ITU Training on Conformance and Interoperability for the AFR region
Tunis, Tunisia, 23-27 June 2014

ITU Conformity and Interoperability Programme

Pillar 3 and 4

http://www.itu.int/en/ITU-D/Technology/Pages/ConformanceandInteroperability.aspx

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Lack of Standards or no Conformity to Standards

- *Poor products performance, poor requirements*
- *Poor products on the market*
- *No difference between original and counterfeit equipment*
- *Poor quality or no service*
- *Company image & market share*
- *No Interoperability*

Poor or lack of broadband services to peoples

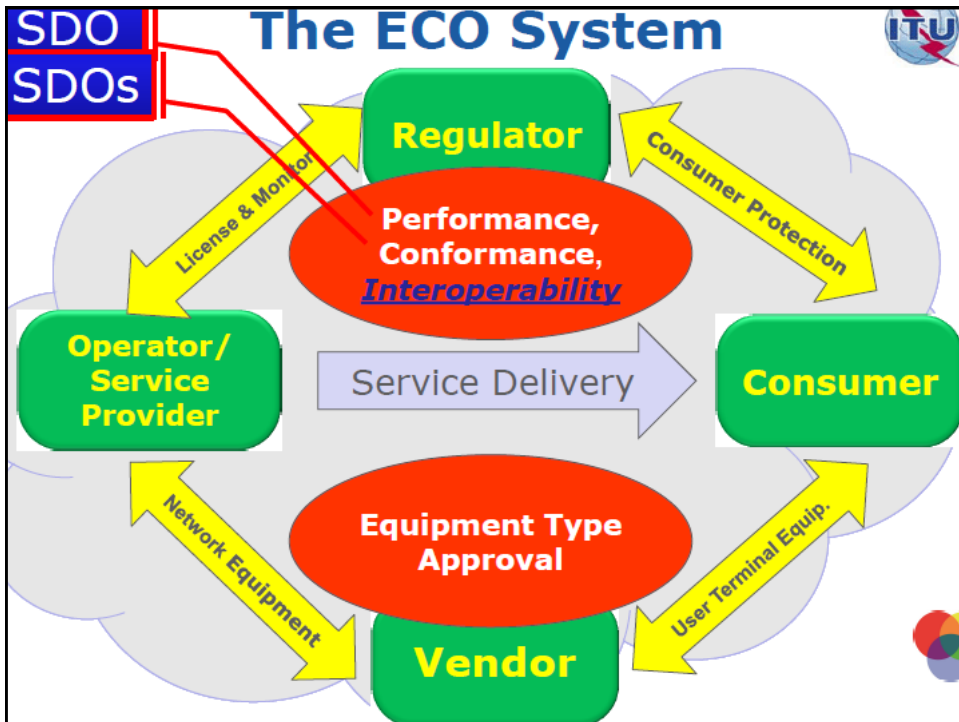## Interoperability for the 21st century global digital economy

- Developing countries experiencing huge interoperability problems and *rising frustration* and demand action by the ITU to redress the *interoperability dilemma*

- Results in *delays* in full participation in the *global digital economy* and impact on social development

- Delivery of e-services requires global standards and *secure interoperable transport platforms*

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Interoperability for a true Access to Broadband

- ITU's global responsibility to *ensure the interoperability* and efficiency of international telecommunications;

- Growing *concerns* about and evidence of *non-compliance* with ITU-T Recommendations on *performance, safety and interoperability*;

- *Counterfeit or illegally imported* non-compliant and poor quality products, in particular in developing countries;

- Need to *facilitate market penetration* by avoiding multiple testing and certification, resulting from *regulatory and customer reactions to the risks of non-compliance*

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The ECO System

SDO
SDOs

Regulator

License & Monitor

Consumer Protection

Performance, Conformance, _Interoperability_

Operator/ Service Provider

Service Delivery

Consumer

Network Equipment

Equipment Type Approval

User Terminal Equip.

