



ITU Regional Workshop on Bridging the Standardization Gap for the Arab and Africa regions

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ITU CONFORMANCE AND INTEROPERABILITY PROGRAMME: PROMOTING CONFIDENCE AND SECURE END-TO-END CONNECTIVITY

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Interoperability: Key to participation in the 21st century global digital economy

- Developing countries experiencing huge interoperability problems and rising frustration
- Results in delays in full participation in the global digital economy
- Impacts economic and social development
- Delivery of e-services requires global standards and secure interoperable transport platforms
- Developing countries demanding action by the ITU to redress the interoperability dilemma



Authority for ITU Action

- WTSA-08 Res. 76
- WTDC-2010 Res. 47
- Plenipotentiary 2010 Res. 177
- ITU Council Decisions 2009, 2010





The ITU Conformity Program

- **Conformity assessment:**
 - The first step to interoperability,
 - Testing: certification / SDOs-Forums recognized labs
 - Creation of ITU conformity database

- **Use of** Current international procedures (ISO/IEC 17025, 17050, ISO Guide 65 - **CASCO toolbox**)

- **Establish a database** of conforming products and systems with robust credentials for participants

- **Develop a long-term business plan**



ITU Conformity Database

- Enables manufacturers and service providers to make a visible declaration that their equipment conforms to ITU-T Recommendations and to referenced standards, if any, from SDOs recognized according to Recommendation ITU-T A.5.
- The Database is open both to members and non-members of ITU
- The Database contains only information entered directly by companies by means of an on-line tool: the Supplier's Declaration of Conformity (SDoC).
- ITU is not in a position to verify the accuracy of the information submitted by companies, who, in signing the SDoC take the full responsibility for its contents.





Three Conformity Testing Options to populate the ITU Conformity database

<http://www.itu.int/net/ITU-T/cdb/cdb.aspx>

Companies will directly populate the conformity database by submitting to conformity@itu.int, a **Supplier's Declaration of Conformity (SDoC)** available on-line.

One of the following three "Routes" for testing can be chosen:

- **Route 1:** Testing performed in an accredited laboratory according to ISO/IEC 17025; or
- **Route 2:** Test results approved by an Accredited Certification Body (ISO/IEC Guide 65) (any lab); or
- **Route 3:** Testing performed in laboratories recognized by an SDOs, Forum or Consortium qualified in accordance with Recommendation ITU-T A.5.





Industry Consultations and Interoperability Events 2010

- **ITU as facilitator for interoperability events to:**
 - identify the interoperability problems
 - develop Interoperability test suites as needed
 - Creation of ITU interoperability database
- **First ITU Interoperability Event** on IPTV, Geneva, 20-23 July 2010
- **Second ITU Interoperability Event** on IPTV, Singapore, 23-24 and 27 September 2010
- **Second CTO Consultation**, Paris, 29th October 2010
- **3rd ITU Interoperability Event** on IPTV, Pune, India, 14-17 December 2010
- **3rd CTO Consultation Meeting planned for 25 October 2011, Geneva, Switzerland**



Regional “robust” Consultation Meetings 2010

- Quito, Ecuador, 6 July 2010
 - Nairobi, Kenya, 30-31 July 2010
 - BDT event - 2-4 August 2010 Nairobi, Kenya on NGN and creation of test labs
 - Sydney, Australia, 16-17 September 2010
- <http://www.itu.int/ITU-T/worksem/wtsa-08/res76/index.html#events>



Results from consultations

- Immediate implementation of the Conformity DB and the creation of Interoperability DBs
- Negotiate arrangements to link with Databases from SDOs / Forums
- Regions and regional organizations invited to identify locations for test centres in their regions / sub regions (Res. 47)
- Parallel study and implementation of action lines of council-09 to respond to the demand for urgent action
- Encourage the TSB, in collaboration with BDT and other relevant institutions to create capacity building opportunities and to perform feasibility studies to create test labs centres in the regions and to consider specific topics to be addressed in this field region by region
- Encourage all stakeholders to cooperate with TSB to speed up the implementation of Res. 76 to permit developing countries to benefit from the opportunities offered by the rapid development of technology.



