Key activities and major ITU outcomes on C&I
Pillar 1 and 2

ITU-T C&I Portal

PILLAR 1

CONFORMITY ASSESSMENT

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

- "Instructs the Director of the TSB:

  - to continue to carry out pilot projects for conformity to ITU-T Recommendations to increase the probability of interoperability

  - to enhance and improve standards-setting processes in order to improve interoperability through conformity"

- "Invited the Membership to populate the pilot conformity database with details of products tested to applicable ITU T recommendations"

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ITU Product Conformity Database

Product Conformity Database

YOU ARE HERE HOME > ITU-T > ITU CONFORMITY AND INTEROPERABILITY > PRODUCT CONFORMITY DATABASE   SHARE

DISCLAIMER: This database is not certified to be either accurate or complete, but only reflects the information that has been communicated to the ITU secretariat. The ITU secretariat has not verified the veracity or accuracy of such information, nor the relevance of the products to ITU Recommendations

E-Health Devices | Mobile Phones

Product	Company	Model Number	Conformity to ITU-T Recommendation
Austonio Application for Android	Intel	Asus Memo Pad 8	ITU-T H.810 (2013-12)
Digital Thermometer	A & D Medical	UT-201BLE	ITU-T H.810 (2013-12)
Digital Blood Pressure Monitor	A & D Medical	UA-651BLE as Type A	ITU-T H.810 (2013-12)
Energy Smart Blood pressure monitor	IDT	BPU321 (as Type A)	ITU-T H.810 (2013-12)
Accu-Chek Active GB	Roche	GB revision 2	ITU-T H.810 (2013-12)
NTT Docomo - Mobile phone HDP manager platform, Android mobile phone	Fujitsu Limited	F-04G	ITU-T H.810 (2013-12)
Manager Platform for Android	Sharp	SHARP Manager Platform	ITU-T H.810 (2013-12)
Precision Health Scale	A & D Medical	UC-352BLE	ITU-T H.810 (2013-12)
A&D Digital Weighing Scale (with Body Composition Analyzer)	A & D Medical	UC-411PBT-C as Type D, AD-6209PBT-C, UC-355PBT-Ci, UC-351PBT-Ci and UC-325PBT-Ci as Type U.	ITU-T H.810 (2013-12)
Bosch Blood Pressure Monitor	Robert Bosch Healthcare GmBH	BP5000 BT	ITU-T H.810 (2013-12)

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KEY OUTCOMES OF PILLAR 1 (1/3)

- **First entries in the Product Conformity Database,**
  19 December 2014, www.itu.int/go/tcdb

- **Whitelist of mobile phones** which meet the requirements of P.1100/P.1110

- **Pilot projects** of conformity assessment against ITU-T Recs
  http://itu.int/go/pilot-projects

  - M.3170-series (SG2)

  - Mobile Number Portability (SG11)

  - EPON (SG15)

- **Living list of ITU-T Recommendations on key technologies** suitable for C&I
  testing http://itu.int/go/key-technologies

- **Reference table of ITU-T Recs and corresponding test specification under C&I
  testing** http://itu.int/go/reference-table

KEY OUTCOMES OF PILLAR 1 (2/3)

- Approved a Guideline **Testing laboratories recognition procedure**

- Established the **Conformity Assessment Steering Committee (ITU-T CASC)** to elaborate detailed procedures for the implementation of a test laboratory recognition procedure in ITU-T (web page, TD938)

- Conducted **Workshop on VoLTE/ViLTE interconnection** (web) and started a new work item **Q.30xx_VoLTE_Interconnection_FW "Framework of interconnection of VoLTE/ViLTE-based networks"**

KEY OUTCOMES OF PILLAR 1 (3/3)

- Updated **SIP-IMS conformity assessment** web page

- Updated **Benchmarking of IMS platform**. Work plan (TD861, SG11)

- Consented ITU-T Q.3960 "**Framework of Internet speed measurements for the fixed and mobile networks**"

