The ITU Conformity and Interoperability Programme

Paolo Rosa
ITU

C&I Background

- Major concerns were raised at WTSA-08, especially by developing countries;
  - lack of conformance
  - poor quality, legacy
  - counterfeit equipment
  - lack of legal, contractual and regulatory framework

- Lack of interoperability

- Assistance in deploying testing facilities and capacity building

- Other standards bodies have already introduced a number of activities to address conformity and interoperability and are far ahead of ITU.

ITU Council-09 Endorsement

- Implementation of conformity assessment and interoperability events programme, including the creation of the conformance database

- Creation of human resources capacity building opportunities

- Assist establishment of test facilities in developing countries

- Report to next Council on the effective implementation of the above.

The ITU C&I Programme

Conformity: Ability of a product to meet the requirement(s) of a standard

A first step to increase the probability of interoperability

The ITU C&I Programme

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

- **ITU as facilitator for interop events to:**
  - identify the interoperability problems
  - develop Interoperability test suites as needed
  - Creation ITU interoperability database

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

- **Conduct feasibility studies in developing countries** for capacity building and test labs in the regions

- **Develop a long-term business plan**
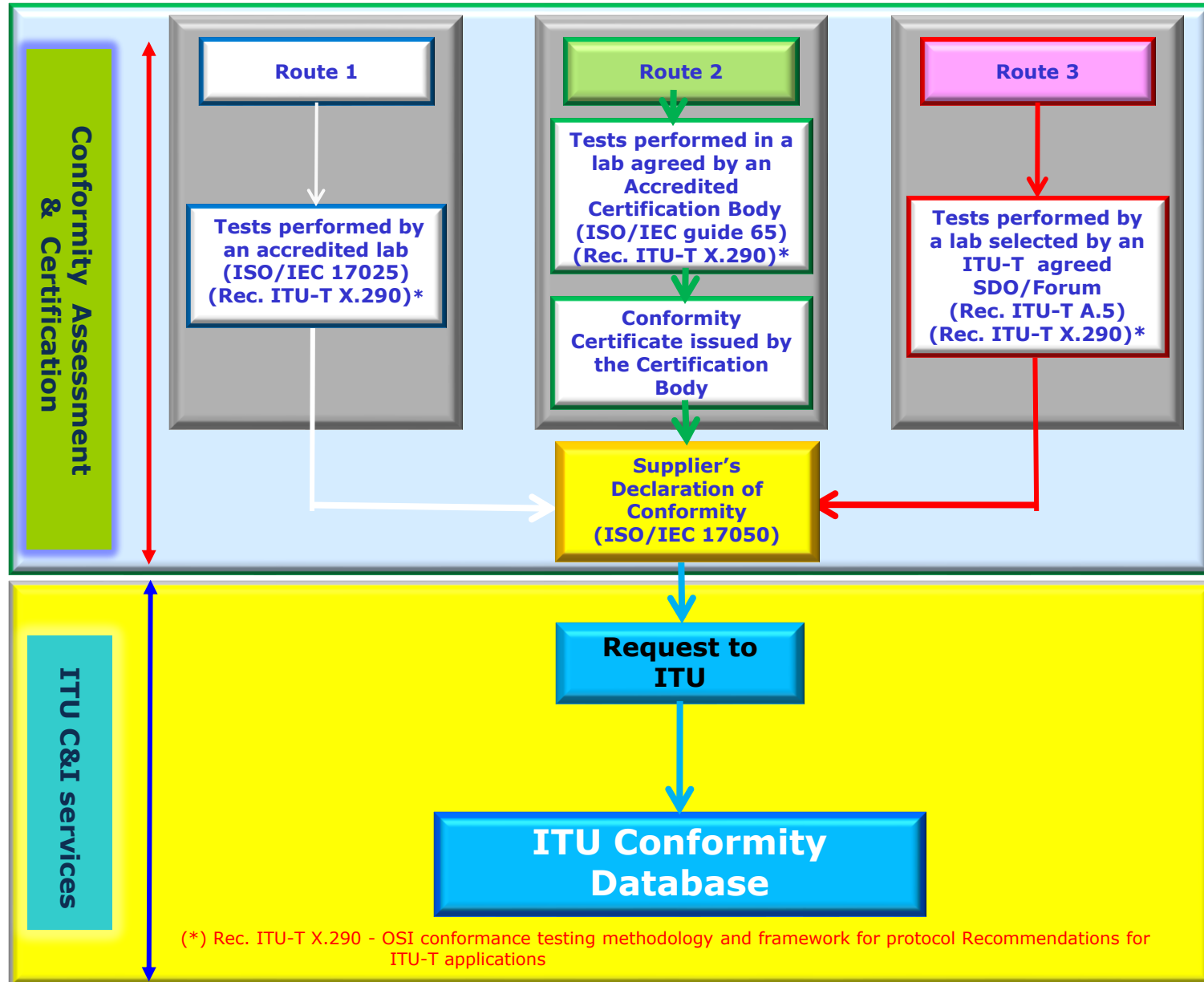
ITU Conformity Database

- Enable manufacturers and service providers to make a visible declaration that their equipment conform to ITU-T Recommendations and to referenced standards, if any, from SDOs recognized according to recommendation ITU-T A.5.

