

Workshop for Maghreb countries to promote the development and implementation of Conformity Assessment programmes



Tunis-Tunisia, 9-11 December 2014

ITU C&I Programme:

Pillars 1 and 2

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ITU Conformity & Interoperability Programme - Pillar 1 and 2

C&I basic terms



- **Conformity assessment (CA)** – the process used to demonstrate that a product, service or system conform to specified requirements. – ISO/IEC 17000
 - **1st party CA** – manufactures' self-declaration of conformity
 - **2nd party CA** - by user, e.g. purchaser, importer, retailer..
 - **3rd party CA** – ISO/IEC 17025, 17065, etc.
- **Interoperability** – the ability of two or more systems or applications to exchange information and to mutually use the information that has been exchanged. - Rec. ITU-T Y.101

**Conformance increases the probability of
interoperability, but CAN NOT guarantee**

ITU Conformity & Interoperability Programme - Pillar 1 and 2

2/30



Lack of necessary standards and/or standard enforcement leads to:

- poor interconnection and interoperability
- damage reputation of company
- damaged reputation of new service/technology
- jeopardized competition by dominant market player
- vendor locked telecom operators
- redundant testing is a burden to both vendors and operators
- trade barrier for vendors to access new market
-



- **ITU-T's Mission**
 - Develop interoperable, non-discriminatory and demand-driven international standards for International telecommunication
- **Conformity to ITU Recommendations will**
 - Enable telecom operators, vendors, end users, and regulators worldwide to have confidence that products sourced in global market meet international telecommunication requirements
 - Improve interconnection and interoperability
 - Reduce trade barrier and improve transparency to market access
 - increased choice from multiple manufacturers/service providers
 - Help telecom operators to reduce time of new service provision
 - Help vendors to save cost on repetitive testing/certification for same product, thus reduce time to market



- **PP Resolution 177:** (PP-14) "Conformance and interoperability"
- **WTDC Resolution 47:** (WTDC-10, WTDC-14)
"Enhancement of knowledge and effective application of ITU Recommendations in developing countries, including conformance and interoperability testing of systems manufactured on the basis of ITU Recommendations"
- **WTSA Resolution 76:** (WTSA-08, WTSA-12)
"Studies related to conformance and interoperability testing, assistance to developing countries, and a possible future ITU mark programme"
- **RA Resolution 62:** (RA-12)
"Studies related to testing for conformance with ITU-R Recommendations and interoperability of radiocommunication equipment and systems"
- **ITU Council Decisions:** (2009, 2010, 2011, 2012, 2013, 2014)

ITU C&I Programme in 4 "Pillars"



- **The Standardization Sector side**
 - ❖ Pillar 1: Conformity Assessment
 - ❖ Pillar 2: Interoperability Events
- **The Development Sector side**
 - ❖ Pillar 3: Capacity building
 - ❖ Pillar 4: Establishment of test centres in developing countries



Pillar 1

Conformity Assessment



Pillar 1 as defined in Resolution 177 (ITU PP-14)

- mentioned a pilot ITU Conformity Database as informative only
- invited ITU Sector Members to populate the pilot conformity database with details of products tested to applicable ITU-T Recommendations
- Instructs the Director of TSB to continue to carry out pilot projects for conformity to ITU-T Recommendations



- 1. Produce interoperable standards - ITU-T SGs are identifying ITU-T Recommendations with demonstrated market need for C&I testing and developing testing specifications if needed, in collaboration with partner SDOs if appropriate**
- 2. Promote conformity assessment on products/services against ITU-T Recommendation(s) - ITU Conformity database**



Key Activity:

- **pilot projects** of conformity assessment against ITU-T Recs
- New SG11 work item [Q.TL-rec-pro](#) "ITU recognition procedure of testing laboratories "

Key Outcome:

- ✓ A **living list of ITU-T Recommendations** on key technologies suitable for C&I testing (<http://itu.int/go/key-technologies>)
- ✓ A **reference table of ITU-T Recs and corresponding test specification** under C&I testing (<http://itu.int/go/reference-table>)
- ✓ **ITU conformity database**



ITU-T M.3170.x C&I pilot project

Testing scope: conformance testing of the Multi-technology network interface in accordance with series of Recs. ITU-T M.3170.x

Companies: China Telecom, FiberHome, ZTE, CTTL, BUPT, etc.