Vendor

Lack of Interoperability: Network Integrator

Equip. Category	Problem	Main Reasons	Effects
alog Voice teway	Can't forward dialed digits to next devise.	Feature not supported and not mentioned on Data Sheet although it is basic requirements for operation.	Another device should be used.
ice interface rd	Caller ID feature is not working on certain mode of operation although it is globally mentioned on Spec. Sheet that it is supported.	New hardware interface card should be used.	The customer was unsatisfied and switched to another vendor.
ta Switch	Per Packet load sharing on multi-trunk lines is not working although it is mentioned in the Spec. Sheet	Function not available in current software release.	Additional devices need to be used to support the required function.
MAX se-station	Antenna diversity should be supported... It is available on the configuration menu but not working.	The diversity is actually not working when it was enabled on the software	support Team stated that the diversity is not working in the current software and may be active in next version

Source: ITU consultation mtg, Nairobi, Kenya, 30 – 31 July 2010

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Authority for Action from all the ITU's highest decision making bodies

ITU World Telecommunication Standardization Assembly (WTSA-08) **Resolution 76**

ITU World Telecommunication Development Conference (WTDC-14) **Resolution 47**

ITU Plenipotentiary Conference (PP-10) **Resolution 177**

Radiocommunication Assembly 2012 **Resolution 62**

ITU **Council Decisions**

The ITU 4 Pillars

The Standardization Sector side

❖ Conformity Assessment

❖ Interoperability Events

The Development Sector side

❖ Capacity building

❖ Establishment of test centres in developing countries.

The Telecommunication Development Bureau Side

❖ Capacity building
❖ Establishment of test centres and appropriate C&I Regimes including MRAs in developing countries.

Meeting with in-deep consideration for test centres and Capacity Building in the Regions

Held:
❖ Africa (Ghana)
❖ CIS (Moscow)
❖ Americas
❖ Arab States (Tunis) Forum and Training

Next:
❖ Asia Pacific (2014)

Questionnaire on the Status of Conformance and Interoperability in the regions: Three main groups

Variety of Equipment, services and providers

Questionnaire Outline

June 2011 – 35 replies

- **Fixed and Mobile Networks –** (technologies, services, equipment)

- **Conformance and Interoperability**
  - ➤legacy, Impact of C&I problems, type approval strategies in place, recognition of marking schemes (FCC, CE, …)
  - ➤measures to mitigate C&I problems
  - ➤National Accreditation Bodies, Certification Bodies and Test Labs for Type Approval established?
  - ➤MRAs with other parties ?
  - ➤Market Surveillance procedures and practices
- **Training and Capacity Building initiatives**
- **Culture and Readiness** to participate in the ITU C&I Programme

Conformance and Interoperability

Group 1 Limited variety of equipment, services and providers	Reported no problems – likely single operator Type Approval regime reported in place No Type Approval responsible body Marking – recognized either a body recommended by service provider or well known Mark such as EC, FCC No national accreditation, certification bodies or test labs, No MRAs, No market surveillance , No ICT labs
Group 2 Medium variety of equipment, services and a few providers	New equipment and legacy – Interoperability: signalling in core networks, equipment malfunctions, implementation of new features on all platforms – Affecting QoS, customer satisfaction and loss of business - Pre installation activities carried out to mitigate interoperability problems - Half of this Group have Type Approval regimes - Half have Type Approval bodies -No national accreditation and certification bodies, No MRAs -No market surveillance
Group 3 Wide variety of equipment, services and providers	Longer lists of interoperability problems such as: MSAN-Softswitch conformity, ISDN support, IMS core, software Economic impacts: additional costs, company image, QoS, project delay, upgrade costs, extra testing costs Pre installation work always done to mitigate interoperability problems - Type Approval regimes in place - Type Approval Bodies in place - Recognize EU, or FCC , or IC or all three Accreditation and certification bodies in place as well as test labs. MRAs active - Market surveillance in place

