



**APT/ITU Conformance and
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**TESTING ACTIVITIES FOR CONFORMITY ASSESSMENT OF
TELECOMMUNICATIONS IN VIETNAM**

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TESTING ACTIVITIES for CONFORMITY ASSESSMENT of TELECOMMUNICATIONS in VIETNAM

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Vietnam Conformity Assessment Regimes

- Governed by Law of the National Assembly on Standards and Technical Regulations (2007)
- Conformity assessment involves a set of processes that show your product, service or system meets the requirements of a standard or regulation;
- Main forms are Testing, Certification, Inspection, Declaration/Registration, Accreditation;
- Coordinates by Ministry of Science and Technology;
- Line ministries are responsible for developing technical regulations, test lab designation, management of regulations conformity certification and declaration

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Telecommunications Conformity Assessment

- Governed by Law of the National Assembly on Quality of Products and Goods (2008) and Law on Telecommunications (2009)
- Circular No. 05/2014/TT-BTTTT promulgating The list of **Products and Goods** capable of causing unsafe under management responsibilities of the MIC
- Circular No. 30/2011/TT-BTTTT promulgating the Regulation on certification and declaration of conformance of ICT **products and goods**

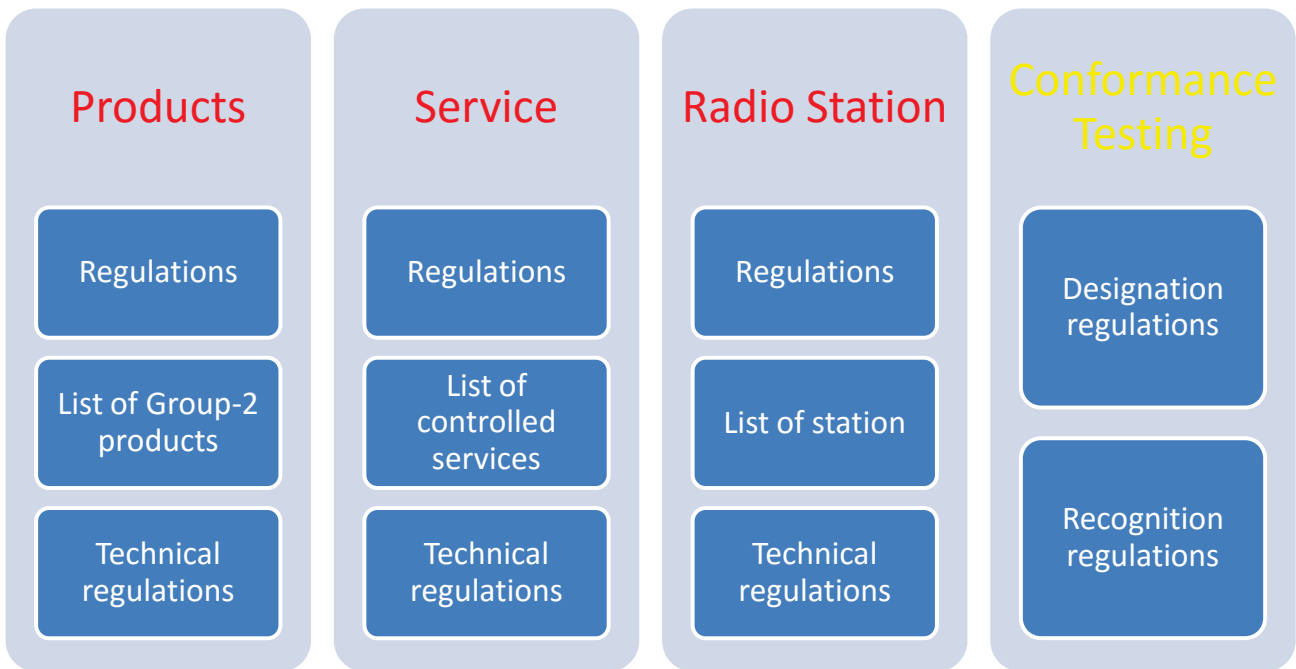
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Telecommunications Conformity Assessment *(cont'd)*

- Circular No. 16/2011/TT-BTTTT promulgating the Regulation on inspection of telecommunications equipments and **radio stations**
- Circular No. 17/2011/TT-BTTTT promulgating the List of telecommunications equipments and **radio stations** subjected to compulsory inspection
- Circular No. 08/2013/TT-BTTTT promulgating the Regulation on quality control of telecommunication **services**
- Circular No. 02/2013/TT-BTTTT promulgating the list of mandatory quality control of telecommunication **services**

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Telecommunications Conformity Assessment *(cont'd)*