- Consented ITU-T Q.3905 "**Conformance test plan for Number Portability requirements defined by ITU-T Q.Suppl.4**"

- Consented ITU-T Q.4040 "**The framework and overview of Cloud Computing interoperability testing**"

- Started a new work item Q.39_FW_Test_ID_IoT "**The framework of testing of identification systems used in IoT**"

- Started a new work item on **C&I vocabulary** Q.C&I_VOC

ITU-T Conformity Assessment Steering Committee
(ITU-T CASC)

ITU's testing laboratories recognition procedure

ITU-T CASC web page

RATIONALE

Common practice of C&I programmes of SDOs and forums (such as IECEE, IEEE ICAP, BBF, MEF, Bluetooth, Wi-Fi Alliance, WiMAX Forum, etc.) shows that a recognition procedure of Testing Laboratories (TL) is the best way to ensure the credibility of their testing programme, i.e., that testing results are produced by a TL which is competent, behaves ethically and employs suitable quality assurance

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TWO OPTIONS TO IMPLEMENT THE ITU-T TL'S RECOGNITION PROCEDURE

- **to join the existing conformity assessment programs, by providing ITU-T's technical experts to perform relevant TL's assessment against ITU-T Recommendations**

- **based on experience gained from collaboration with existing schemes, ITU may, in future, consider the possibility of establishing an ITU-T TL self-recognition procedure, providing the assessment of ITU-T technical experts and assessment of the TL**

BACKGROUND

- **The Conformity Assessment Steering Committee (ITU-T CASC) was established in April 2015 by ITU-T SG11 to elaborate detailed procedures for the implementation of a test laboratory recognition procedure in ITU-T**

- **The ITU-T CASC works in accordance with the ITU-T SG11 Guideline "Testing laboratories recognition procedure" which describes the procedure for recognition of Testing Laboratories that have competence for testing against ITU-T Recommendations**

- **Mr Isaac BOATENG (SG11 Vice-chairman, Ghana) has been appointed as Chairman of ITU-T CASC**

- **First meeting of the ITU-T CASC held on 3 December 2015 during ITU-T SG11 meeting (2-11 December 2015) (web page)**

- **Next meeting of the ITU-T CASC is scheduled on 28 June 2016**
  Subjects to be discussed: list of particular ITU-T Recommendations which may become subjects of the new joint IEC/ITU certification scheme, draft procedure on collaboration between ITU and IEC on this particular subject

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ITU-T CASC WILL MANAGE THE ITU-T TL'S RECOGNITION PROCEDURE

Main objectives of ITU-T CASC are:

- **to provide the ITU-T view and position to the management organs of the established Conformity Assessment Systems and Schemes of the IEC and ILAC**

- **to set up criteria, rules and procedures for the appointment of ITU-T technical experts by working with established Conformity Assessment Systems and Schemes of IEC, in collaboration with ILAC aiming for a common testing and conformity assessment**

- **to process applications from candidate experts from ITU-T membership**

- **to appoint the ITU-T technical expert(s)**

- **to recognize TL with a scope of ITU-T Recommendation(s) which is assessed by IEC or by ILAC accreditation bodies and register it in the ITU recognized TL list**

Interconnection of 4G networks (VoLTE/ViLTE)

Workshop web page

Summary of the Workshop

New work item ITU-T Q.30xx

CTO Meeting
Budapest, 11 October 2015

- **Service interoperability in fixed-mobile hybrid environments is becoming a high priority to industry**

- **Participants identified high-quality voice telephony as a challenging but attractive opportunity for network operators**

- **ITU-T has been invited to facilitate the roll out of high-quality voice and video services through standards, testing and interoperability**

CTOs encouraged ITU-T to initiate studies with the goal of enabling the global interoperability of such high-quality services

Background

The implementation of VoLTE/ViLTE poses to some challenges for operators:

- **interconnection inside country** (among different telecom operators)
  National level

- **interconnection with operators outside of the country** (long distance calls, roaming)
  International level

Current issues

- **Numbering**
  (translation from E.164 to URI – ENUM implementation)