Training and Capacity Building

Group 1 Limited variety of equipment, services and providers	**Interested** in follow-up training/capacity building related to WTDC 2010 Res 47, WTSA 2008 Res 76, PP-10 Res177
Group 2 Medium variety of equipment, services and a few providers	Would **participate** in development of regional program in **capacity building** Interested in opportunities to **establish** national, sub-regional and regional **test centres**
Group 3 Wide variety of equipment, services and providers	**No** ICT Labs capable of hosting test events or ITU activities

Training and Capacity Building

Group 1 Limited variety of equipment, services and providers	**Interested** in **follow-up** training/capacity building related to WTDC 2010 Res 47, WTSA 2008 Res 76, PP-10 Res177
Group 2 Medium variety of equipment, services and a few providers	Would **participate** in development of regional program in **capacity building** and **expert tutorials** Interested in opportunities to **establish** national, sub-regional and regional **test centres**
Group 3 Wide variety of equipment, services and providers	Availability of ICT Labs to **host test events** or ITU activities

Questionnaire: Overall results

- Highlighted *lack of interoperability*
- ITU to *provide assistance and relief*
- *capacity building* and access to expertise is an essential ingredient
- initiatives to promote the use of **global testable standards**
- *test events for* compliance and interoperability *welcome*

Guidelines for Developing Countries for Establishing Test Labs in Different Regions

http://www.itu.int/ITU-D/tech/ConformanceInteroperability/ConformanceInterop/indexGuidelines.html

- *Status* in the regions and needs
- *Funding and Training Sources*
- *Criteria* to establish Accreditation and Conformity Assessment Bodies - *International Telecommunications Testing Centres (ITTCs)*
- Economics and *Cost Implications* for ITTCs
- *Roadmap* for ITTC rollout

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Needs in Developing Countries for Test Labs

- Conformity Assessment Bodies to contribute to create an orderly telecom apparatus market place

- Once standards and test suites are in place, test labs can check equipment for compliance

- Sharing test labs resources amongst countries and regions may lowering overall costs while continuing addressing regional priorities

- A robust framework (following international procedures – ISO/CASCO) needed for trust and confidence in test results and among test labs

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Conclusions from Guidelines

- Members to:
  - ➤ advise the ITU of *interoperability problems*
  - ➤ Regulators to establish market access requirements
  - ➤ assess *legislation and regulations*
  - ➤ *prioritize areas of concern* for products and systems

- Establishment of Accreditation Bodies and approach to *MRAs and MLAs*

- Establishment of *Test Centres* on a regional basis, wide areas and possibly common infrastructures

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Steps to Establish an ISO 17025 Compliant Test Lab

➢Management requirements and systems

➢Lab requirements, test methods and procedures, audits, equipment handling, technical competence

➢Document control, calibration records and staff records

➢ Handling of test reports and calibration certificates

➢Service to customers and handling of complaints

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Funding and Training Sources

➢UNIDO, major Banks in each region, specialized funding agencies for telecoms projects and others

➢Requirements to access funds vary from low interest loans, to grants, seed funding and cost underwriting

➢Repository of international telecom training organizations

➢Costs of training may vary from just travel to and from location, to government and supplier subsidized training, to private for-profit fully costed training.

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New Guidelines on C&I (2013- 2014)

Guidelines for the Development, Implementation and Management of Mutual Recognition Arrangements/Agreements on Conformity Assessment (2013)

These guidelines promote the understanding and establishment of Mutual Recognition Agreements (MRAs)
MRAs on conformity assessment are intended to promote efficiency and resource sharing, as well as to streamline the flow of products among participating Parties such as ITU Member States and private sector organizations, such as testing laboratories

Feasibility Study for the establishment of a Conformance Testing Centre (2013)

This feasibility study describes environments, procedures and methodologies to be adopted to establish, manage and maintain a testing center covering different kinds of conformance and interoperability testing areas

Establishing Conformity and Interoperability Regimes – Basic Guidelines
These Guidelines address challenges faced by developing countries as they plan and review their own C&I regimes. Aspects covered by this publication include, inter alia, conformity assessment procedures; legislation to promote an orderly equipment marketplace; surveillance; coordination across regulatory agencies; and relevant international standards.

