Conformity and Interoperability Training for AMS Region on Homologation Procedures and Type Approval testing for Mobile Terminals

Campinas, 12-16 May 2014

1) Background

As part of the C&I ITU programme, Pillars 3 and 4, ITU in collaboration with CPqD organized and delivered a training course on Conformance and Interoperability (C&I) testing, held in CPqD lab facilities from 12 to 16 May 2014.

The course programme focused on homologation procedures and type approval testing for mobile terminals, covering theoretical and practical aspects, including laboratory experience. The detailed programme can be found in Annex A.

Sixteen (16) participants from ten (10) American countries attended the course: Argentina, Brazil, Costa Rica, Cuba, Ecuador, El Salvador, Haiti, Paraguay, Peru and Venezuela.

Honduras withdrew its participation due to conflicting last minute commitments.

2) Documents

All training documentation is available online, including:

a. List of participants;

b. Programme ;

c. Training material and C&I Guidelines finalized by ITU:

c.1- Presentation on the Activities conducted by ITU-BDT for Pillar 3 and Pillar 4 of the ITU C&I Programme;

c.2- Establishing Conformity and Interoperability Regimes: Basic Guidelines. New Spanish version included;

c.3- Guidelines for the development, implementation and management of Mutual Recognition Agreements (MRAs): New Spanish version included;

c.4- Guidelines for Developing Countries on establishing conformity assessment test labs in different regions;

c.5- Feasibility study for building conformance testing centers;

c.6- Training Material on Type Approval testing for Mobile Terminals produced by CPqD.

d. Presentation from participants on national homologation process for telecommunication/ICT equipment.

3) Evaluation of the training

Participant feedback was extremely positive on training subject, content and infrastructure. Attendees were particularly grateful for the opportunity of having hands-on training in an actual laboratory setting. On a scale of 1 (poor) to 6 (excellent) average score was of 5.6 points, with "Achievement of goals established for the training" ranking 5.4. The training also succeeded in providing a good networking platform to telecommunication/ICT professionals from different Administrations. Long-lasting, relevant collaboration on C&I matters can be expected among participants as a direct result of this training initiative. For more details, please see section 5 of this report: *Partnership opportunities and establishment of MRA*.

Some room for improvement has been identified as well, notably the need for better communications during the laboratory practices, with some participants suggesting that the languages of instruction be revisited. Given that the literature on testing equipment and lab procedures is mostly available in English, and further considering the cost of interpretation services, future iterations of such testing modules could perhaps be conducted in that language only. A detailed breakdown of their feedback can be found in Annex B.

ITU will keep negotiating with laboratory partners and checking on their testing agendas and charges. While ITU should continue to consider CPqD for future training opportunities, additional partners must be sought and identified in the Region with a view to greater diversity and regional integration.

4) Future training course on C&I domains for next years

Taking into consideration the feedbacks received from the 16 participants on future training opportunities on C&I domains, the following topics were noted for the next training, in order of preference: 1st - NGN, 2nd - broadband, 3rd - interoperability, etc. The feedbacks on this issue can be found in Annex C.

Participants were also invited to indicate other training needs. The closest subjects to C&I programme are: International standards on measurements and procedures for Laboratories ; Equipment used in laboratories for testing of ICT products, Training on metrology laboratories and calibration, Establishment of Labs (ISO/IEC 17025); establishment of Certification Bodies (ISO/IEC 17065).

The participants expressed their willingness to continuing receiving more training on C&I. The next training course is anticipated to take 5 working days. Detailed programme will be circulated together with the invitation letter in due time.

5) Partnership opportunities and establishment of MRA

Interactive sessions allowed participants to share their experience with national regulations and procedures on conformance assessment of telecommunication/ICT equipment.

The need to increase the conformance of telecommunication/ICT products was highlighted by all participants. Many participants expressed high interest in having ITU assistance and support on establishing of mutual recognition agreements tailored to their needs. The discussions detected common and complementary infrastructures that could potentially lead to the establishment of

mutually beneficial MRAs (e.g. SAR lab in one country that could be used complementarily to a new EMC lab built in another country). In this context, various participants signaled their willingness to increased collaboration on C&I matters.

In order to receive ITU assistance, the participants were invited to inform their C&I needs by contacting ITU Area and Regional Offices by means of their Administrations or regional organizations.

6) Conclusions; Follow-ups; C&I activities for AMS Region

From the rates given by the participants it can be concluded that the training achieved the goals established and was successful. Contributions for improvement were noted and well received.

The establishment of a mail-list/forum will promote C&I deliverables and activities and also will be used to collect future inputs from the participants.

ITU is conducting "Assessment Study on Conformity and Interoperability on Regional basis". The assessment is based on collaboration with regional and sub-regional organizations for establishing a common C&I regime and Mutual Recognition Agreements (MRA). The initial target concentrated the Study on SADC Countries (2013), for assessing the situation of C&I regimes in place there (Laboratories, Regulatory regimes, MRAs, etc. as specified in the terms of references[1]). Based on the result of the study, a common and integrated approach for establishing appropriate C&I regimes in those countries are proposed e.g. building additional labs for some C&I domains (mobile, EMC, NGN, etc.) and/or encouraging the establishment of MRAs between countries within the Region.

ITU is conducting this year an Assessment Study for the Maghreb Region. Similar activity is planned for the Caribbean Region; participant countries will be selected in consultation with the Americas RO and Caribbean AO in coordination with regional or sub-regional organizations.

