Programme 1
Regional Initiatives
Resolution 47

International Workshop "Innovative research directions in the field of telecommunications in the world" under ITU-ZNIIS joint project on creation of "International Telecommunication Testing Centre" (ITTC), Moscow (Russian Federation), 21-22 July 2011

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WTDC-06 Regional Initiatives

CIS REGIONAL INITIATIVE: Creation of international centres for the implementation and testing of new technologies

Objectives

To test telecommunication equipment and services; harmonize methods for the provision of new services within a region; harmonize the introduction in one or more regions of telecommunication standards issued by different international organizations; resolve system/network issues associated with the modernization of communication networks, taking account of previous communication network development experience within a given region.

WTDC-06 Regional Initiatives

CIS REGIONAL INITIATIVE: Creation of international centres for the implementation and testing of new technologies

Expected results

Standard alternatives for the transition to multiservice networks for networks at different levels of development at the time of elaboration of the recommendations; creation of model networks and a knowledge base on the testing of modern equipment and services; provision of access to the knowledge base and model networks to interested telecommunication administrations and operators; uniform (harmonized) provision of new services within the region; future harmonized functioning of multimode terminals throughout the region's telecommunication landscape; creation of a knowledge base on the standards issued by different international organizations and of recommendations for their application, with a view to achieving the uniform (harmonized) introduction of standards within the region; prevention of packet disruption between a region's communication networks through optimized network planning and construction, taking account of previous communication network development experience within the region.

ITU-ZNIIS Project

- Project Title: International Telecommunication Union – Central Science Research Telecommunication Institute: International Telecommunication Testing Centre Project

- Short Title: ITU-ZNIIS ITTC

- Start Date: March 2008

- Estimated End Date: August 2011

ITU-ZNIIS Project

Brief Description of the Project

- Adopted at World Telecommunication Development Conference (WTDC, Doha, 2006), the Doha Action Plan include five regional initiatives for CIS region. This umbrella project is one of the initiatives. Under this project, ITU and ZNIIS will collaborate to create an International Telecommunication Testing Centre (ITTC) for new technologies and will train telecom specialists from developing countries. Methodical testing on Next Generation Networks (NGN) in particular will be carried out at the ITTC through creating a model network that can simulate different network parameters and use multi-vendor equipment. The results of these tests will be documented and shared. Training material on NGN testing will also be developed together with hands-on laboratories, in order to deliver workshops.

- This project has been designed in line with the Recommendation of the World Telecommunication Development Conference (WTDC) 2006 in Qatar to establish International Centres for NGN testing.

ITU-ZNIIS Project

Project Objectives

- An International Telecommunication Testing Centre will be established to: test new telecommunication equipment and services; harmonize methods for the provision of new services within a region; harmonize the introduction in one or more regions of telecommunication standards issued by different international organizations; resolve system/network issues associated with the modernization of communication networks, taking account of previous communication network development experience within a given region; train specialists from developing countries.

Expected Outputs

- an International Telecommunication Testing Centre (ITTC) will be established with adequate space for classrooms, laboratories, conference hall, administration and management and etc.;

- a model network for practical NGN testing and for lab exercises during training;

- effective testing strategies (methodologies) on the model networks;

- training programs and training material;

- access to the knowledge base of NGN tests results.

PROGRAMME 1: Programme on information and communication infrastructure and technology development

Purpose

The objective of this programme is to assist ITU Member States and ITU-D Sector Members and Associates to maximize the utilization of appropriate new technologies for the development of their information and communication infrastructures and services, by taking due account of broadband deployment, transition from analogue to digital broadcasting, traffic and demand forecasting, spectrum management and radio monitoring, interconnectivity, interoperability, network management, security, and quality of service standards for wired and wireless networks, including mobile telecommunications, next-generation networks, rural and satellite telecommunications and the accelerated convergence of the telecommunication networks and services.

Particular attention will be given to capacity building in the development and use of ICT networks through training activities and sharing of information and know-how, as well as to developing and making openly available relevant guidelines, manuals and case studies

PROGRAMME 1: Priority areas

- Spectrum management and radio monitoring
- Broadcasting
- Next-generation networks
- Mobile communications (2G, 3G, 4G, etc.)
- Broadband networks
- Rural communications
- Outside plant

PROGRAMME 1: Deliverables and means

- Creation of tools and guidelines:-

- Creation of training material and delivery of training

- Direct assistance to members:- provide assistance on network management, interconnectivity, interoperability and quality of service standards and alternative routing systems, for wired and wireless networks

- Implementation Res.47

RESOLUTION 47 (REV. HYDERABAD, 2010)

Promotes enhancement of knowledge and effective application of ITU Recommendations in developing countries, including conformance and interoperability testing of systems manufactured on the basis of ITU Recommendations

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instructs the Director of the Telecommunication Development Bureau, in close collaboration with the Directors of the Telecommunication Standardization Bureau and the Radiocommunication Bureau

1.to encourage the participation of developing countries in training courses and workshops organized by ITU-D so as to introduce best practices in the application of ITU-R and ITU-T Recommendations, for example by providing fellowships;

2.to assist developing countries in building their capacity, in collaboration with ITU-T, so as to be able to perform conformance testing of equipment and systems, relevant to their needs, in accordance with the relevant Recommendations;

