Conformity and Interoperability regimes of Telecommunication/ICT equipment in [India]

Homologation of telecommunication equipment experience in India

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Legal Framework of the C&I Regime for Telecommunication/ICT equipment in the country

- Indian Telegraph Act 1885
- Indian Telegraph Rules 1951
- The Indian Telegraph Rules, 1951, PART XI : Testing & Certification of Telegraph provides legislative framework for mandatory testing of telecom equipment.
- Mandatory testing and prior certification of telecom equipment shall come into force from <u>1st October, 2018</u>
- Various licenses granted to Service Providers :
- While granting licenses, Government has mandated that licensee (Telecom Service Provider) shall induct only those network elements into his telecom network, which have been got tested as per relevant contemporary Indian or International Security Standards from any agency or labs of those standards.

Common problems faced due the lack of conformity and interoperability in your country

- Products may not conform to all the desired specifications
- Products may not interwork properly
- Those may cause harm to other equipment or user.
- There have been concerns related to Network Security compromising national security in absence of indigenous security certifications.

Institution responsible for C&I activities

- Telecom Engineering Center (TEC) under Ministry of Communications, is the institution responsible for C&I activities of Telecom equipment.
- The functions of TEC are
 - Formulate technical requirements for all telecom equipment and networks, to ensure seamless functioning and inter-operability in Indian telecom network
 - Formulate standards to limit harmful electromagnetic interference to ensure proper functioning of equipment, as well as to ensure safety for human beings
 - Test and certify equipment, interfaces, and networks
 - Monitor, for compliance to the laid-down norms and standards on need basis

Institution responsible for C&I activities

- TEC is responsible for implementing Mandatory Testing and Certification of Telecom Equipment (MTCTE).
- MTCTE framework is inter alia aimed to:
 - Ensure that any telecom equipment does not degrade performance of existing network when connected.
 - Ensure safety of the end-users.
 - Protect users and general public from harmful radio frequency emissions.
 - Ensure that telecom equipment complies with the relevant national and international regulatory standards and requirements.
 - Ensure security of the network.

Conformity assessment processes in place : Specifications

Types of Documents formulated by TEC

GENERIC REQUIREMENT (GR) of a telecom equipment:

Set of requirements pertaining to performance, features, quality etc.

INTERFACE REQUIREMENT (IR) of a telecom equipment:

Set of requirements **primarily in respect of inter-operability, safety and security** that the equipment should conform to in order to connect and operate in the Indian Telecom Network.

SERVICE REQUIREMENT (SR)

Service Requirements (SR) detail the services and network related requirements for specific applications, which should be met by service providers in accordance with the requirements specified by licensing authority

Conformity assessment processes in place : Certification

Set of Test Schedule & Test Procedure (TSTP) formulated by TEC for certification

TYPE APPROVAL is a process of testing and certification of telecom product, in accordance with Test Schedule & Test Procedure (TSTP) of TEC, for conformance with the Generic Requirement (GR) of the product issued by TEC.

INTERFACE APPROVAL is a process of testing and certification of telecom equipment, in accordance with Test Schedule & Test Procedure (TSTP) issued by TEC, for conformance with the Interface Requirement (IR).

CERTIFICATE OF APPROVAL is issued by TEC for the product for which the IR/GR does not exist with TEC and is issued against applicant's own specification and in particular cases viz. GSM Phones, 3G Modems, Bluetooth Enabled wireless terminals against approved Standards of Standard Body.

Conformity assessment processes in place : MRA

- TEC would recognize, as per International best practices, other test labs in India and abroad for the purpose of speedy and efficient testing and certification process. (MRA)
- Under the MRA, the Govt. of India , has declared its Telecommunication Engineering Centre (TEC) as the Designating Authority (DA).
 - TEC as DA will designate Conformity Assessment Bodies (CABs) & Certification Bodies (CBs) located in India to perform testing and certification of telecom products
 - TEC as DA will also recognise Foreign CABs & CBs located in the territory of MRA partner to perform testing and certification of telecom products to India's requirements.

ICT Reference standards

- International standards of ICT equipment that are globally acceptable
- A test laboratory will be at first accredited and then designated as CAB or CB to carry out testing and certification with respect to one or more of the applicable DoT's Technical Regulations/ technical specifications / standards for telephony and/ or radio communication equipment.
- CABs shall be accredited by NABL (National Accreditation Board for Testing & Calibration Laboratories) in accordance with ISO/IEC 17025:2005 and
- CBs shall be accredited by NABCB (National Accreditation Board for Certification Bodies) in accordance with ISO/IEC guide 65:1996.

Future vision

Mandatory testing will be implemented through web based online processes

Will have easy access to the web based application

Will be user friendly for telecom equipment vendors

Thanks