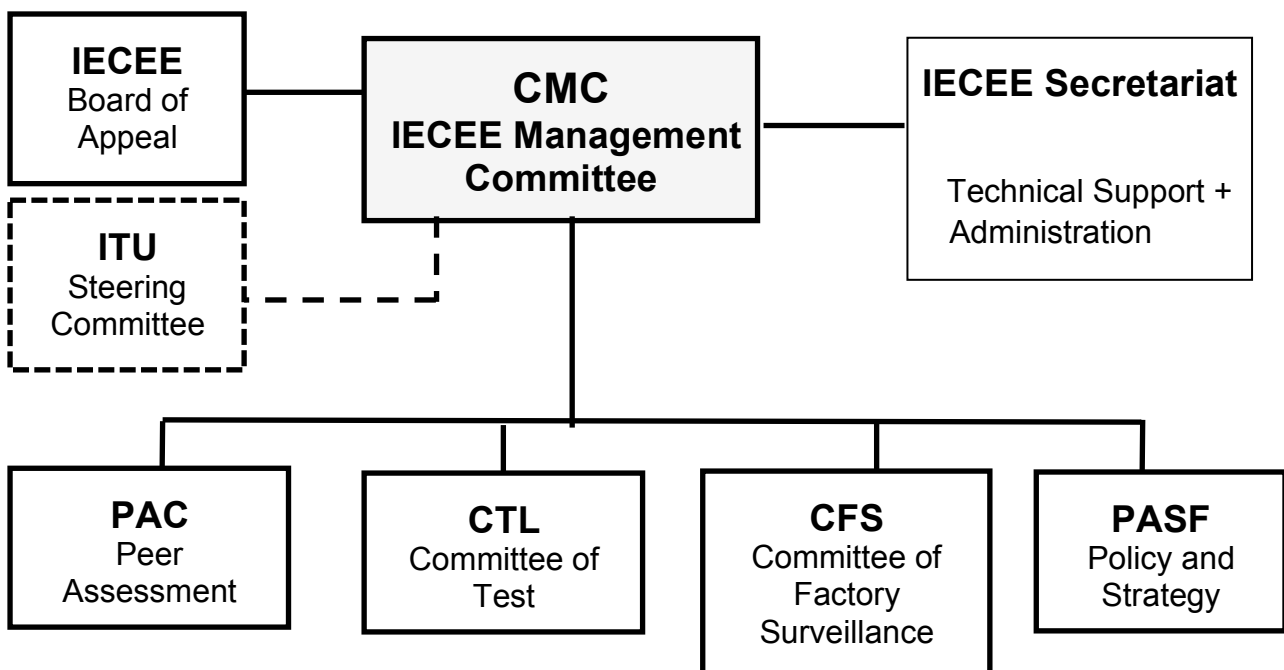
ITU collaboration with IEC / IECEE

2.5 The International Electrotechnical Commission (IEC) supports all three types of CA (1st, 2nd, 3rd party). In addition, IEC runs four CA Systems with dedicated Schemes based on 3rd party conformity assessment certification provided to the market on a voluntary basis.

2.6 It is intended therefore that ITU partner with IEC to conduct a trial of voluntary 3rd party CA of suitable ITU-T Recommendations. The following explanation has been developed in consultation with the IEC Central Office.

2.7 By partnering with IEC, ITU would benefit from IEC’s rich and long experience in CA, and use of an existing and well established framework whereas industry would benefit by way of a one-stop shop approach given the common coverage of areas by both IEC and ITU. It is also noted that many of the manufacturers with test labs participating in the IEC System also operate in the ITU space.

2.8 The IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE- System) operates within the IEC and has the current structure as described below with provision for an ITU-Steering Committee to be added:



2.9 In the IECEE System, a team of IECEE qualified assessors recognize (“accredit”) test labs which qualify for testing to specific international standards. A recognized test lab is able to issue certificates.

2.10 In analogy, in the “ITU CA pilot project” a team of assessors selected by ITU-T and qualified by IECEE would recognize test labs which qualify for testing specific ITU-T Recommendations. A recognized test lab would then be able to issue certificates.

2.11 As is current practice of the IECEE System, costs would be borne through membership fees and certificate fees.

2.12 IECEE CMC is the highest decision-making body of IECEE and manages the IECEE System. An ITU-TSB staff would be designated as the ITU Project Manager of the pilot and represent ITU in the IECEE CMC.

