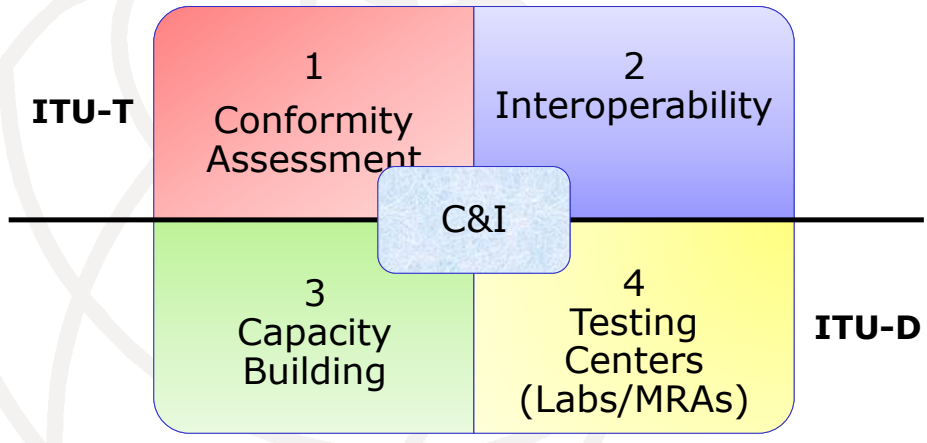
Conformance and Interoperability (C&I) Validation Workshop for EAC Region

(Nairobi, Kenya, 21-23 Oct. 2015)

ITU C&I Programme Pillars 1 and 2

ISAAC BOATENG
ITU-T SG11 Vice-Chairman

Structure of ITU C&I Programme



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 informative pilot conformity database with details of products tested to applicable ITU-T recommendations"

Pillar 1 Key outcomes (1/2)

1. **First entries in ITU Product Conformity Database** (19 December 2014)
2. **A whitelist of mobile phones** met the requirements of ITU-T P.1100/P.1110
3. **Two pilot projects** of conformity assessment against ITU-T Recs
   - M.3170-series (ITU-T SG2)
   - Mobile Number Portability (ITU-T SG11)
4. **Testing laboratory recognition (April 2015):**
   - Approved a "guideline on testing laboratories recognition procedure"
   - established ITU-T Conformity Assessment Steering Committee (ITU-T CASC) to elaborate detailed procedures
     - Chair: Mr Isaac Boateng (NCA, Ghana)
     - First meeting: *3 December 2015 (Geneva)*

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Pillar 1 Key outcomes (2/2)

5. A **living list of ITU-T Recommendations** on key technologies suitable for C&I testing
6. A **reference table of ITU-T Recs and corresponding test specification** under C&I testing
7. **New work items**
   - SIP-IMS conformity assessment
   - "Unified methodology of Internet speed quality measurement usable by end-users on fixed and mobile networks"
   - "Conformance test plan for number portability requirements defined by ITU-T Q.Suppl.4" (C-240, SG11)
   - Benchmarking of IMS platform - Work plan (C-220, SG11)

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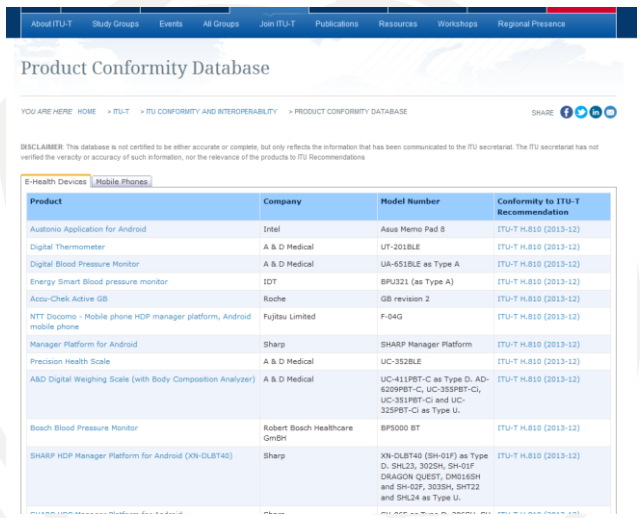
ITU Recs tested/certified by TLs

Among 4000+ ITU-T Recommendations, ~5% are test spec

- **EMC** – ITU-T K.17, K.20, K.21, K.43, K.44, K.45, K.48, K.54
- **SS7** – ITU-T Q.118, Q.552, Q.701, Q.702, Q.703, Q.704, Q.705, Q.706, Q.707, Q.711, Q.712, Q.713, Q.714, Q.730, Q.731, Q.732, Q.733, Q.734, Q.735, Q.737, Q.761, Q.762, Q.763, Q.764, Q.765, Q.767, Q.781, Q.782, Q.784, Q.785, Q.786
- **Speech quality** – ITU-T P.57, P.313, P.340
- **Video codecs** – ITU-T H.261, H.263, H.264
- **xDSL, E1** – ITU-T G.703, G.823, G.991, G.992, G.993, G.8265, G.8275
- **Satellite services** – ITU-R M.1343-1
- **Spectrum Management** – ITU-R SM.326

