

ITU Forum on Conformance and Interoperability  
for the Arab and African regions  
Tunis, Tunisia, 5-7 November 2012



**ITU CONFORMITY AND  
INTEROPERABILITY PROGRAMME**




**PILLAR 3 AND 4**

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**The Telecommunication  
Development Bureau Side**



❖ Capacity building  
❖ Establishment of test centres in developing countries.

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

**Held:**

- ❖ Africa (Ghana)
- ❖ CIS (Moscow)
- ❖ Americas

**Next:**

- ❖ Arab States (Tunis, Forum 5-7, Training 8-10 Nov 2012)
- ❖ Asia Pacific (2013)



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



### Variety of Equipment, services and providers

**Group 1**  
Limited

**Group 2**  
Medium

**Group 3**  
Wide





## 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



Fixed & Mobile networks 		
<b>Group 1</b> Limited variety of equipment, services and providers	<b>Internet/IP</b> Gateway services <b>2G and 3G</b> GSM network services	No equipment listed in response, referred/deferred to service provider for detailed information
<b>Group 2</b> Medium variety of equipment, services and a few providers	<b>TDM</b> voice, fax, international voice, data <b>Internet/IP</b> ADSL, Cybercafe, VoIP <b>NGN Softswitch</b> voice, data <b>2G</b> voice, local and international SMS, prepaid <b>3G</b> international and local SMS, data and Internet	Tendence to have a <b>dominant equipment supplier</b>
<b>Group 3</b> Wide variety of equipment, services and providers	<b>TDM</b> voice, data, ISDN <b>Internet/IP</b> VoIP, data, email, wimax, metro ethernet <b>NGN Softswitch</b> voice, fax, ISDN <b>NGN IMS</b> VoIP, digital fax <b>2G</b> GPRS/EDGE, circuit switched data, voice, SMS <b>3G</b> HSPA + mobile broadband, voice, AMR-WB voice, CS video call, SMS, R99 PS data	Tendence to have a <b>wide mix of suppliers</b> 

Conformance and Interoperability 	
<b>Group 1</b> <b>Limited</b> variety of equipment, services and providers	<b>Reported no problems – likely single operator</b> 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
<b>Group 2</b> <b>Medium</b> variety of equipment, services and a few providers	New equipment and <b>legacy</b> – <b>Interoperability:</b> signalling in core networks, equipment malfunctions, implementation of new features on all platforms – Affecting <b>QoS, customer satisfaction and loss of business</b> - Pre installation activities carried out to mitigate interoperability problems - Half of this Group have Type Approval regimes - Half have Type Approval bodies - <b>No national accreditation and certification bodies, No MRAs -No market surveillance</b>
<b>Group 3</b> <b>Wide</b> variety of equipment, services and providers	<b>Longer lists of interoperability problems</b> such as: MSAN-Softswitch conformity, ISDN support, IMS core, software <b>Economic impacts:</b> additional costs, company image, QoS, project delay, upgrade costs, extra testing costs <b>Pre installation work</b> always done to <b>mitigate interoperability problems</b> - <b>Type Approval</b> 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. <b>MRAs active</b> - <b>Market surveillance</b> 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



## 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



## 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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## 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 Conformance and Interoperability Testing Center(s), Accra (Ghana), 4-6 July 2011
- ITU Regional Seminar for the CIS Countries on Conformance and Interoperability Testing Center(s), Moscow (Russian Federation), 9-11 November 2011
- **Next: Africa and Arab regions, Tunis 5-7 Nov 2012**

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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 2013



### 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 2013



### Pillar 4

- Conformity and Interoperability Assessment on Regional Basis: Collaboration with Regional and Subregional Organizations for establishing a common C&I Regime and Mutual Recognition Arrangements
- Guidelines on establishing Conformity Assessment Test Labs and Regimes in different Regions
- Guidelines for the development, implementation and management of Mutual Recognition Agreements (MRAs)
- Initiate a pilot project for the development of a regional test facility in Asia Pacific
- Sub-Regional Workshop for SADC Countries to promote the development and implementation of Mutual Recognitions Agreements

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## ARB, AFR and ITU Cooperation

- ❖ **Analysing the status of resources in the regions**
- ❖ **Finding regional agreements about possible locations for resources/ and testing capabilities**
- ❖ **Participation in Capacity Building activities, accreditation and certification**
- ❖ **Participation in the creation of regional test laboratories**



**Thank You !**

