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**Title of Presentation:** ITTC Testing Experience

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In a dynamic transformation from PSTN to NGN, besides architecture, protocols and network functionalities, issues of testing and introduction of new telecommunication technologies get primary importance. Testing on the Model networks, emulating functionalities and technical capabilities of operating and new-built networks, becomes a global approach of NGN testing.

During the period from 2003 to the present time, substantial work has been done in part of promotion the idea of NGN testing unified approach based on Model networks. Thus, in ZNIIS the Model network was built and opened the project for NGN equipment testing for JSC «Svyazinvest» (largest Russian telecommunication operator). In addition, considerable progress has been made at the international level: in the WTSA Brazil in 2004 ITU-T has opened new question Q.8/11 «NGN protocols testing», Q.39xx series of five recommendations has been opened in the scope of Q.8 SG11 ITU-T considering NGN technical means testing, provided contribution to the RCC (Regional Commonwealth in the field of communications, CIS) Boar of operators considering principles of creation and functioning of international testing centre, seminars provided by ITU-D/ITU-T on questions of testing on Model networks (USA, Tanzania, Bahrain, Switzerland) and ITU project on creation of International Telecommunication Testing Centre (hereinafter - ITTC) was endorsed.

During the period of operation of the joint ITU-ZNIIS project ITTC since 2008 there were conducted a large number of activities aimed at finding and removing errors and differences in the implementation of NGN technical means from different vendors before putting them into commercial service on the existing operators networks and training of specialists form the telecommunications organizations of developing countries considering aspects of NGN equipment testing.

As a result of joint activities of the ITU and ZNIIS was received and distributed to developing countries experience in testing of the following NGN systems and network solutions and protocols:

- Softswitch;
- IMS;
- Fixed Broadband access;
- IP/MPLS;
- SIP protocol;
- MEGACO/H.248 protocol.

It is also important to note that the ITTC events regularly attended by European operators experts and owing to this attendance specialists from telecommunications organizations of developing countries acquainted with experience of testing and implementation of NGN in Europe.

This presentation will be submitted to the international experience of projects for NGN testing, including: background and experience in creating ITTC, aspects of different types of testing, experience of European operators in the area of services testing, experience in testing NGN system-network solutions in the scope of ITTC project, including Softswitch, IMS, Fixed Broadband access and IP / MPLS. Also in the presentation will be given singularities of testing protocols for compliance to international standards and typical problems detected during the testing process.

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