ITU Training activities on C&I

Dedicated exclusively to C&I (http://www.itu.int/ITU-D/tech/events/index.html)

- Workshop on NGN Conformity and Interoperability Testing Centre(s), Nairobi (Kenya), 2-4 August 2010
- ITU Regional Seminar for the Africa Region on C&I   Testing Center(s), Accra (Ghana), 4-6 July 2011
- ITU Regional Seminar for the CIS Countries on C&I Testing Center(s), Moscow (Russian Federation), 9-11 November 2011
- **Africa and Arab Regions, Tunis 5-7 Nov 2012**
- **ARB Region, Tunis 2-6 April 2013 (EMC Compatibility)**
- **Africa Region, Tunis 14-18 October 2013 (EMC Compatibility)**
- **Americas Region, Campinas, 24-28 June 2013 (EMC Compatibility)**
- **ARB Region, Tunis 17-22 March 2014 (Mobile terminals)**
- **AFR Region, Tunis 23-27 June 2014 (Mobile terminals)**
- **Americas Region, Campinas July 2014 (Mobile terminals)**

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Capacity building and test centres

❖ ITU is implementing proposals on human *capacity building*

❖ ITU will assist developing countries in the establishment of test facilities and in cooperation with *international institutions*:
  ➤ UNIDO
  ➤ International Laboratory Accreditation Cooperation (ILAC)
  ➤ International Accreditation Forum (IAF),…)
  ➤ Labs and R&D institutions

What's next in 2014
Pillar 3

- Forum and Training on Conformance and Interoperability for ASP CIS Region
- Training on Conformance and Interoperability for Arab and Africa Regions
- Training on Conformance and Interoperability for AMS Region

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What's next in 2014
Pillar 4 for AFR/ARB region

- Sub-Regional Workshop for **for SADC Region** to promote the development and implementation of Mutual Recognitions Agreements
- Conformity and Interoperability Assessment on Regional Basis- Collaboration with Regional and Subregional organization: Assessment Study **for Mahghreb Region**
- Guidelines for the development, implementation and management of Mutual Recognition Agreements (MRAs)
- Sub-Regional Workshop for **for Mahghreb Region** to promote the development and implementation of Mutual Recognitions Agreements

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Direct Assistance on C&I

- Objectives
  - Understanding of the challenges and identify strategies to increase the C&I infrastructure in the country
  - Facilitate universal access to ICT networks and applications/services by way of increased interoperability between equipment and systems from different vendors
  - C&I Programme and regional integration through the establishment of MRA or regional test centres to meet national needs
  - Draft roadmap to guide the implementation of further actions
- Experience in ASP Region: Mongolia (CRC)

Memorandum of Understanding

- ITU has signed MoUs with testing centers in the regions to promote activities of the C&I Programme, such as capacity building events:

  - AFR and ARB: CERT (Tunisia)
  - AMS: CPqD (Brazil)
  - Europe: Sintesio (Slovenia)
  - Europe: Tilab (Italia)
  - CIS: ZNIIS (Russia)
  - ASP: ITU is looking for laboratory partners in the Asia-Pacific Region.

WTDC-14, Outcomes on C&I

- Dubai Declaration
- Amendment of Resolution 47
- New ITU-D Study Group Question on C&I
- Objective 2, Output 2.2, Programme
- Regional Initiatives for AFR and ARB Regions

AFR and ITU Cooperation

❖ **Analysing the status of resources in the regions**

❖ **Finding regional agreements about possible locations for resources/ MRAs and testing capabilities: establishing Forums of Experts at Subregional Level**

❖ **Participation in Capacity Building activities, accreditation and certification**

❖ **Participation in the creation of a common C&I regime and regional test laboratories**

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Thank You !