- **Roaming**
  (there are no strict rules for operators which option needs to be used)

- **Other issues**
  - Floating delay
  - Lawful interception
  - Data retention
  - Emergency services (e.g. emergency call 112)

ITU-T Activities

– **Workshop on VoLTE/ViLTE (1 Dec.15)**
  Note: according to the report of the WSHP most of SGs will be involved to this issue, as follows:
  SG2-ENUM, SG12-QoS/QoE e2e for VoLTE, SG16-transcoding, SG11-framework/signaling, SG3-charges, regulations, SG17-security

– **New work item started in SG11** *"Framework of interconnection of VoLTE/ViLTE-based networks"*

– **Joint meeting ETSI TC INT, GSMA and Q2/11 (Sophia-Antipolis, ETSI HQ, March 2016)**

– **Next Joint meeting during SG11 meeting (27 June – 6 July 2016)**

SIP-IMS conformance testing
under Q11/11 "Protocols and networks test specifications; frameworks and methodologies"

http://www.itu.int/en/ITU-T/C-I/Pages/SIP/IMS.aspx

BACKGROUND

- International standards (such as ITU-T Recommendations) are the best tool to achieve interconnection between worldwide telecom operators

- **Most telecom operators have already implemented the IMS platform**, connecting their customer's Terminal Equipment (TE) through SIP-IMS protocol

- **Different implementation of SIP-IMS** profiles may result in additional operator's efforts (budgets) to adapt TE to the installed IMS platform

- **The roaming for VoLTE-based services among operators is not guaranteed** due to the different implementations/options of VoLTE, the lack of unified standardized interconnection requirements and signaling protocols

OBJECTIVES OF SIP-IMS STANDARDIZATION PLAN

- **Collect all standards on SIP-IMS profile** in ITU-T and amend it with missing standards (e.g. requirements, test specifications, use cases, etc.)

- **Establish a framework for the conformity assessment of SIP-IMS profile** which may be used by all fixed telecom operators in the world for testing equipment based on SIP-IMS profile

- **Support the conformity assessment of equipment against ITU-T Recommendations on SIP-IMS profile** (Testing Laboratory and other interested parties are invited)

- **Create a list of TEs based on SIP-IMS profile** which comply with ITU-T Recommendations (e.g. signalling protocol, voice QoS/QoE)

- **Align and develop ITU-T Recommendations in collaboration with ETSI TC INT**

INTERNET SPEED MEASUREMENT
under Q15/11 "Testing as a service (TAAS)"

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

BACKGROUND

1. Framework of Internet speed measurement (consented, Dec.15)

2. Testing methodology which is based on two types of measurements:

- Network Internet speed test path
- Internet resource speed test path

Next meeting:
SG11 meeting
(27 June — 6 July 2016)

In progress:

Draft Recommendation ITU-T Q.TM_Int_sp_test "Testing methodologies of internet speed measurement system to be used on the fixed and mobile networks"

Conformance testing of the Mobile Number Portability

under Q11/11 "Protocols and networks test specifications; frameworks and methodologies"

KEY OUTCOMES

REQUIREMENTS

✓ Q.suppl.4 "Number portability – Capability set 1 requirements for service provider portability (All call query and Onward routing)"

APPROVED TEST SPECIFICATION

✓ ITU-T Q.3905 "Conformance test plan for Number Portability requirements defined by ITU-T Q.Suppl.4"

PILOT PROJECT

✓ SG11 started pilot project which aims to perform testing of MNP implementation against ITU-T Recs.
(web page http://itu.int/go/pilot-projects)

ITU ACTIVITIES TO COMBAT COUNTERFEITING

- ITU-T PP-14 Resolution 188 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)
  Note: In its conclusion, ITU was invited to contribute by "using standards and C&I programs as a means to combat counterfeit and substandard ICT devices"

- **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)

ITU WORKSHOP ON "COMBATING COUNTERFEIT USING CONFORMANCE AND INTEROPERABILITY SOLUTIONS"

