



ITU CONFORMITY AND INTEROPERABILITY PROGRAMME: PILLARS 3 AND 4


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The ITU C&I Programme



2nd part – Telecommunication Development
Bureau

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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 (Kenya and Ghana)
- ❖ CIS (Moscow)

Next:

- ❖ Arab States
- ❖ Americas



Questionnaire on the status of Conformance and Interoperability of Equipment and Systems



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: Overall results



- Highlighted impact due to **lack of interoperability**
- **food for thought** as to what areas the ITU, within its scope and mandate, can **provide assistance and relief**
- **capacity building** and access to expertise is an essential ingredient
- initiatives to promote the use of **global testable standards** for product implementations
- compliance and interoperability **test events welcome**



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



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



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 can affect **legacy** systems - Lists of
interoperability problems such as: signalling in core networks,
CDR equipment malfunctions, problems implementing new
features on all platforms - Impact of interoperability problems
high, affects **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 features
in general
Lists of **economic impacts** such as: 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** and
expert tutorials

Group 3
Wide variety of
equipment,
services and
providers

Interested in opportunities to **establish**
national, sub-regional and regional **test
centres**

Availability of ICT Labs to **host test
events** or ITU activities



Guidelines for Developing Countries for Establishing Test Labs in Different Regions



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



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Conclusions from Guidelines



- Members to:
 - advise the ITU of **interoperability problems**
 - establish market access requirements (regulators)
 - assess **legislation and regulations**
 - **prioritize areas of concern** related to telecommunication products and systems
- Establishment of Accreditation bodies and approach to at least regional **MRAs and MLAs**
- Establishment of **Test Centres** on a regional basis, wide areas and possibly common infrastructures



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Needs in Developing Countries for Test Labs

- Conformity Assessment Bodies activities contribute to create an orderly telecom apparatus marketplace
- Once standards and test suites are in place, test labs can check equipment for compliance
- Sharing test labs resources amongst countries and regions and must have sufficient scope to address regional priorities lowering overall costs
- A robust framework (following international procedures) is needed for trust and confidence in test results and among test labs

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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
- 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, Tunisia November 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 Partners and **international institutions**:
 - UNIDO
 - International Laboratory Accreditation Cooperation (ILAC)
 - International Accreditation Forum (IAF),...
 - Labs and R&D institutions



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Thank You !