- The DB is open both to members and non-members of ITU

- The DB 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, thus in signing the SDoC take the full responsibility of its contents.

ITU-T Recs & test suites: the three options

Conformity Assessment & Certification

Route 1

Tests performed by an accredited lab (ISO/IEC 17025) (Rec. ITU-T X.290)*

Route 2

Tests performed in a lab agreed by an Accredited Certification Body (ISO/IEC guide 65) (Rec. ITU-T X.290)*

Conformity Certificate issued by the Certification Body

Route 3

Tests performed by a lab selected by an ITU-T agreed SDO/Forum (Rec. ITU-T A.5) (Rec. ITU-T X.290)*

Supplier's Declaration of Conformity (ISO/IEC 17050)

ITU C&I services

Request to ITU

ITU Conformity Database

(*) Rec. ITU-T X.290 - OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications

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)

- 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

The ITU Global C&I Portal
(find a reply to your needs)

- ❖ **Basic C&I Concepts**
  - ❖ The ITU C&I Governing Rules
  - ❖ Accreditation, certification, inspection, calibration (CASCO Toolkit)
  - ❖ National Accreditation Bodies, MRAs and MLAs concepts for the market
- ❖ **The ITU-T C&I Programme**
  - ❖ The ITU approach to C&I
  - ❖ The ITU Conformity Database
  - ❖ The ITU Interop activities
  - ❖ Capacity Building opportunities and Regional test centres
  - ❖ The ITU Study Groups test suites development
- ❖ **Cooperation with ITU-T A.5 SDOs**
  - ❖ Best practices for testing
- ❖ **Cooperation with International Institutions**
  - ❖ Labs: ILAC/IAF
  - ❖ Accreditation Bodies, Regulators, ITU Laboratories repository
- ❖ **Cooperation with International Organizations**
  - ❖ ISO, IEC, (CASCO), BIPM, UNIDO, WTO
- ❖ **Consumers Associations**
  - ❖ Market needs from end users and civil society

ICT Labs Repository

Testable ITU-T Rec and A.5 SDOs stndrds	Lab details (URL/contacts)	Country	Accreditation (Y/N)	MRA (Y/N)	Accreditation & MRAs Certificates

The portal will reply to:

- ❖ Where to search for products conform to standards/recommendations?
- ❖ Which are the ITU Standards for which test suites have been developed?
- ❖ What is a 1st, 2nd or 3rd party lab? How can I have my lab accredited?
- ❖ Which are the requirements/procedures to enter data in the ITU conformity database?
- ❖ How ITU Guarantees that data in its conformity database are correct?
- ❖ Is ITU liable for the data shown in its conformity database?
- ❖ What is the CASCO Toolkit? What is a certification? What is an MRA or MLA?
- ❖ What is the Supplier's Declaration of Conformity?
- ❖ Can I use test suites produced by other organizations or standards derived from ITU to assess conformity to ITU standards?
- ❖ Where to find Accredited Testing Labs / Accreditation Bodies in my country/region?
- ❖ Product listed in a non-ITU conformity database: is it good?
- ❖ How can I contribute to the regional capacity building programme of ITU ?
- ❖ How can I participate in ITU interop events?
- ❖ Which are the tests to be performed to be listed in the ITU conformity database?
- ❖ How I can check which standards/options have been implemented in a product?
- ❖ In which cases it is allowed the use of non-accredited lab to enter data on my product to the ITU database?
- ❖ When I may use an accredited certification body?
- ❖ What is an Accreditation Body?

The C&I long-term business plan

Conformity to standards, which implies widespread agreement on interpretation, testing and implementation of standards, is an essential element to fulfillment of the ITU mission to achieve interoperability to deliver the benefits of ICTs worldwide without discrimination.

Elements of the long-term business plan will contain:

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

Parts of the long-term business plan can be completed only after relevant data are available, e.g. Level of demand.

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 of interoperability has higher priority
- listing of products incorporating conformance tested ITU Recommendations with supporting credentials (ITU conformity BD),
- 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 establishing 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 interop 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

PP-10 Res. 177 on C&I

- Endorsement of the objectives of Resolution 76, Resolution 47 and the recommendations of the Director of TSB endorsed by the Council-09

- C&I programme to be implemented in parallel without any delay, including the development of a fully functioning conformity database;

- Development of a long-term business plan in consultation with each region, taking into consideration effects of the conformity database, its impact on bridging the standardization gap and the potential liability issues for ITU and for Member States, Sector Members and stakeholders taking into account the results of the regional ITU conformity and interoperability consultations;

- to assist developing countries in establishing regional or subregional conformity and interoperability centres suitable to perform interoperability testing as appropriate

- to continue to carry out the necessary studies with a view to introducing the use of ITU Mark for a possible future ITU Mark programme

Conclusions

- Resolutions 76(ITU-T), 47(ITU-D) and the new resolution 177: ITU must reply to the needs of Developing Countries regarding conformity and interoperability

- TSB and BDT fully committed in implementing the Conformity and Interoperability Programme

- Conformity one of the tools able to increase probability of interoperability

- Created the voluntary based and free pilot conformity database available to ITU members and non members

- ITU-T Interop events successfully started

- Capacity building activities and creation of test centres under way