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[1]Site: http://www.itu.int/en/ITU-D/Technology/Documents/ConformanceInteroperability/TERMSREFERENCE_CI_Regime_MRA.pdf

Annex A – Training Programme

Conformity and Interoperability Training for AMS Region on
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Programme

Part I – Procedures on Conformity Assessment and Interoperability Regimes (2 days in the class)

- ITU C&I Programme: the 4 Pillars, status of the Action Plan implementation;
- ITU Guidelines and Feasibility Studies
- Procedures to establish C&I Regimes:
    - Definitions and conformity assessment schemes: certification, declaration of conformity, etc.;
    - Telecommunications Act provisions: placing products in the market; institutions rights and responsibilities;
    - Query for new products acceptance;
    - Issuing and validating a Certificate of Conformity and homologation;
        - Practical example of a complete query for mobile;
    - Import procedures for testing proposals;
    - Real examples of Conformity Assessment workflow from the international experience;
    - Defining a list of ICT equipment and reference standards for conformity assessment;
    - Harmonized technical requirements in a region or sub-region;
    - Recognizing certification bodies, laboratories and test reports;
    - Mutual Recognition Agreements benefits;
    - Enforcement and market surveillance.
- Participant's presentations on the Conformity Assessment of ICT products of their respective countries. (Procedures on certification, declaration of conformity, etc.)

Part II – Type Approval Testing for Mobile Terminals (3 days in the laboratory)

- Overview on IMT technology and standards;
- EMC requirements;
- Embedded technologies on mobiles: GSM, IMT, Wi-fi, Bluetooth, etc.;
- SAR measurements;
- Safety requirements;
- Instruments and devices for testing and measurement;
- Equipment Under Test (EUT) configuration;
- Test uncertainty;
- Aspects regarding accreditation of Labs according 17025;

Workshop on Lab Test: The participants will follow testing sessions prepared and executed at the Mobile test lab in order to familiarize with the practical aspects related to the tests

Annex B - Evaluation

Evaluation from 16 participants (6-excelent: 1-poor)

Participant / Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Average
ITU administrative procedures prior to the training	6	6	6	6	6	6	5	5	5	6	4	6	6	6	6	6	**5.7**
Technical level of the training	6	6	6	5	6	6	5	6	5	6	6	5	5	6	6	6	**5.7**
Professional level and academic ability of Instructor	6	5	6	5	6	6	6	6	5	6	6	6	6	6	6	6	**5.8**
Methodology used for knowledge transfer	6	5	5	5	5	6	6	6	5	6	5	5	4	5	6	5	**5.3**
Quality of instructional material provided	5	6	6	3	5	6	6	3	5	6	6	6	4	6	6	6	**5.3**
Level of interaction: a) among participants	5	6	6	6	6	6	5	5	5	6	6	5	6	6	6	6	**5.7**
Level of interaction: b) participants/Instructor	4	6	6	3	6	5	5	5	5	6	5	6	6	6	6	6	**5.4**
Achievement of goals established for the training	6	5	6	5	6	6	5	4	5	6	6	5	5	6	6	5	**5.4**
Activities carried out in EMC Labs (workshop)	6	6	6	6	6	6	5	6	6	6	6	6	6	5	6	5	**5.8**
Logistics provided by CPqD (lunch, transp., coffee breaks)	6	6	6	6	5	6	6	6	4	6	6	6	6	6	5	6	**5.8**
Accessibility/mobility within CPqD premises	6	6	6	6	6	6	6	6	4	6	5	5	6	6	6	6	**5.8**
Infrastructure of CPqD	6	5	6	5	6	6	6	6	5	6	6	6	6	6	6	6	**5.8**
													Global Average				**5.6**

Annex C - Future training course on C&I domains for next years

Participant	Broadband	Electric Protection	Interoperability	Mobile Networks	NGN	Optical Networks	Safety	Virtual Lab
1	2			3	1	4		
2	3		2		1	4		
3	3	2	1	1	3	4		3
4	1		4	3	2			
5	1	2	2	1	1	3		4
6	1	2	1	1	1	1	1	1
7		1		4	2		3	
8	4			3		1	2	
9	1	2	1	2	1	3	3	3
10		1				2	3	4
11	1				2	3		
12	3	1	1	2	2	1	2	1
13	1	2	1	1	1	2	1	1
14	4			3	1			2
15	3			2	1	4		
16	2	2	1	1	2	1	1	2
Next Training Priorities								
1st	**6**	**3**	**6**	**5**	**8**	**4**	**3**	**3**
2nd	**2**	**6**	**2**	**3**	**5**	**2**	**2**	**2**
3rd	**4**	**0**	**0**	**4**	**1**	**3**	**3**	**2**
4th	**2**	**0**	**1**	**1**	**0**	**4**	**0**	**2**

Participants were also invited to fill in other training needs; the list below consolidates the suggestions.

Please indicate other training needs of your country/institution
- More training on lab testing of 4G/LTE, Wi-Fi and new technologies; - Equipment used in laboratories for testing of ICT products; - International standards on measurements and procedures for Laboratories; - Regulatory framework; telecom services regulation; organic structure of a Regulator; - Digital TV, analog to digital migration, LTE, 700 MHz bandwidth interference care; - Development of technical manuals explaining how to operate test equipment; - Training on metrology laboratories and calibration; - Digital TV: ISDB-T; - Laboratory audit; - Establishment of Labs (17025); establishment of Certification Bodies (17065), MRA reach; - conformance assessment systems audit; - Broadband, NGN.