2.13 An ‘ITU steering committee’ would be established within the [IECEE organization structure](#), comprising the following members:

- ITU-TSB Director as Chairman;
- the ITU Project Manager (see above); and
- Members nominated from telecom/ICT industry, i.e. telecom operators, manufacturers and test labs.

2.14 IECEE representation including the IECEE Secretariat is invited to participate in the meeting of the ITU steering committee as observer(s).

2.15 The ‘ITU Steering Committee’ would:

- develop rules and procedures of the ITU pilot CA project based on IECEE scheme (for subsequent approval by the IECEE CMC);
- manage the ITU CA pilot project in accordance with such rules and procedures; and
- promote the ITU CA pilot project.

2.16 It would decide on the following aspects of the ITU CA pilot project for submission to the IECEE CMC, in line with [IECEE Basic Rules](#) and [Rules of Procedures](#):

- Membership;
- Finances;
- Appointments of the management team;
- ITU-T Recommendations;
- Appointments of assessors of the ITU-T Recommendations; and
- Establishment of sub groups as appropriate.

3 Pillar 2 – ITU Interoperability events

3.1 ITU has organized various interoperability and/or showcasing events. Participants of these events paid a participation fee. As a result of the feedback provided to the ITU-T study groups, some ITU-T Recommendations have been updated.

- Performance assessment of vehicle-mounted mobile phones in conjunction with hands-free terminals according to Chapter 12 of ITU-T P.1100 and P.1110; Geneva, May 2014.

- IPTV interoperability (ITU-T H.760): Geneva, July 2010; Singapore, September 2010; India, December 2010; Brazil, July 2011; United Arab Emirates, September 2011. Various showcasing events on ITU's IPTV standards (Dubai, September 2011; ITU Telecom, Geneva, October 2011; and at various ITU-T study group meetings).
- ITU members with the support of the ITU secretariat set up a global [ITU IPTV IPv6 Global testbed](#) which connects ITU headquarters and countries such as Japan, Singapore, South Africa, etc. to test interoperability of IPTV equipment/service as well as other IPv6-based technologies and also to promote IPv6 capability deployment in developing countries.
- NGN interoperability (ITU-T Q.3900): An interoperability event on NGN and IPTV was jointly organized by ITU and APT in September 2013, and with HATS in July 2012, Japan.
- e-health (ITU-T H.810): during the ITU-T SG 9 & and ITU-T SG16 meetings in 2012 and 2013.
- Home networking ("G.hn", ITU-T G.996x-series): In May 2011, G.hn chipset manufacturers took part in an interoperability event at ITU headquarters. The event was a joint effort of the HomeGrid Forum and the Broadband Forum.

4 Pillar 3 – Capacity building

Partnership with regional stakeholder and MoUs

4.1 ITU has signed Memorandums of Understanding (MoUs) with laboratories in the regions that are capable to provide training courses on C&I. To date, ITU has signed MoUs with CERT (Tunisia), CPqD (Brazil), Sintesio (Slovenia), Tilab (Telecom Italia), and ZNIIS (Russia). ITU continues to interact with UNIDO, ILAC, IAF and IEC to review best practices that could assist developing countries in addressing their C&I needs.

Workshops, forums and seminars

4.2 ITU's [workshops, forums and seminars](#) on C&I cover relevant aspects such as accreditation and certification, Mutual Recognition Agreements (MRAs), capacity building and the set-up of test labs in the regions, regional experiences and activities of various regional and international institutions, standards organizations, test labs and views from industry as an important insight.

4.3 The following events were held from 2010 to 2013:

- Workshop on NGN C&I Testing Centre(s), Nairobi (Kenya), 2-4 August 2010; 43 participants from 20 countries;
- ITU Regional Seminar for the Africa Region on C&I Testing Centre(s), Accra (Ghana), 4-6 July 2011; 150 participants from 25 countries;
- ITU Regional Seminar for the CIS Countries on C&I Testing Centre (s), Moscow (Russian Federation), 9-11 November 2011; 81 participants from 17 countries;
- ITU Forum on C&I for the Americas and Caribbean Region, Brasilia (Brazil), 12-15 June 2012; 50 participants from 10 countries;
- ITU Forum on C&I for the Arab and African Regions, 5-7 November 2012, and Training Course on C&I Testing, 8-10 November 2012, Tunis (Tunisia); 70 participants from 19 countries;
- [ITU](#), jointly with UNIDO, Forum on Sustainable Conformity Assessment for Asia-Pacific Region, Yangon (Myanmar), 25-27 November 2013; 73 participants from 10 countries;

4.4 [Events planned for 2014:](#)

- Workshop for CIS on C&I, Moscow, Russian Federation, 20-22 August 2014
- Workshops on C&I to present the results of the Assessment Study for the
 - o SADC region (September 2014);
 - o Maghreb region (September 2014);
 - o Caribbean region (December 2014);

Training courses

4.5 [Training courses](#) on C&I are planned and delivered on regional basis in collaboration with regional partners. Based on the priorities outlined by Member States, a C&I domain (e.g. Electromagnetic Compatibility, Safety, Mobile, NGN, etc.) is selected every year.