ITU Study Group 11 is organizing a ITU workshop that aim to

- determine whether or not conformance and interoperability programmes can assist to combat counterfeit ICT devices

- understand mechanisms to secure the supply chain management (from manufacturing, importation distribution and marketing) to ensure traceability, security, privacy and trust of people, products and networks

- create awareness of the problem of counterfeiting of ICT devices and the dangers they pose as well as on the studies currently on-going in ITU-T SG11 Question 8 and particularly to foster development of the technical Recommendation "Framework for Solutions to Combat Counterfeit ICT Devices"

http://itu.int/en/ITU-T/Workshops-and-Seminars/20160628/Pages/default.aspx

Date and venue: Geneva, Switzerland, 28 June 2016 (PM)
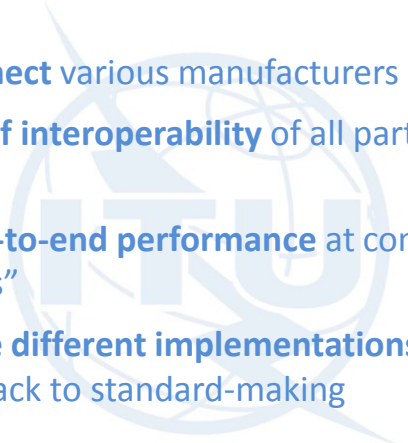Contact: tsbworkshops@itu.int

PILLAR 2

INTEROPERABILITY EVENTS

OBJECTIVES OF ITU INTEROP 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 testing event** (Geneva, Switzerland, 14-15 October 2015)
- **3rd joint APT/ITU Conformance and Interoperability event** (Bangkok, Thailand, 7-8 September 2015)
- **HATS Interoperability event on NGN supported by ITU and APT** (Tokyo, Japan, 14-16 July 2015)
- **E-health testing and showcasing event** (Geneva, ITU Headquarters, 10-12 February 2015)
- **2nd joint APT/ITU Conformance and Interoperability event** (Bangkok, Thailand, 25-26 August 2014)
- **ITU test event** on Performance assessment of vehicle-mounted mobile phones in conjunction with Hands-free Terminals according to Recommendations ITU-T P.1100 and ITU-T P.1110 (Geneva, ITU Headquarters, 12-16 May 2014)

Future events

- **2nd ITU-T testing event on performance assessment of vehicle-mounted mobile phones in conjunction with hands-free terminals according to Recommendations ITU-T P.1100 and ITU-T P.1110** (Geneva, ITU Headquarters, 23-27 May 2016) web page

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FIRST ITU TEST EVENT
PERFORMANCE ASSESSMENT OF MOBILE PHONES AS GATEWAYS TO CAR HANDS-FREE SYSTEMS
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
- ✓ Updated Recs. ITU-T P.1100/P.1110 with the new values of performance have been approved (December 14)
- ✓ Automotive industry appealed to ITU to publish a **"whitelist"** of mobile phones which meet the requirements, **web page**

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

ITU press-release

Test report

SECOND ITU TEST EVENT
PERFORMANCE ASSESSMENT OF MOBILE PHONES AS GATEWAYS TO CAR HANDS-FREE SYSTEMS

Date and venue: 23-27 May 2016, Geneva ITU HQ

Goal: to update the 'whitelist' with the mobile phones which work properly with a vehicle's hands-free telephone system