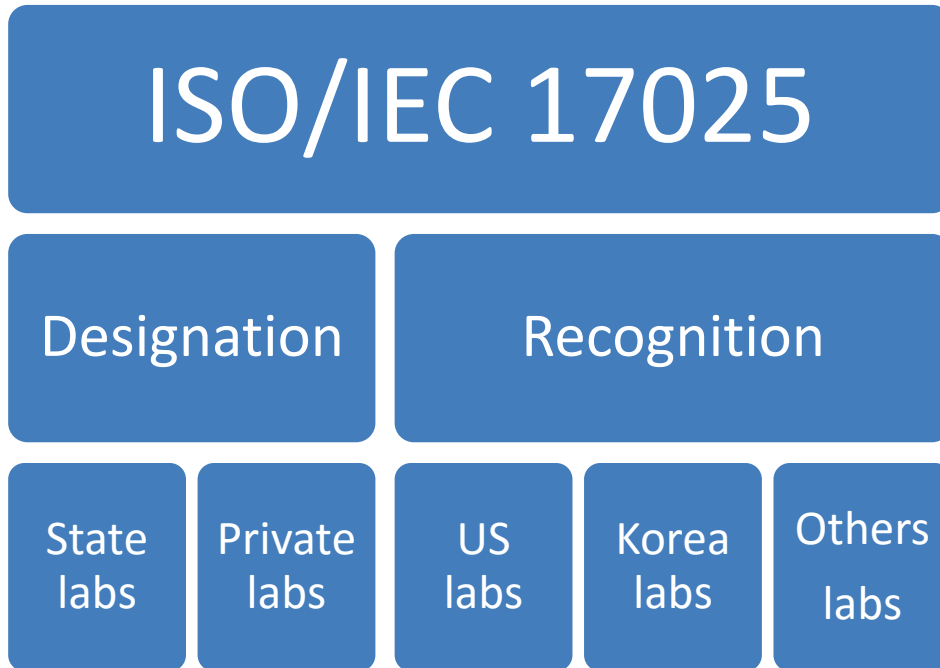


Conformance Testing

Considering:

- Circular No. 01/2015/TT-BTTTT promulgating the regulation on designation of telecommunications testing laboratories for quality management
- Circular No. 28/2014/TT-BTTTT promulgating the Regulation on Recognition of Designated Foreign Testing Laboratories by for MRA recognition
- ISO/IEC 17025: 2005 standard
- 79 national standards and 90 technical regulations

Conformance Testing *(cont'd)*



Capacity building

- Designation body: Ministry of Information and Communications
- Accreditation Body : Bureau of Accreditation (BoA Vietnam)
- 20 Designated labs of which 7 accredited labs; 11 private, 09 state owned
- Subject :
 - ◆ Products: 9 labs, 02 mainly focus on EMC testing
 - ◆ Services and Network: 17 labs;
 - ◆ Radio site (only): 02 labs

Capability of Testing

- ICT products: EMC (only 2 labs), RF characteristics, functionality, performance, DTT (DVB-T2/S2/C2), etc required for mandatory declaration and/or certification of conformity of ~ 40 type of products
- QoS: popular services in mobile network, defined in ITU-T E.804, Fixed Broadband connection, PSTN, VoIP, IPTV services, required for mandatory declaration of conformity

Capability of Testing

- Inspection of radio stations: Electromagnetic field testing required for mandatory declaration of conformity
- Others: Skype, SS7 transaction, IPv6 ready, optical/coaxial cable required for voluntary declaration of conformity

Functions

Policy proposals

- Draft of legal documents for submitting to competent authorities (bill of law, Government's decrees, Prime Ministers decisions, MIC Minister's circulars)
- Draft of national telecommunications development strategies and policies, master-plans, passive infrastructure plan, numbering plan

Regulatory decisions

- Application license evaluating and licensing
- Market regulation
- Numbers regulation
- Tariff regulation
- Infrastructure regulation
- **Quality and verification regulation**
- International cooperation on regulatory issues
- Inspection

Authority of Telecommunications

Transaction name

- Viet Nam Telecommunications Authority in full
- VNTA in short

Legal basis

- Governmental Decree No.132/2013/ND-CP
- Prime Minister's Decision 35/2011/QĐ-TTg on rights, responsibilities and structure

Organizational structure

- Merger of Department of Telecommunications and Directorate of ICT Quality Control

