# ITU Forum on Conformance and Interoperability Testing in CIS and Europe Regions
## (Moscow, Russia, 9-11 November 2011 )

# ITTC Knowledge Database and Social network of experts

## Denis Andreev

# Rapporteur of Q.10/11 & Q.11/11
## ZNIIS, Moscow

# Content

1.  **ITTC Knowledge database**

2.  **ITTC social network**

3.  **Virtual laboratory as a project based on ITTC results**

4.  **Conclusions**

# Joint project ITU-ZNIIS (Central Science Research Telecommunication Institute) INTERNATIONAL TELECOMMUNICATION TESTING CENTRE (ITTC)

**RESULTS:**

- ✓ **ITTC with sufficient area for placement of classrooms, laboratories, conference rooms, administration, management and etc.**

- ✓ **Model network for conducting testing of new technologies and providing training courses on exist telecom equipment**

- ✓ **Knowledge database which contains the basic NGN testing results**

- ✓ **Training program and training materials**

# ITTC Knowledge database

**Purpose**

**The special instrument for ITTC documentation exchange and results of testing saving**

**Features**

- **Directories (vendors information, experts, terms and definitions)**
- **The catalog of tested equipment (vendors information, soft version, installed patches, types of corrections which were made on, the total results)**
- **The testing management system**
- **Admission control system**

4

# ITTC Knowledge database structure

➢ **Registries**

Database of on-line and tests performed

➢ **Training**

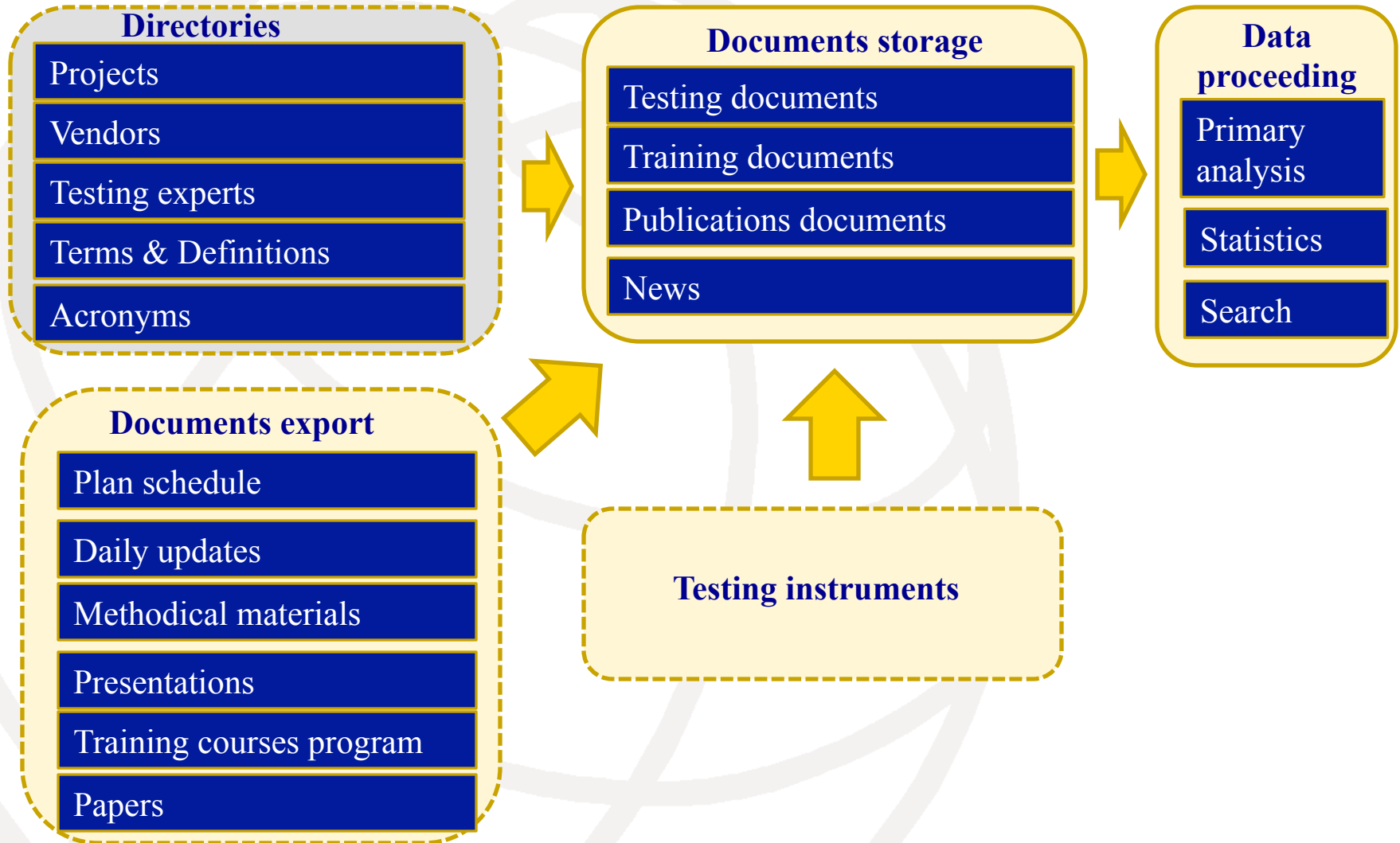Consolidation of information on training seminars and courses as part of ITTC