ITU Product Database



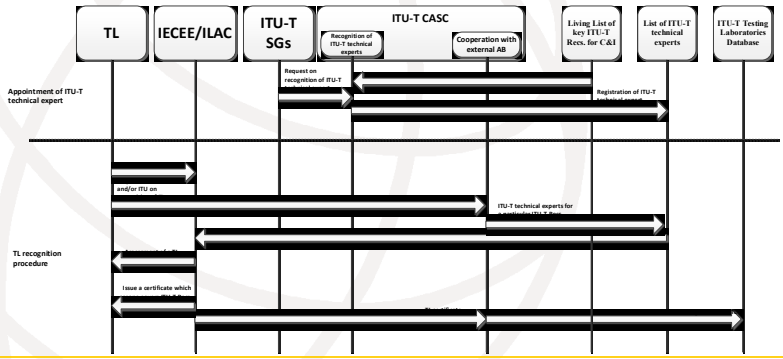
Launched in Dec 2014

Current entries
- E-health devices: 79
- Mobile phones: 7

Mobile phones are also captured in a "white list"

TL recognition procedure work flow

- Detailed procedures will be developed by ITU-T CASC
- A general work flow will be as follows:
  - ITU-T CASC provide ITU-T technical experts as assessors to join existing TL assessment (e.g., IEC, ILAC, …)
  - Candidate TL shall submit to ITU-T CASC an application for recognition
  - ITU-T CASC will recognize a TL based on IEC/ILAC's assessment decisions
  - The TL will be notified and added to the list of ITU-T recognized TL



Pillar 2 – Interoperability Events

Objectives

- To test interoperability of products from different vendors
- To validate different implementations of standard, and feedback to standard-making
- To accelerate the development phases of technology as well as the standard-making process
- To showcase/promote products with demonstrated interoperability at the ITU events
- To organize other test events upon request from ITU members (e.g. performance assessment of mobile phones, conformance testing of e-health devices, etc.)

ITU test events so far

- 3rd APT/ITU Conformance and Interoperability event *(Bangkok, Thailand, 7-8 Sep 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 event:

- 2nd ITU-T testing event on performance assessment of vehicle-mounted mobile phones *(Geneva, ITU Headquarters, date TBC)*

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

- ✓ "whitelist" of mobile phones which meet the requirements is made publically available
- ✓ Updated Recs. ITU-T P.1100/P.1110 with the new values of performance have been approved *(January 15)*

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

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Thank you!

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Backup Slides

ITU's Mandate on C&I

- **Resolution 177** ITU Plenipotentiary Conference (PP-14)
- **Resolution 47** ITU World Telecommunication Development Conference (WTDC-10, rev. WTDC-14)
- **Resolution 76** ITU World Telecommunication Standardization Assembly (WTSA-08, rev. WTSA-12)
- **Resolution 62** Radiocommunication Assembly (RA-2012)
- **ITU Council Decisions** (2009, 2010, 2011,2012, 2013, 2014, 2015)

ITU C&I Portal

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

ITU C&I Programme as a means to combat counterfeit

- ITU-T PP-14 New Resolution on Combating counterfeit telecommunication/ICT devices which refers to the Resolution 177 (PP-14) on Conformity and Interoperability
- 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.)
- The Framework on combating counterfeit goods is under study in ITU-T SG11

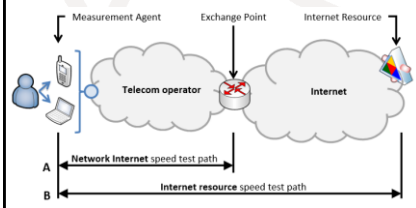
Measurements of Internet speed

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

Two types of measurements:

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

Web page



In progress:

- Draft Recommendation ITU-T Q.FW_Int_sp_test
  *"**Framework** of Internet speed measurements for the fixed and mobile networks"*
- 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"*

SIP-IMS conformance testing

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

Background

- Different implementation of SIP-IMS protocols requires additional operator's efforts (budgets) to adapt TE to the installed IMS platform
- Most telecom operators refer to ITU-T Recommendations in case of debatable issues with partner
  (operator – issues with interconnection, vendor – issues with equipment)

Actions

- Establish 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
- Create a list of TEs based on SIP-IMS profile which comply with ITU-T Recommendations
- Collaboration with ETSI TC INT