3.to assist the Director of TSB, and in collaboration with the Director of BR, and as appropriate, with equipment and systems manufacturers, internationally and regionally recognized standards development organizations, in conducting conformance assessment and interoperability testing events, preferably in the developing countries, and encouraging developing countries to attend these events; and to collaborate with the Director of TSB to build capacity of the developing countries to effectively participate and be involved in these events, and to provide views of developing countries on this issue following a questionnaire addressed by Programme 1 to the ITU members;

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4. to coordinate and facilitate participation of specialists from developing countries in the work of international or regional test laboratories of organizations or entities specialized in conformance assessment and interoperability testing, in order to gain on-the-job experience;

5. to collaborate with the Director of TSB in order to implement the recommended actions on Resolution 76 (Johannesburg, 2008) as endorsed by the ITU Council in 2009;

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6   to assign to Programme 1 the responsibility for following up implementation of this resolution, to conduct a field study on the economic feasibility of and need for creating regional laboratories in areas which may need them (the Africa region, the Arab region and the RCC, the Americas region and the Asia and Pacific region) for conformance and interoperability testing of manufactured systems in relation to ITU-R and ITU-T Recommendations, and to report to Council on the results of this field study;

7   to submit a periodic report to the Telecommunication Development Advisory Group on the implementation of this resolution as well as a report to the next WTDC in 2014 on implementation of this resolution, which shall also contain lessons learned with a view to updating the resolution for the phase after 2014.

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In collaboration with TSB
First Step:
Prepare the Questionnaire. Content of the Questionnaire: feedback from the workshop held in Nairobi 2-4 August 2010

Second Step:
Define the framework of the Field study on the economic feasibility of and need for creating regional laboratories in areas which may need them (the Africa region, the Arab region and the RCC, the Americas region and the Asia and Pacific region) for conformance and interoperability testing of manufactured systems in relation to ITU-R and ITU-T Recommendations, and to report to Council on the results of this field study;

Third Step
Identify partners for conducting the Field Study and Training Activity Region by Region.

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Questionnaire on C&I issues.

Feedback from the workshop, Nairobi 2-4 August 2010

- *Purpose of the Questionnaire: to collect information from ITU Members on the status of Conformance and Interoperability of Equipment and Systems*

- Questionnaire and analysys of the received replies are available at: http://www.itu.int/ITU-D/tech/NGN/index.html

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Guidelines for Developing Countries on establishing conformity assessment test labs in different Regions

The Guidelines shall include
- **Process required**
- **Situation in the Region and Economical analysis**
- **Financing opportunities**
- **Collaboration mechanisms**
- **Best practices**
- **Reference Recommendations**

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Content of the Guidelines

- *Collecting information from Developing Countries on the need to build testing labs for conformance and interoperability to test equipment and systems*

- *Collecting information on existing testing labs and their areas of activities in the ICTs field*

- *Collecting views on opportunities to establish type approval testing labs in the countries and to implement Mutual Recognizing Agreements / Arrangements for ICTs products.*

- *Identifying the criteria and characteristic to establish accredited Bodies/Labs in the Regions for Type Approval/Homologation based on rules and recommendation, best practice (e.g. ISO/IEC/CASCO toolbox, guides and standards such as ISO/IEC 17011 and 17025) internationally used to issue conformity testing certifications as necessary,*

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Content of the Guidelines (Cont'd)

- *Advising on technical and economical steps to be followed to build Testing Labs according to the identified criteria and characteristics outlined in ISO/IEC 17025*

- *Considering the involvement of other international funding and training organization where applicable*

- *Proposing MRAs reference documents for mutual recognition of conformity assessment of telecommunication equipment and systems in consultation with recognized agencies/associations/bodies that could advice and coordinate MRAs at Regional level also contributing to populate the ITU database of conforming and/or interoperable products*

- *Acquiring elements from International experience of testing center creation from other organizations for an optimal strategy of standardization and testing organization procedure*

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Content of the Guidelines (Cont'd)

- *Cooperating with ITU-T in the search of available test suites from any SDO and sending inputs to the Study Groups to consider the development of new test suite*

- *Exploring the possible role of International telecommunication testing centers (ITTC) Unified and test network solutions for Region (equipment requirements, special requirements to services and QoS); ITTC's operational procedure. The typical work plan for build ITTC; Structure of ITTC includes testing lab facilities, technologies and equipment to be tested, personal to be trained*

- *Estimating the Impact and cost penalty due to lack of unified work program for Region (regional specific requirements, methodology of testing)*

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Content of the Guidelines (Cont'd)

- *With the assistance from the Related Organization (e.g. African Telecommunication Union for AFR Region), identifying and proposing the possible location of the Test Centre (s)*

- *Identifying the roadmap and guidelines in accordance with the environment for NGN test centre project document and the roll out plan.*

- *Evaluation of economical impact on:*
  - *creation of test centers according to established criteria (geographical distribution, existing labs and technologies to be tested,*
  - *creation of capacity building opportunities*
  - *costs of human, material and instrumental resources*
  - *costs of maintenance and periodical activities (e.g. calibration)*
  - *others*

ITU Training activities on C&I

The following events were dedicated exclusively to C&I (see   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) will be held in Moscow (Russian Federation, 9-11 November 2011