➢ **Testing**

Formalization and integration of all data on testing of telecommunications (equipment, system networking solutions, services, networks, QoS, etc.)

➢ **Publications**

Combining information on the available scientific, technical and educational publications in the field of telecommunications

# Principal of ITTC Knowledge operation

**Directories**
- Projects
- Vendors
- Testing experts
- Terms & Definitions
- Acronyms

**Documents storage**
- Testing documents
- Training documents
- Publications documents
- News

**Data proceeding**
- Primary analysis
- Statistics
- Search

**Documents export**
- Plan schedule
- Daily updates
- Methodical materials
- Presentations
- Training courses program
- Papers

**Testing instruments**

**www.zniis.ru**



ЦЕНТРАЛЬНЫЙ
НАУЧНО-ИССЛЕДОВАТЕЛЬСКИЙ
ИНСТИТУТ СВЯЗИ



International Telecommunication
Testing Centre



International Telecommunication
Testing Centre

**Project number:** 7RER07820

**Title:** Joint project of International Telecommunication Union and Central Science Research Telecommunication Institute - **International Telecommunication Testing Centre**

**Description:** Joint ITU and ZNIIS activities aim to create the International Telecommunication Testing Centre (ITTC), working in the field of new technologies, and training of the professionals from developing countries in the field of telecommunications. This project is an important step on the evolutionary path of telecommunication networks development in the world, the results of which will be directly distributed to the Administrations of developing countries members of the ITU-D. The results of ITTC is a **Knowledge Database**, implemented in full accordance with the requirements of ITU-T Recommendation Q.3903, Model network constructed in full accordance with the requirements of ITU-T Recommendation Q.3900

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

**Time Frame:** From 01 March 2008 till 31 July 2011

**Results:**

- 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;
- **Knowledge Database** of NGN tests results;
- Training programs and training material.

**Contacts:**

**Untila, A. Mr.**

Program administrator, ITU Area Office for CIS countries

ITU Area Office 4, building 1

Sergiy Radonezhsky Str. Moscow 105120, Russia

Tel.: +7 (495) 926 60 70

Fax: +7 (495) 926 60 73

E-mail: andrei.untila@itu.int

**Andreev, D. Mr.**

Technopark ZNIIS Director

ZNIIS address: 1-st proezd Perova polya, Russia, Moscow, 111141

Tel.:+7 (495) 368 87 45

Fax: +7 (495) 368 91 05

E-mail: andreevd@zniis.ru

On the functioning of the Knowledge Base, please contact: info.ittc@zniis.ru

**http://83.242.133.105/ittc/index.php**

# The common page of ITTC KNDB

**facebook**

**Группа** http://www.facebook.com/groups/ittc.cis

**E-mail** ittc.cis@groups.facebook.com

**This group was created as a joint project of ITU-ZNIIS to create "International Telecommunications Testing Center" (ITTC) for the CIS region**