Goal: improve interconnection between EMS, NMS, and OSS for the MTNM interface

Project plan:

- ✓ harmonize requirements based on the inputs provided by vendors, labs, operators
- ✓ select an appropriate TL with competence to perform relevant tests
- ✓ perform testing at the appointed TL
- ✓ populate ITU product conformity DB

G.hn conformance testing pilot project (SG15/SG11)

[SG15 - LS 147](#); [SG15 TD-WP1-380](#)



Conformity assessment of ICT equipment based on SIP-IMS profile against ITU-T Recommendations

- Define the requirements for Network and User sides for SIP-IMS profile
- Develop the conformance tests specifications for SIP-IMS profile
- Develop conformance tests specifications for Integrated Access Devices (IAD)
- RCC region is going to establish the alliance of operators which is going to use ITU-T Recommendations on SIP-IMS profile as a basic requirement for user's equipment (UE)

Telecom operators are invited to join this SG11 activity and initiate the relevant ITU test event

Outcome – list of SIP-IMS based UE which complied with ITU-T Recommendations (e.g. signalling protocol, voice QoS/QoE)

Possible approaches to implement a TL recognition procedure in ITU



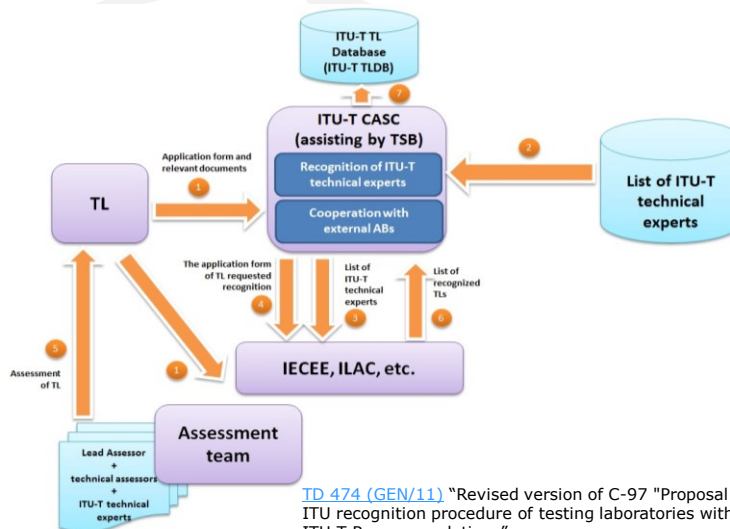
Report of the Correspondence Group: [TD 475 \(GEN/11\)](#)

1. For certain ITU-T Recommendations, ITU to join existing CA schemes, e.g. IECEE as appropriate
2. ITU may have to establish ITU's own TL recognition procedure as deemed necessary in a later stage

Future activities

- ✓ discussions under Q11/11 (Mr Isaac Boateng, Ghana, associated Rapporteur)
- ✓ Next meeting: **Q11/11 E-meeting (17 December 2014)**

TL recognition procedure work flow (under discussion)



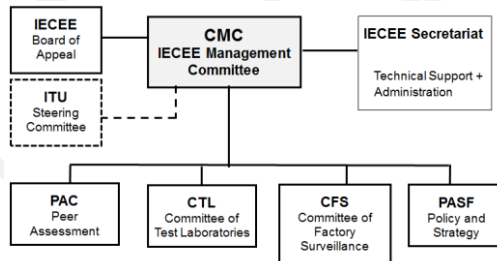
TD 474 (GEN/11) "Revised version of C-97 "Proposal to establish an ITU recognition procedure of testing laboratories with competence in ITU-T Recommendations", 9-16 July 2014



Possible ITU collaboration with IEC/IECEE (PP-14, C63)



- ✓ **ITU partner with IEC to conduct a trial of voluntary 3rd party CA of suitable ITU-T Recommendations**
- ✓ **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**
- ✓ **An 'ITU steering committee' would be established within the [IECEE organization structure](#)**



ITU Activities to combat counterfeiting



- **ITU-T PP-14 New Resolution on Combating counterfeit telecommunication/ICT devices which refers to the Resolution 177 (PP-14) on Conformity and Interoperability**
- **WTDC-14 Resolution 79 "The role of telecommunications/ICT in combating and dealing with counterfeit telecommunication/information and communication devices"**
- **ITU held an event on combating counterfeit and substandard ICT devices ([17-18 November 2014](#))**
- **ITU-T SG11 approved a "Technical Report on Counterfeit ICT Equipment". (Involvement of WTO, WCO, WIPO, MMF, GSMA etc.) [TD-574 R.2 \(GEN/11\)](#)**



Pillar 2

Interoperability Events



ITU Interop events

- ITU Interoperability testing events:
 - ▶ cross-connect various manufacturers
 - ▶ evaluate of interoperability of all participants on a peer basis
 - ▶ check end to end performance at common “interfaces”to validate different implementations of standard, and feedback to standard-making.