4.6 In 2013, C&I training courses focused on theory and practice in electromagnetic compatibility (EMC):

- Arab Region, Tunis (Tunisia), 2-6 April 2013; 9 participants from 7 countries;
- Americas Region, Campinas (Brazil), 24-28 June 2013; 11 participants from 9 countries;
- Africa Region, Tunis (Tunisia), 28 October – 1 November 2013; 9 participants from 6 countries.

4.7 For 2014, the following training courses address procedures on the establishment of C&I programmes and laboratory experience on type approval of mobile terminals:

- ARB region: Tunis, 17-21 March 2014; 13 participants from 7 countries;
- AMS region: Campinas, 12-16 May 2014; 16 participants from 10 countries;
- AFR region: Tunis, 23-27 June 2014; 22 participants from 20 countries;
- CIS region: Moscow, September 2014 (date to be defined).

5 Pillar 4 – Establishment of test centres and C&I programmes in developing countries

5.1 A number of countries have expressed strong interest in establishing regional test centres for conformance testing of ICT products and also assistance on establishing MRAs. ITU, taking into consideration the complexity of various national and regional policy and regulatory aspects, and cost associated with test centres, calls upon the regional organizations to assist in identifying the location of regional test centres.

Direct assistance to developing countries

5.2 ITU provides direct assistance on C&I programmes to address specific national and regional challenges in implementing a C&I roadmap, reviewing the C&I regime for type approval of ICT products, or analyzing the feasibility for building a testing center and/or developing MRAs.

ITU Guidelines

5.3 ITU prepared the following publications which provide elements for the establishment of test centers, MRAs and C&I regimes in developing countries:

1. Guidelines for Developing Countries: Establishing Conformity Assessment Test Labs in Different Regions (2012) ([link](#));
2. Development, Implementation and Management of Mutual Recognition Arrangements/Agreements (MRAs) on Conformity Assessment (2013) ([link](#));

3. Feasibility Study for the Establishment of a Conformance Testing Centre (2013) ([link](#));
4. Establishing Conformance and Interoperability Regimes – Basic Guidelines (2014) ([link](#)).
5. Establishing Conformance and Interoperability Regimes – Complete Guidelines ([link](#))

Assessment Study

5.4 [Assessment studies](#) are being conducted on a regional basis to determine C&I areas of commonalities and differences in the concerned countries with the purpose of promoting a common C&I regime at national, regional and sub-regional basis through the establishment of test laboratories and/or signing of MRAs. The study covers regulation, institutions, laboratories and type approval procedures of ICT products. Recommendations are produced to enable harmonized C&I programmes.

5.5 In 2013, an assessment study was conducted for the SADC region, covering 15 countries. The results and the recommendations will be presented in a workshop for the SADC region (2014). Similar assessments studies are in process for the Maghreb and Caribbean regions.

Follow-up

5.6 In discussions carried out during C&I events (trainings and workshops) it was suggested to establish Regional/Subregional Forums (Joint Committees). Their mandate would be to share information and to define a common approach for building Regional Testing Centres and/or, considering the high costs associated with such Centres, to establish MRAs as appropriate. MRAs would produce several benefits for manufacturers, conformity assessment bodies, regulators, consumers and policy-makers ([link](#)).

5.7 Since MRAs are formulated between and among cooperative parties often involving complex technologies, procedures and processes, a Regional Forum (Joint Committee) should be composed of policy-makers, regulators, operators and suppliers to assist the membership in establishing MRAs. The Joint Committee is intended to act at the request of the concerned parties and may also assist in dispute resolution under the terms of the MRA.

5.8 Full information about the content of MRAs and on how the Forums should act for establishing and maintaining MRAs is available at http://www.itu.int/en/ITU-D/Technology/Documents/ConformanceInteroperability/GuidelinesMRAs_E.pdf.