**In this group you can find photos from the project activities, links to presentations and communicate with colleagues**

**At this time – 15 members from 7 countries**

# Virtual laboratory as a new ITTC project

## WTDC-10 (India, june 2010)

**CIS Regional initiative**

**"Creating an ITU virtual laboratory for the conducting remote test equipment, new technologies and services in order to achieve the objectives of Resolution 76 (WTSA-08) and the filling of a CIT ITU database"**

# The functional capabilities of the VTS intended for the virtual laboratory activities should include

- ✓ **Capability to configure the measuring equipment remotely**
- ✓ **Support and interoperability with the unified knowledge database including**
  - • **capability to create dedicated closed and open fields for users so that they can create their own and public fields for testing (storage of testing methods, unified testing procedures, testing reports, architecture schemes for system and network solutions applied in operators' networks);**
  - • **support of virtual designers and testing procedure automated control systems (testing methods, testing protocols);**
  - • **support of information distribution system including Internet facilities;**
- ✓ **Capability to control principles and policies of access to the Virtual lab resources;**
- ✓ **Capability to control the telecommunication system used for communication with laboratory experts (forums, instant messages, personal communication etc.).**

11

# The Project realization is aimed at solving the following tasks

- **Provision of remote access to NP/QoS testing technologies (measurement equipment) for developing countries**

- **Provision of the Virtual lab testing programs realization using a "virtual access" mechanism with direct participation of specialists from developing countries**

- **Provision of consultations of world skilled specialists of high qualification in the field of testing and operation**

- **Provision of virtual training as per testing procedures and new technologies within the framework of the Virtual lab activity**

- **Propagation of the Virtual lab experience to developing countries**

- **Support of the Virtual lab knowledge database functioning and interaction with the ITU unified database**

# The Virtual lab features

- ✓ **Short time for preparation** **to tests**
- ✓ **Remote testing** **without obligatory presence of specialists on the testing site**
- ✓ **Availability and wide use of expensive measuring equipment** **via a remote interface**
- ✓ **Automation of testing procedures** **requires minimal participation of the personnel with minimum time spending for testing**
- ✓ **Debugging of customer's network** **specific functions for a short period of time**
- ✓ **Testing cost is much lower** **than the cost of testing on generally recognized world testing sites**

