Chinese Telecom Conformity Assessment
&
CTTL

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Introduction

1. CA & Certifications in China

- NAL (Network Access License)

- RTA (Radio Type Approval)

- CCC (China Compulsory Certification)

- CRoHS (China RoHS)

- Others

NAL

- **Law:**

  - All the telecommunication equipment accessing to public telecommunication network shall comply with national specified standards and shall be granted with NAL.

- **Objective:**

  - Safeguard the interests of customers;

  - Ensure smooth interoperation of all the telecom networks in China;

- **Product:**

  - Telecom terminals;

  - Radio telecom equipment;

  - Equipment concerning inter-connection between networks.

NAL

- **Requirement:**

  - Telecom

  - Radio

  - EMC

  - Electrical Safety

  - Administrative regulations (ex. Information security)

- **Organizations:**

  - The Bureau of Telecommunication Administration of MIIT

  - Telecom Equipment Certification Center

  - Recognized test Labs

  - Experts appraising committee (ex. for new tech.)

Label of NAL

Probation
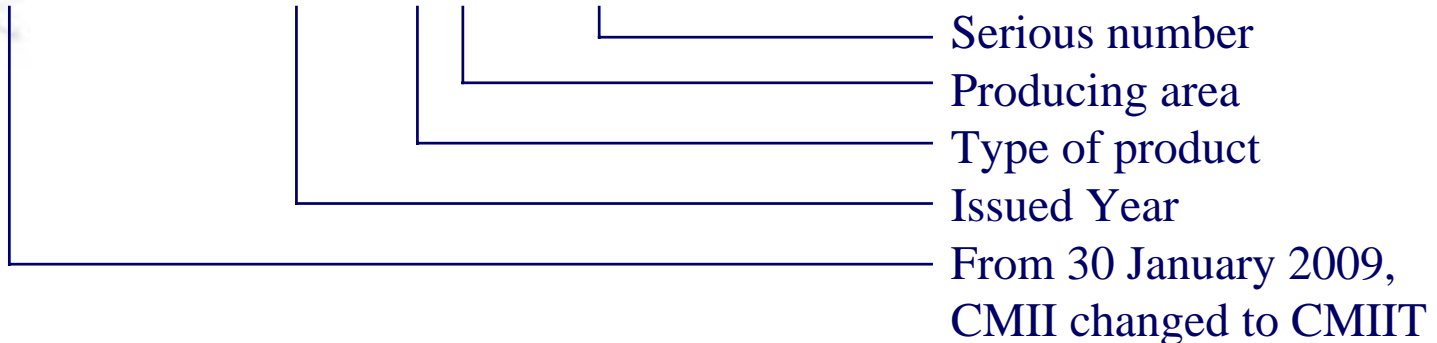
NAL

Code
Model
ID

Code
Model
ID

• Code: Certification number
  • 2[Type of equipment];-ex.”02”:Mobile phone
  • 4[manufacture Code];-ex.”0010”:MOTO
  • 6[2<issued year>+4<series number>];-ex.”011477”:No.1477 certificate issued in 2001

• Model: Model of device

• Product ID: 15number&alphabet (esp. Encryption corresponding to IMEI (International Mobile Equipment Identify of GSM)/ESN (Emergency Service Number for CDMA))

• Checking for issued NAL: http://www.tenaa.com.cn

RTA

- **Law:** All the Radio transmitting equipment used in China should comply the radio management.

- **Objective:** Keep the order of radio telecommunications

- **Product:** Radio telecom equipment (Only for radio transmitting equipment)

- **Requirements:**

  Radio frequency spectrum specialty ---- transmitting frequency, power, spurious

- **Organizations:**
  - The Bureau of Radio Administration of MIIT
  - Reception Office
  - Recognized test lab

ID of RTA

- ## CMIIT ID: XXXXYZNNNN

Serious number

Producing area

Type of product

Issued Year

From 30 January 2009, CMII changed to CMIIT

Z: Producing area

P: China

J: imported

•Checking for issued RTA:
http://www.srrc.org.cn

Y: Type of product
A: Fixed radio device
C: Public mobile device
D: Short Range (Low power) transmit device
F: Private mobile device
G: Broadcast transmit device
H: Aviation device
L: Radar device
S: Navigation device
W: Satellite device
Z: Others

CCC

- **Regulation:** All products in the list of CCC should get the certificate before get in to the China market.

- **Objective:** Safeguard the interests of customers

- **Product:** Telecom terminals

- **Requirements:**
  - Safety
  - EMC (i.e. EMI)

- **Organizations:**
  - Certification and Accreditation Administration of P.R. China (CNCA)
  - Recognized Certification Body
  - Recognized test Labs

CCC mark

Type of Certificate:

"S"——Safety Certificate；
"E"——EMC Certificate；
"F"——Fire Fighting Certificate；
"I" ——WLAN Certificate；
"S&E"——Safety & EMC

S&E

•Checking for issued CCC certification: http://www.cnca.gov.cn

CRoHS

- **Law:**

  In electron and information sector in China (just like RoHS Direct in UE).

- **Objective:**

  To control and reduce environment pollution.