ITU Interop events



- ✓ [IPTV Interop and showcasing events](#) (Geneva, Singapore, Pune, Rio de Janeiro, Dubai, since 2010)
 - ✓ [ITU-T G.hn Home networking testing](#) (Geneva, May 11)
 - ✓ [NGN Interop and showcasing events](#) (Bangkok, Sep. 13)
 - ✓ [E-health Interop event with Continua Health Alliance](#) (Geneva, Oct. 13)
 - ✓ [Performance assessment of mobile phones in conjunction with HFT in a car against Recs. ITU-T P.1100/P.1110](#) (Geneva, May. 14)
 - ✓ [Interoperability of IMS-NNI, IoT](#) (Bangkok, Aug. 14)
- **Future events planned:**
- ✓ [E-health Interop event on ITU-T H.810 with Continua Health Alliance](#) (Geneva, Feb 2015)

ITU Test Event

Performance assessment of mobile phones in conjunction with vehicle's HFT in accordance with Recs. ITU-T P.1100/P.1110

www.itu.int/go/test-event



Background

Many mobile phones do not work properly with HFT's system and thereby significantly degrading the speech quality of the complete system

Findings

- ✓ an incorrect behavior of the mobile phone in the wireless connection to a vehicle's HFT
- ✓ an unacceptable quality of a voice-call inside the car and outside the car for the conversational partner

Only 30 % of phones passed the tests !!!!!

Key outcomes

- ✓ New web portal describing the existing issues
- ✓ A "white list" of mobile phones recommended by major car manufactures
- ✓ Updated Recs. ITU-T P.1100/P.1110 with the new values of performance



Venue: ITU Headquarters
TL: HEAD Acoustics
Date: 12-16 May 2014
Participants: Mercedes-Benz, Volvo, Bosch, Toyota
Number of tests: 40 (30 phones)
[ITU press-release](#)

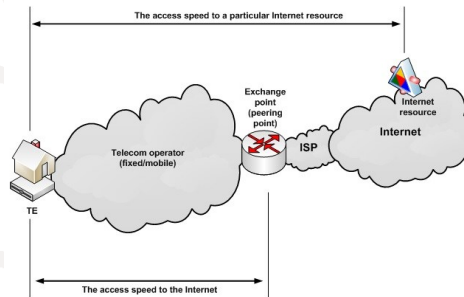


ITU-T SG11 Q15/11 "Testing as a service TAAS"

Q.Int speed test "Unified methodology of Internet speed quality measurement usable by end-users on the fixed and mobile networks"

<http://www.itu.int/en/ITU-T/C-1/Pages/IM/Internet-speed.aspx>

The screenshot shows the ITU website page for 'Measurements of Internet speed'. It includes a navigation menu, a main content area with a globe icon, and a sidebar with 'FEATURED EVENTS' and 'CONTACT LINKS'. The main text discusses the development of a unified approach to measure internet speed and the establishment of a framework to ensure consumer confidence.



- **Develop interoperable international telecommunication/ICT standards**
- **Promote conformity to telecommunication/ICT standards**
- **improve international interconnection and interoperability**
- **Reduce global trade barrier, promote market transparency and competition**
- **Facilitate capacity building in developing countries covering most of the key technologies**

Conclusions



We invite:

- all interested parties, esp. **test labs and other SDOs**, to contribute **test specifications** of ITU-T Recommendations;
- all interested parties, esp. test labs/accreditation bodies, to discuss and **trial voluntary 3rd CA** for products implementing particular ITU-T Recommendation(s) with market needs;
- **Vendors** (and/or **test labs** with their agreement) to **populate the ITU Conformity Database**

www.itu.int/en/ITU-T/C-I
conformity@itu.int
interop@itu.int



Thank You !



ADDITIONAL SLIDES



ITU web sources related C&I Programme

ITU C&I resources

C&I Portal - <http://www.itu.int/en/ITU-T/C-I/Pages/default.aspx>

JCA-CIT - <http://www.itu.int/en/ITU-T/jca/cit/Pages/default.aspx>

SG11 (lead group on testing) - <http://www.itu.int/en/ITU-T/studygroups/2013-2016/11/Pages/default.aspx>



Living lists on the ITU-T C&I Portal (1/3)

<http://itu.int/go/key-technologies>

The living list of Recommendations and related specifications within key technologies suitable for C&I testing

YOU ARE HERE HOME > ITU-T > ITU CONFORMITY AND INTEROPERABILITY

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ITU-T SGs outputs:

Living List of key technologies to be tested on C&I (SG11 output, 25 February - 1 March 2013)
JCA-CIT updates (25 April 2013)

| # | Title | Focal Point | Other SDOs | ITU-T SGs | References to SDOs docs | References to ITU-T Recs. |
|---|--|---|-------------------------|--------------|---|---|
| 1 | Network and equipment performance (Benchmarking) | Martin Brand Vice-chairman of SG11 (Austria) martin.brand@Atelekom.at | ETSI (INT, STQ, MTS) | SG11 | ETSI (Requirements) DTR/STQ-207 (draft) ETSI (Test suites) ETSI TR 101 577 TS 186 025-1 TS 186 025-2 TS 186 025-3 TS 186 025-4 TS 186 008-1 TS 186 008-2 TS 186 008-3 TS 186 008-4 | ITU (Requirements) Draft Q.392z-1 ITU (Test suites) Q.3930 Q.3931.1 Q.3931.2 Q.3931.3 (draft) Q.3931.4 (draft) Q.3932.1 (draft) Q.3932.2 (draft) Q.3932.3 (draft) Q.3932.4 (draft) |
| 2 | QoS/QoE and NP | Martin Brand Vice-chairman of SG11 (Austria) martin.brand@Atelekom.at Eva Ibarrola (Spain) eva.ibarrola@ehu.es Minou Shi (China) | ETSI | SG12 SG11 | ETSI (Requirements) - - - TR 102 775 TS 101 563 TS 102 528 (draft) - - - | ITU (Requirements) Q.3925 Y.1542 Y.1543 Y.1541 Y.1541 - Q.MSPQuality Q.NP-req |



Living lists on the ITU-T C&I Portal (2/3)

<http://www.itu.int/go/pilot-projects>

List of Pilot projects for conformity assessment against ITU-T Recs

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| # | Title | ITU-T Recs. | Focal Point | Interested Companies | Motivations | Short-term strategy |
|---|--|---|-----------------------------|--|---|---|
| 1 | Conformance testing pilot project on 'Network management interface related Recommendations (ITU-T M.3170 series' | Recs. ITU-T M.3170.0, M.3170.1, M.3170.2, M.3170.3) | WANG Zhili (WP2/2 chair) | Network Operators <ul style="list-style-type: none"> China Telecom Co., Ltd. China Southern Power Grid (China) Vendors <ul style="list-style-type: none"> FiberHome (China) ZTE (China) Integrators <ul style="list-style-type: none"> Beijing Metamnet Technologies Co., Ltd. (China) Testing Labs <ul style="list-style-type: none"> Beijing infotel Network Testing Laboratory (China) China Telecommunication Technology Labs (CTTL) University <ul style="list-style-type: none"> Beijing University of Posts and Telecommunications (BUPT, China) | <p>Taking into account of the wide adoption and influence in industrial of this series of Recommendations, this Conformance testing project will promote products which are compliant to this series of Recommendations, help operators, vendors, and integrators to implement this series of ITU-T Recommendations and better facilitate the interconnection between EMS, NMS, and OSS for the MTNM interface.</p> | <p>First — gather interested vendors, operators, integrators and others who implement Recs. ITU-T M.3170 series to identify and harmonize their testing requirements.</p> <p>Second — select appropriate testing organization(s) that are competent to perform the conformance testing for the Recs. ITU-T M.3170 series against these testing requirements using agreed test suites.</p> <p>Third — testing organization(s) to test the products which are based on the Recs. ITU-T M.3170 series by agreed test suites (see 1st above).</p> <p>Fourth — populate the ITU-T product conformance database with testing results generated by selected testing organizations which performed testing, and produced conformance testing report in agreed format.</p> |



Living lists on the ITU-T C&I Portal (3/3)

<http://itu.int/go/reference-table>



The reference table of standards are used for C&I assessment

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The living list of technologies to be tested on C&I

List of Pilot projects for conformity assessment against ITU-T Recs

The reference table of standards are used for C&I assessment

SG11 Action plan on C&I

ITU-T meeting schedules on C&I activities

Resolution 76 of WTSA-12 resolves 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".

The C&I Action Plan agreed by Council-12 requests "ITU-T study groups to identify further technologies for which there is a market demand for a conformity assessment programme and to identify whether test specifications are available and if not, to explore the provision of test specifications. If test specifications are available, they may be turned into e.g. ITU-T Recommendations or supplements".

Following the WTSA-12 and Council-12 decisions, SG11 established the SG11 Action plan for implementation of C&I Programme which will help to achieve the goals of Resolution 76 (WTSA-12) and will assist ITU-T SGs in their work concerning the development of ITU C&I Programme within their responsibilities. The Action plan also is aimed at helping developing countries in the implementation of their C&I plans in the regions.

The one of the most important part of the SG11 Action plan is a Reference Table showing list of ITU-T Recs and relevant parameters to be tested for conformity/interoperability and references to the applicable test suites (ITU/other SDOs). This information will be used for filling out the ITU conformity Database by results of conformity assessment against ITU Recs.

The Reference Table is maintained by TSB in accordance with information provided by all ITU-T SGs and JCA-CIT on the SG11 requests with the template is provided in Annex B of SG11 Action plan.

QUICK LINKS

- C&I Portal home page
- ITU C&I databases
- Guidances and information on C&I
- JCA-CIT
- BOT C&I Activities
- ITU Promotional materials
- TSB Circular 98
- ITU-T SG11 (lead group on testing)

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