13

# The structure of Virtual laboratories
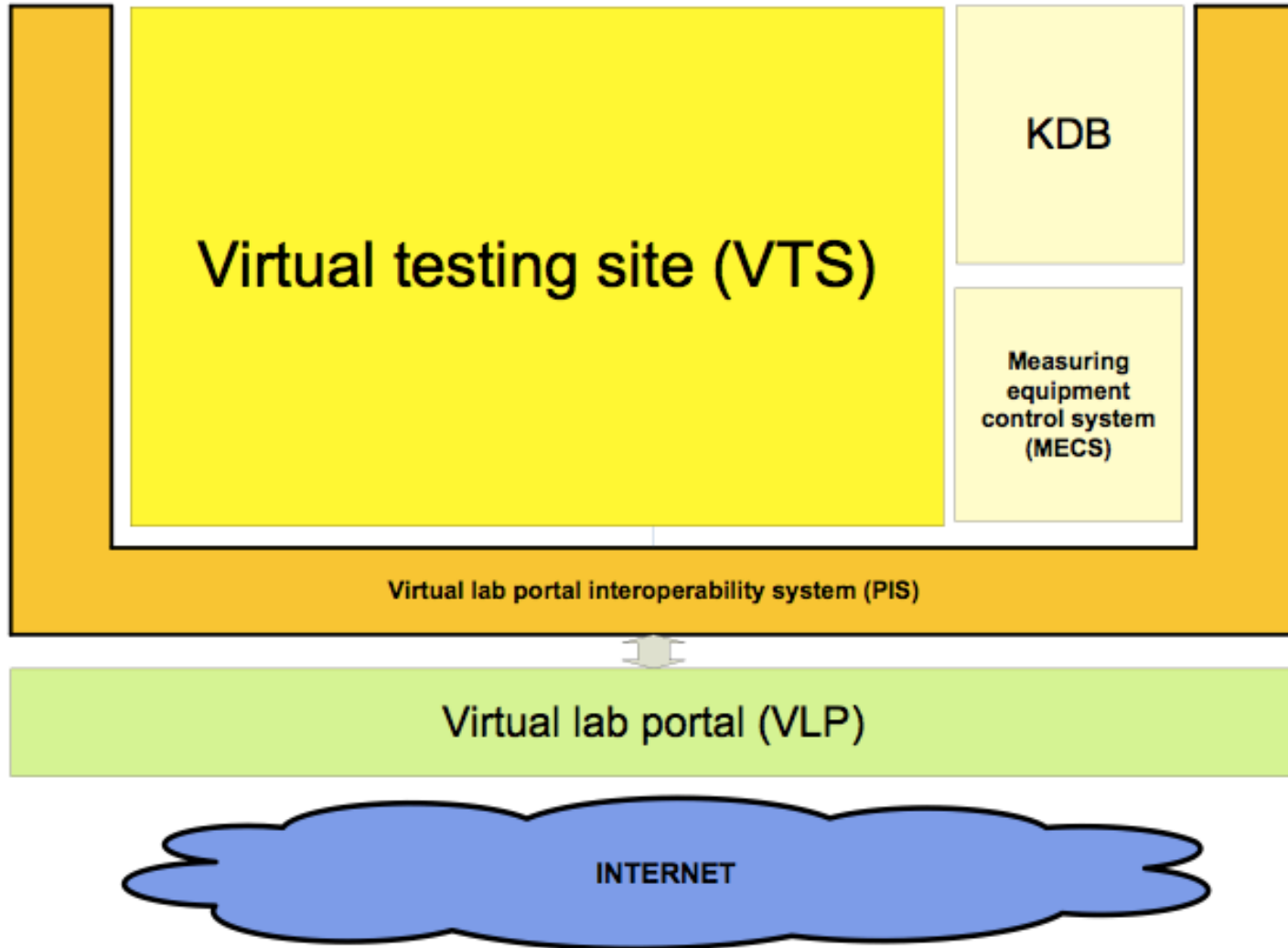
# The stages of project

**Stage 1 - Elaboration of the Virtual lab creation system project and the required reference documentation to ensure efficient activity of the virtual lab**

**Stage 2 - Creation of the Virtual lab infrastructure on the ITTC basis under model network and preparation remote connection to measurement equipment**

**Stage 3 - Creation of the Virtual lab unified database and visual portal**

**Stage 4 – Performance of remote testing and four remote training courses on following themes: technology testing, service testing, QoS/NP testing/ monitoring, benchmarking**

# Conclusions

- ✓ **First experience on ITTC creation very useful and could be used not only in CIS region. It's open for all telecom parties wide world**

- ✓ **The Virtual laboratory project (VLP) aims at enabling the communication operators to meet their demands in performing preoperational testing during selection of a new telecommunication equipment.**

- ✓ **The VLP is especially important for operators who do not have a versatile park of telecommunication and measuring equipment. The Project is intended to provide for full-scale testing with minimum financing on the side of the operator in the course of testing over a minimum period of time.**

- ✓ **The VLP will be also important for service operators as a system which could estimate live NP/QoS on the real network using remotely interface.**

- ✓ **Potential customers are above all the communication operators from developing countries including the RCC countries taking into account reduction of operators' costs for testing and specialists' traveling to special testing sites.**

# Denis Andreev

**Director of Technopark ZNIIS,
Rapporteur of Q.10/11 SG11 ITU-T**

**тел: +7-495-368-8745
Tel: +7-495-368-8745
mobile: +7-495-647-9603
Fax: +7-495-368-9105
skype: davwilly77
sipnet: 2811971@sipnet.ru
E-mail: andreevd@zniis.ru
cc: andreevd@ties.itu.int**

**Russia, 111141, Moscow,
1-st Proezd Perova polya, 8**