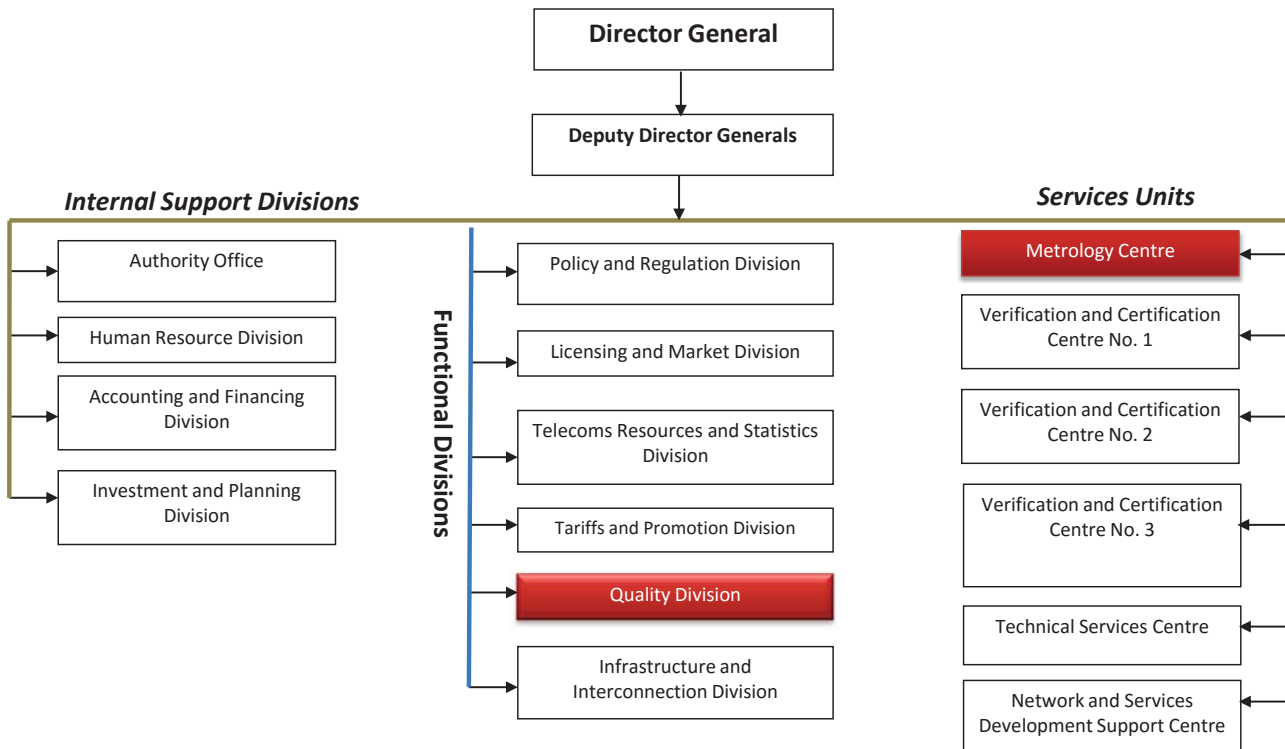
Reporting line

- Minister of Information and Communications

Financial base

- National budget
- Collections from: license fees, telecom numbers fees, **testing fees**, verification and certification fees.

Organization


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Recent development

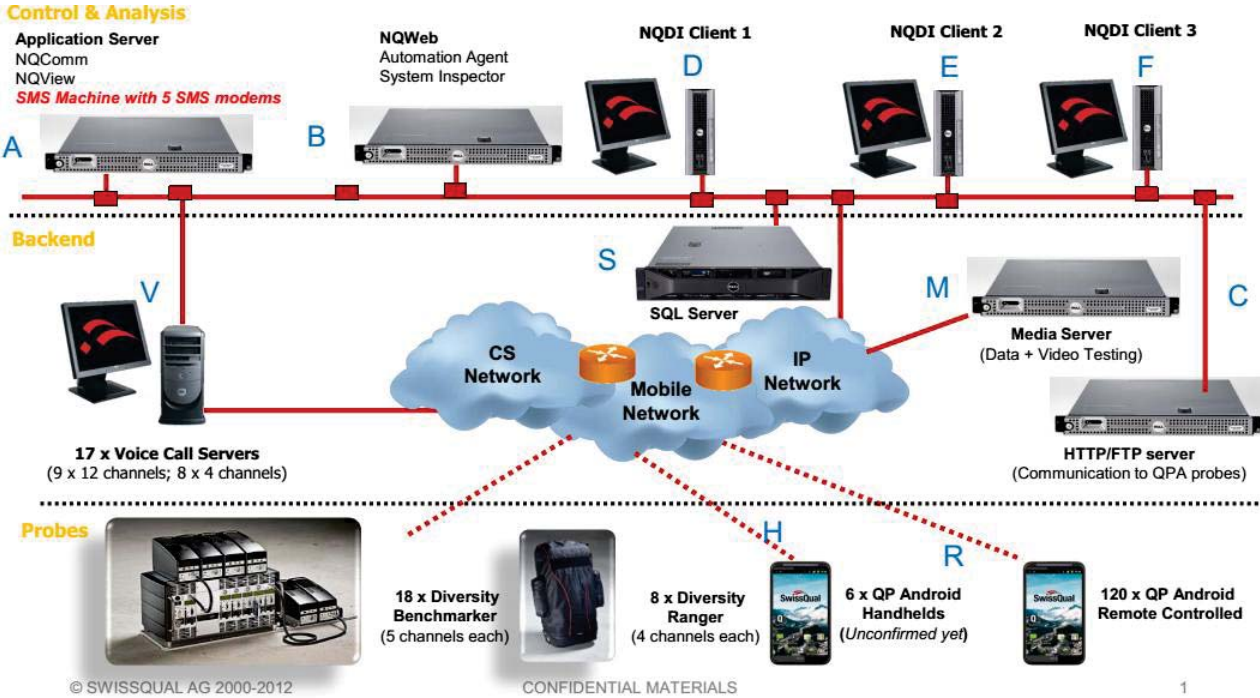
QoS Testing:

- SwissQual system for mobile popular services, fully compliance with ITU-T E.804, capable of benchmarking 06 concurrent networks for voice, data, SMS, video services
- Implemented in specialized cars for drive-testing, backpack for walk/indoor testing and hand-held automated remote controlled mobile phones
- Ready for 3G, 4G/LTE and HD voice with implementation of advanced voice quality measurement technique, ITU-T P.863

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Recent development in QoS Testing

SwissQual testing system for mobile services



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SwissQual testing system for mobile services

Inside a specialized car for driving-test



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SwissQual testing system for mobile services

Backpack for walk/indoor testing



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Recent development in Product Testing: DVB-T2 Receiver

- Technical regulation based on Nordig, D-book, Digi.TV standards, No. 63/2012/TT-BTTTT
- Compliance test system based on: R&S Broadcast Test Center (BTC), AVBRun software and test stream from Streamspark
- Automated, programmed test case to save time
- Subject to test: Front-end RF test, back-end SI/PSI and A/V decoding test
- Fully compliant to requirements of Nordig, SEE Digi.TV, D-Book, E-book standards

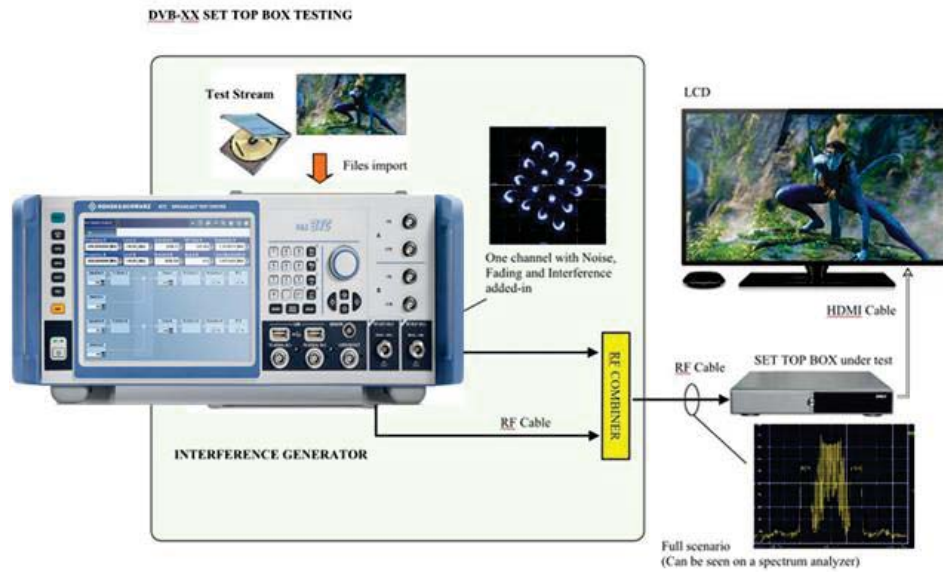
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DVB-T2 Receiver Test System



Challenges

- Lab strengthening:
 - ◆ High CAPEX for test system;
 - ◆ Standardization and quality control of labs
 - ◆ Ready for fast emerge technologies, new standards (IoT, security)
- Operational :
 - ◆ OPEX for maintaining: payroll, training, calibration, maintenance, audit
 - ◆ Reduce run time for testing, save time for business
 - ◆ Cut cost of QoS testing by using automated system

Action Plan

- To prepare for next generation technology: LTE/4G, Digital Television
- To prepare for User – centric QoE Testing for monitoring and QoS survey
- To build and populate the conformity database
- To recognize the concern of counterfeit ICT products

THANK YOU