Capacity Building and Test Centres

- ITU-T (TSB) is implementing proposals on human capacity building in close collaboration with ITU-D (BDT) (WTDC Res. 47)
- **Conduct feasibility studies in developing countries** for capacity building and establishment of test labs in the regions
- ITU-T will assist in the establishment of test facilities in developing countries and in cooperation with international institutions
 - e.g. UNIDO, International Laboratory Accreditation Cooperation (ILAC), International Accreditation Forum (IAF)
- Visits to various Labs are in progress in the regions
- A project to create a test centre in Tanzania is in progress





**ITU Regional Seminar for the
Africa Region on Conformance and Interoperability Testing Centre(s)
Accra (Ghana), 4-6 July 2011**

- ❖ ITU TSB and BDT collaborative activities on Conformance and Interoperability
- ❖ Global Approaches for Testing
- ❖ Building Testing Labs (4 Dedicated Sessions)
- ❖ Round Table



Situation in the Regions:

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





Survey/Questionnaire Outline

June 2011 – 31 responses

- Fixed and Mobile Networks – (technologies, services, equipment)
- Conformance and Interoperability
 - legacy issues, impact of C&I problems, type approval regimes, market surveillance, 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

Survey Results : 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 HPSA + mobile broadband, voice, AMR-WB voice, CS video call, SMS, R99 PS data

Tended to have a wide mix of suppliers



Survey Results : C&I

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



Survey Results : Training and Capacity Building

All Groups expressed interest in opportunities to establish national, sub-regional and regional test centres

Group 1

Limited variety of equipment, services and providers

Interested in follow-up training/capacity building related to WTSA Res 76, WTDC Res 47, PP-10 Res 177

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

ICT labs capable of hosting test events or ITU activities

Overall survey results

- Highlighted the kind of ***non interoperability*** problems and their impacts being experienced in practice
- ***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***



C&I Business Plan

Elements of the business plan will address:

- Development of test specifications of ITU-T Recommendations
- Conformity database
- Interoperability events
- Capacity building and testing facilities in developing countries
- Establishment/intensification collaboration with other organizations and countries
- Proposed ITU Mark Program
- Resource Requirements for implementation of the C&I Programme
- Risks and Benefits of action / no action on Conformity and Interoperability



Benefits of Action on C&I

Adds essential elements to the work program of the ITU-T's Study Groups to ensure competitiveness as a global SDO in interoperable telecommunication standards.

- Development of Conformance Test Suites where the market needs for interoperability have high priority
- Listing of products conformance tested to ITU Recommendations with supporting credentials (ITU conformity DB),
- Facilitation of interoperability test events with listing of successful interoperable products and credentials attesting to veracity of claims.
- Assisting developing countries to improve the likelihood of achieving interoperability,
- Creating training opportunities in cooperation with the BDT, and promoting establishment of regional test labs to assess conformity and test for interoperability,
- Providing the opportunity to maintain leadership and coordination roles in global interoperability standards development by cooperating with the most important SDOs having similar or complementary scope worldwide and other organizations dealing with C&I and testing (ISO, IEEE, ETSI, ILAC, IAF, BIPM)



Risks of Action

- Challenges for TSB of remaining cost neutral
- Resourcing update and maintenance of database and version control
- Finding, attracting and funding test suite experts to develop test suites where needed
- Resourcing negotiation of partnerships and linkages with interoperability test houses and use/access to test results
- Responding to legal challenges and facilitating market surveillance
- Potential inability to create needed expertise/capacity and test labs in developing countries in a timely way
- Potential polarization of developing and developed country membership
- Alienation of some sector members and potentially their Administration





Risks of No Action

- Interoperability concerns of ITU membership from developing countries remain unaddressed,
- A fundamental ITU mission goal will be missed and private sector members could leave ITU in favour of competitive SDOs including de facto standardization bodies
- ITU's position as the pre-eminent global standards development organization in telecommunications would continue to be eroded as it has been in the past decade due to lack of the essential elements in its program as described above
- New Forums, SDOs and Consortia will be created to compensate for the absence of ITU in this field resulting in an increasingly aggressive campaign by competitors in the regions and an increase of divergent standards
- Risk of becoming irrelevant to an increasingly fast paced ICT industry with huge interoperability and compliance challenges



Recommendations for action

- Report cases of non interoperability to ITU with details
- Consider establishment of regional and sub regional test centres for compliance and interoperability testing
- Establish accreditation and certification regimes and testing methodologies for priority product areas
- Identify possibilities for Mutual Recognition Arrangements/Agreements (MRAs) on Conformity Assessment amongst regional partners
- Ensure that robust technical requirements are in place for products to enter regional markets
- Identify appropriate institutional arrangements for oversight and database hosting for regional MRAs



THANK YOU

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