Terms and conditions, participation fee are available on the event's web page
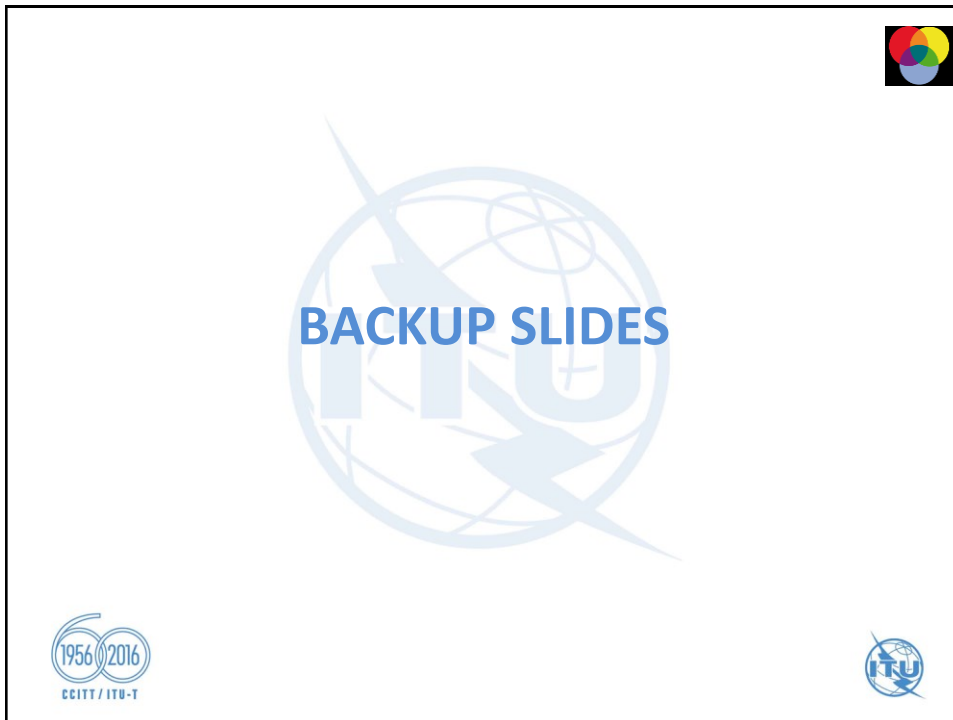

TSB contacts

Conformance: conformity@itu.int
Interoperability: interop@itu.int

JCA-CIT tsbjcacit@itu.int

For more information please contact:
Denis Andreev (TSB/ITU)
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BACKUP SLIDES

ITU web sources related to 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

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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@A1telekom.at	ETSI (INT; STQ; MTS)	SG11	ETSI (Requirements) DTR/STQ-207 (draft)	ITU (Requirements) Draft Q.39zz-1
		Michael Mild Rapporteur of Q10/11 (Sweden) michael.mild@softwell.se			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 (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@A1telekom.at Eva Ibarrola (Spain) eva.ibarrola@ehu.es Minrui Shi (China)	ETSI	SG12 SG11	ETSI (Requirements) - - - TR 102 775 TS 101 563 TS 102 928 (draft) - -	ITU (Requirements) Q.3925 Y.1542 Y.1543 Y.1541 Y.1541 - Q.MSPQuality Q.NP-req

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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 series (M.3170.0, M.3170.1, M.3170.2, M.3170.3)	WANG Zhili (WP2/2 chair)	**Network Operators** • China Telecom Co., Ltd. • China Southern Power Grid (China) **Vendors** • FiberHome (China) • ZTE (China) **Integrators** • Beijing Metarnet Technologies Co., Ltd. (China) **Testing Labs** • Beijing Infotel Network Testing Laboratory (China) • China Telecommunication Technology Labs (CTTL) **University** • Beijing University of Posts and Telecommunications (BUPT, China)	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.	**First** — gather interested vendors, operators, integrators and others who implement Recs. ITU-T M.3170 series to identify and harmonize their testing requirements. **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. **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). **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.

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JCA-CIT
(STUDY PERIOD 2012-2016)

General statistic

- 7 meetings
- Next meeting 1 July 2016 (during SG11 meeting)

Key outcomes

- Discussed key ITU-T activities on C&I (G.8265.1, SIP-IMS profile, Internet speed measurements etc.)
- JCA-CIT decided to extend the list of ICT products to be tested on conformity (signalling protocols, interfaces, telecom services, benchmarking, QoS/QoE/NP) Report, 25 April 13
- Assisted SG11 to maintain living lists on C&I (key technologies, reference table, pilot projects)