- **Product:**

  EIP=Products and their parts made by using electronic information technology (To get the list www.miit.gov.cn)

- **Requirement:**

  Regulated hazardous substances (such as Pb, Hg, Cd, Cr^{VI}, PBBs, PBDEs etc.)

Symbol of CRoHS

- ## Step_1: DoC (in force March 1, 2007)
  - All EIP within the scope must meet the marking and disclosure requirements for
    - hazardous materials content AND
    - packaging material content

- ## Step_2: CCC (in force TBD)
  - Add CRoHS into CCC certification
    - Establish a CCC regulated catalogue.
    - EIP in the catalogue are subject to material restrictions
  - Catalogue to be renewed/amended annually
  - No official timetable known.

No Toxic Subs

Contains Hazards

Note: Number in logo 2 is product's Environmental Protection Using Period.

Others

- **Telecom Equipment Anti-seismic Test Certificate (ATC)**

- **TCG (TD-CDMA Certification Group)**

- **Voluntary certification for telecom products**
  - Communications Power Supply;
  - Communications Cable;
  - Distribution equipment;
  - Unified cellphone charger, etc.

- **CA&I test for telecom operators, manufactures, suppliers, etc**

2. Technical Standards in China

- There are some categories of telecom standards used in China

  - National Standard published by Standardization Administration Committee (SAC)

  - Communication Industry Standard published by MIIT

  - Technical Report of Communications Standards Class

    - TR is used to standardize perspective technologies which have market demand, but is not so technically mature. TR is published by CCSA. Meanwhile CCSA will report to MIIT. When the technology is mature, the technical report can be transited to national standard or industry standard.

- International Standard Adopted for Use

    -- Identical to   (IDT)
    -- Equivalent to   (EQV)
    -- Modified from   (MOD)
    -- Not equivalent to   (NEQ)

China Communication Standards Association (CCSA)

◆ **Principle:**

- ◆ Non-profit organization of legal person guided by MIIT;

- ◆ To extensively absorb manufactures, universities, and institutes to participate voluntarily in the communication standards activities following the principle of "Openness, Fairness, Justness and Consensus" ;

- ◆ To set up a market-oriented management mechanism for the standardization activities in which the enterprises take the role of as the main body, and the standards organization as the platform;

- ◆ To further carry out international cooperation activities, actively participate in the development of international standards to make contributions to both China standards and international standards.

CCSA

- **Membership:** the number of CCSA membership is more than 190, including about 160 members and 30 observers, covering: major network operators; manufactures; R&D institutes and universities. These companies and institutes, together with many middle-sized or small enterprises and joint ventures, form a standardization group in which, enterprises play as main body, and manufactures, universities and institutes participate extensively.

- **Field:** CCSA deals with standardization in a wide range of communication fields, such as network and switching, wireless communication, IP and multimedia, transport & access network, network and information security, network management and operation support, communication power supply and station operational environment, electromagnetic environment and protection, mobile internet application protocol, and home network.
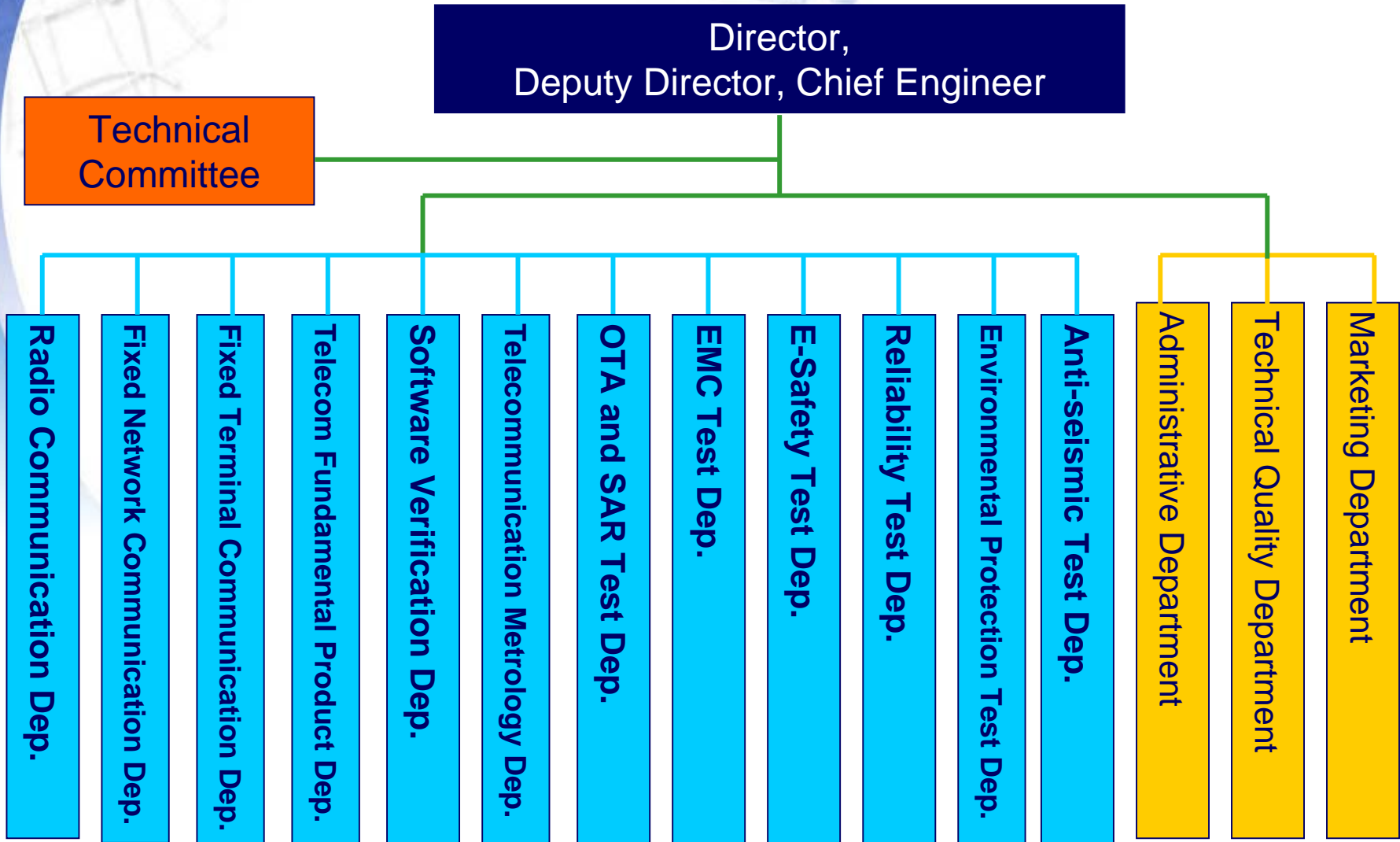
- www.ccsa.org.cn

