Conformity and Interoperability Regime of Telecommunication/ICT equipment in India

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Agenda

- Legal Framework of the C&I Regime for telecommunication/ICT equipment in the country (1 slide)
    - Laws, Rules and Regulations, etc.
- Common problems faced due the lack of conformity and interoperability in your country (1 slide)
    - Brief description
- Conformity assessment processes in place (if any) (2 slides max.)
- ICT Reference standards (1 slide)
- Institutions responsible for C&I activities (2 slides max.)
    - Institutions: ministry, regulator, certification and Accreditation Bodies, Laboratories
    - Responsibilities: who certifies, accept certificates, enforce the law, control borders, executes market-surveillance, etc.
- 5G / IOT Test beds / Initiatives (1 slide)
- Vision of the future (1 slide)
    - Harmonization of C&I procedures, Capacity building needs, regional collaboration/integration, etc.

Indian C & I Regime for Telecom /ICT : MTCTE

❑ Introduced by Gazette Notification GSR 1131(E) dated 5th September, 2017 - Amendment in Indian Telegraph Rules 1885 enabling mandatory testing.

❑ Certification mandatory from 1.10.2018, of **ALL** telecom equipment, prior to sale/ import/ use.

❑ Genesis: GoI's view of introducing / implementing Technical Regulations for each sector of the economy.

MTCTE: Mandatory Testing and Certification of Telecom Equipment.

Issues in absence of C& I Framework

❑ No comprehensive Testing –

- ▪ Safety, EMI, Type Approval
- ▪ Testing by TSP's as per requirement.

❑ No Single Window Approach

- ▪ Multiple Agencies – DoT, WPC, BIS etc.

❑ Uncertified / Non-standard products in the market

- ▪ Confusion to the end user.

❑ Security of the Network

- ▪ Data Privacy at risk.

TSP: Telecom Service Provider.
DoT: Department of Telecommunications
WPC: Wireless Planning Co-ordination – a wing of DoT.
BIS: Bureau of Indian Standards.

MTCTE Objectives

Safety of users and Security of the network.

❑ Protection by ensuring radio frequency emissions within prescribed limits

❑ Non-degradation of performance of existing network when connected

❑ Complies with relevant technical regulations

❑ Security of network

❑ Quality and reliability of equipment not tested/ certified.

MTCTE : Salient features

❑ Certification once for one model, applicable for any quantity, valid for 5 years.

❑ Conformance to Essential Requirements (ERs) prescribed by TEC.

❑ Test reports from Indian designated Labs of TEC or from recognised labs of MRA partner countries.

❑ As an exemption, test reports from any accredited lab accepted till 31st march 2019.

❑ Tested as manufactured/ imported, and not as used/ configured at site.

Essential Requirements

❑ **ERs consist of:**

    ❑ EMI/ EMC requirements

    ❑ Safety requirements

    ❑ Technical requirements

    ❑ Other requirements (SAR, IPV6, Panic button….)

    ❑ Security requirements

❑ All requirements as per international standards, with minimal variation to meet national requirements.

ICT Reference Standards

- ❑ EMI/ EMC requirements
  - ▪ CISPR 11, CISPR 22
  - ▪ IEC 61000 4-2, 4-3,4-4,4-5,4-6, 4-11
- ❑ Safety requirements
  - ▪ IEC 65090 / IEC 60215
- ❑ Technical requirements
  - ▪ Mobile Network 3GPP TS
- ❑ Other requirements (SAR, IPV6, Panic button….)
  - ▪ IPv6 compliance RFC 2460 clause 3, 4.1,4.2,4.3 and 4.4
  - ▪ For Dual Stack RFC 4213 clause 2.1 and 2.2
- ❑ Security requirements

ICT Reference standards

- MeitY has notified "Electronics and Information Technology Goods (Requirement for Compulsory Registration Order CRO), 2012 and amendment Feb, 2018".

- Presently, 44 ICT product are under Compulsory Registration Scheme (CRS).

- Manufacturers of these products to apply for registration from BIS after getting their product tested from BIS recognized labs.

- 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.

MeitY - Ministry of Electronics & Information Technology.

BIS   - Bureau of India Standards.

C & I Activities : Institutions

❑ Ministry

- Ministry of Communications/ MeiTY
- Department of Telecom and TEC
- CRS scheme of BIS, MeiTY.

❑ Regulator

- TRAI.

❑ CB

❑ Department of Telecom and TEC

❑ CAB

❑ TEC labs, TEC designated labs

❑ Accreditation Body

- NABL
- NABCB

C & I Activities : Roles and Responsibilities

❑ Ministry – DoT and TEC

- Formulation of the Procedure
- Implementation and administration,
- Designation of CABs.
- As a CB.
- Market Surveillance.

Institutions responsible for C&I activity

ICT Product

- The Bureau of Indian Standards (BIS) is the national Standards Body of India working under the aegis of Ministry of Consumer Affairs, Food & Public Distribution, Government of India.

- The functions of BIS are:

  - Standards Formulation
  - Product Certification Scheme
  - Compulsory Registration Scheme
  - Hall Marking Scheme
  - Laboratory Services
  - Laboratory Recognition Scheme
  - Sale of Indian Standards
  - Consumer Affairs Activities
  - Training Services, National & International level
  - Information Services

5G / IoT Test Bed : Initiatives

❑ GoI constituted High Level Forum for 5G India 2020.

    ❑ Professors from IIT 's.

    ❑ Define vision, mission and goals for 5G

    ❑ Evaluate and approve roadmaps and action plans for 5G.

❑ Open 5G Test Beds at IIT Hydrabad and CoE IIT Delhi .

    ▪ To build nation capacity in telecom manufacturing and create intellectual property.

    ▪ To drive the development of India's 5G & IoT ecosystem

    ▪ Track-1 NB-IoT

        ▪ Use case development specific to India – Smart Metering

        ▪ Public Transport Tracking

        ▪ Pollution Monitoring

        ▪ Smart agriculture.

    ▪ Track 2 5G radio Characteristic Study

        ▪ 5G use cases Study

            ▪ Automation

            ▪ Smart manufacturing

            ▪ Driverless cars

❑ IoT Experience Center at TEC

    ▪ IoT products based on LoRa and SigFox protocols.

Future Vision

❑ To facilitate more CAB's to come up – development of ecosystem for testing of EMI/EMC and Technical Requirements.

❑ Handling Initial rush of applications – Capacity Building.

❑ Regional cooperation – MRA with partner countries – mutual recognition of standards and CAB's.

❑ Market Surveillance

▪ Telecom products sold through e-commerce portals.

▪ Factory Premises Inspection (FPI).

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Thank You for your Kind Attention !!