3. CAB Accreditation in China

- **Introduction**
  - China National Accreditation Service for Conformity Assessment (CNAS) is the national accreditation body with responsibility for the accreditation of certification bodies, laboratories and inspection bodies etc.

- **International Mutual Recognition**
  - CNAS is the full member of International Laboratory Accreditation Cooperation (ILAC), Asia Pacific Laboratory Accreditation Cooperation (APLAC), International Accreditation Forum (IAF) and Pacific Accreditation Cooperation (PAC) as well as their Mutual Recognition Arrangement.

- http://www.cnas.org.cn

4. China Telecommunication Technology Labs

- **Task**
  - Research of the new technology and evolution in the telecommunication information sectors
  - R&D of standards about telecommunication information sectors
  - Do test as an independent third party testing body

- **Resource**
  - 600 employees.
  - 5 locations in China
  - 600 million RMB (about ¢ 60 million Europe dollars) valued test instrument & systems

Organization of CTTL

Director,
Deputy Director, Chief Engineer

Technical Committee

- Radio Communication Dep.
- Fixed Network Communication Dep.
- Fixed Terminal Communication Dep.
- Telecom Fundamental Product Dep.
- Software Verification Dep.
- Telecommunication Metrology Dep.
- OTA and SAR Test Dep.
- EMC Test Dep.
- E-Safety Test Dep.
- Reliability Test Dep.
- Environmental Protection Test Dep.
- Anti-seismic Test Dep.
- Administrative Department
- Technical Quality Department
- Marketing Department

Research Work of CTTL

- In China, CTTL is a leading high-tech laboratory on the combined missions of Telecommunication technology development, telecommunication product standard and test methods research, telecommunication metrology standards and methods research , and evaluation of communication software.

- CTTL often participates in the research and meetings of CCSA, ITU, APEC-TEL, IEC, IEC/CISPR, IEEE, 3GPP, 3GPP2, GCF, CCF, PTCRB,USB-IF, R&TTE CA and so on.

International Certification Test of CTTL
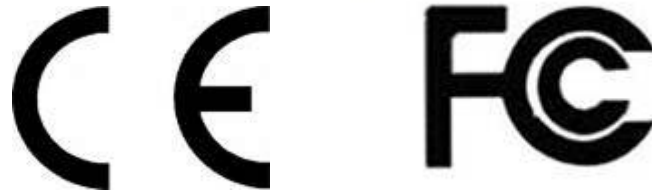
Point of View on International Cooperation

- International standards - benefit.
  - Global telecommunication standards are essential not just to the efficient working of the world's communications networks but also as a key driver of social-economic growth. They bring economies of scale and lower development costs, benefiting consumer, manufacturer and service provider. At the same time they reduce technical barriers and promote compatibility between systems.

- ITU - a very important SDO.
  - There are many standards-setting organizations dealing with the development of communications standards. ITU is most important one. ITU is an inter-government organization. It is truly global and impartial. This gives ITU credibility as well as fostering better cooperation between commercial players, as it is in everyone's interest that communication equipment and services work properly and efficiently around the world.

- CTTL on ITU CA&I.
  - Now CTTL is Capable for conformity test against ITU-T Recommendations, such IPTV; Home Networking; VDSL2; GPON.
  - CTTL would like to participate in future ITU interop events.

Thanks for your attention！