Conformity and Interoperability (C&I) regimes of (Telecommunication/ICT) equipment in Sri Lanka(Ceylon)

Homologation of telecommunication equipment experience

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ITU/CAICT/TRCSL

- @ The ITU Centres of Excellence Network for Asia-Pacific

China Academy of Information and Communications Technology- CAICT

Face-to-Face Training on C & I for IOT

Shanghai, China

30 October to 3 November, 2017

Agenda in brief, to be talked

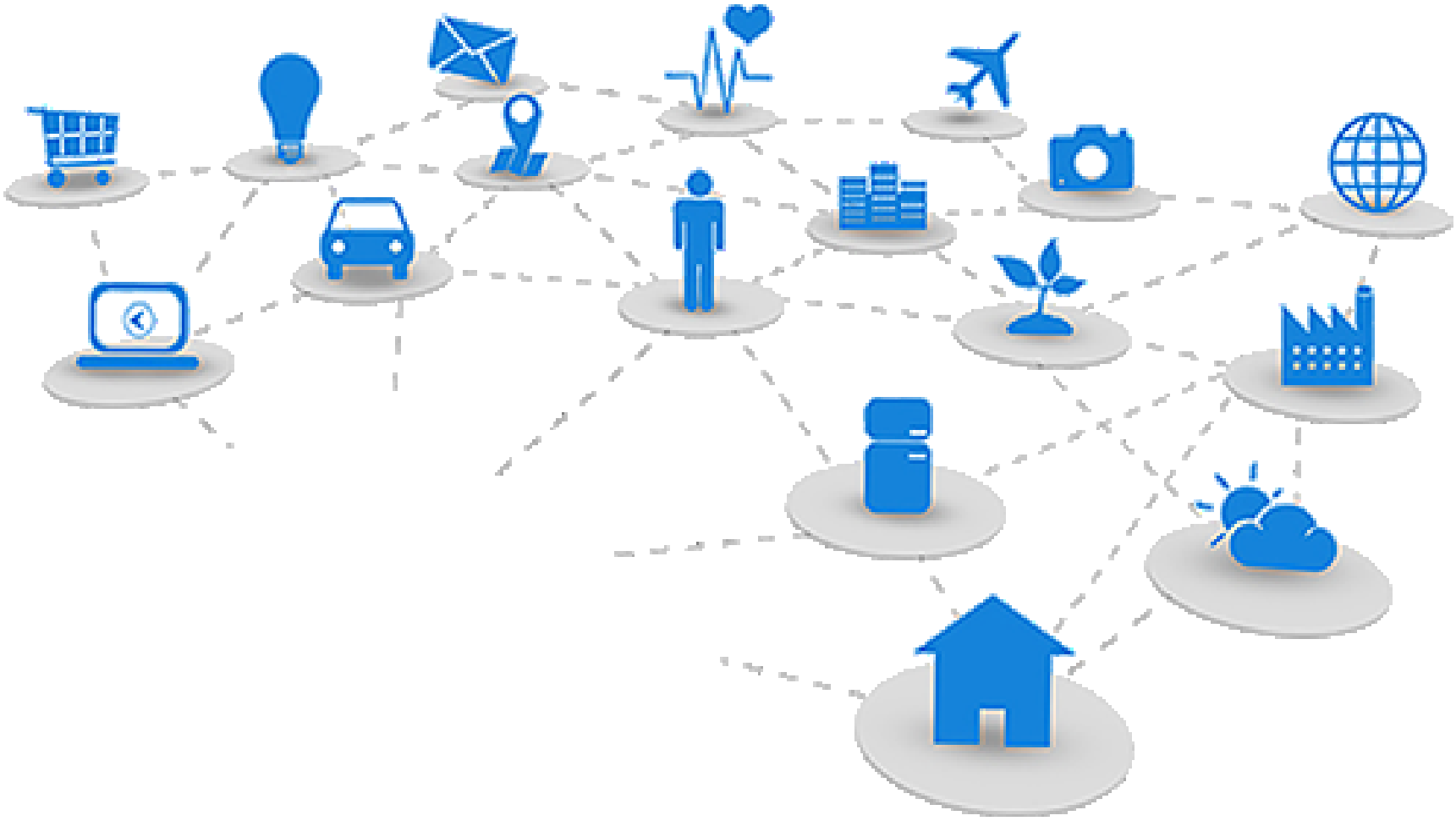
- Legal Framework of the C&I Regime for telecommunication/ICT equipment in Sri Lanka
  - Laws, Rules and Regulations, etc.
- Common problems faced due the lack of conformity and interoperability in Sri Lanka
  - Brief description
- Conformity assessment processes in place
- ICT Reference standards
- Institutions responsible for C&I activities
  - Institutions: ministry office, regulator, certification and Accreditation Bodies, Laboratories
  - Responsibilities: who certifies, accept certificates, enforce the law, control borders, executes market-surveillance
- Vision of the future
  - Harmonization of C&I procedures, Capacity building needs, regional collaboration/integration

Safety and security are at the heart of IOT

-**Introduction**

- At its core, **IOT** is simple: it's about connecting devices(objects) over the internet, letting them talk to us, applications, and each other
- Internet of Things-new Buzzword, a word or phrase, often an item of jargon, that is fashionable at a particular time or in a particular context. The **Internet Of Things** (**IOT**), like big data, is a hot **buzzword**. But is IOT actually a **new** market? No.The concept of IOT has been around for decades.

Low power IOT devices appreciation by all



Legal Framework of the C&I Regime for (telecommunication/ICT) equipment in Sri Lanka
Laws, Rules and Regulations, Circulars and Gazette Notices.

– Laws

*Primarily, C & I regime for Tel-ICT wireless devices too, activities are executed through & from The Telecommunications Regulatory Commission of Sri Lanka, formed under the Sri Lanka Telecommunications Act No: 25 of 1991, as amended by Act No: 27 of 1996.

**Equally, these equipment are assessed against the National Frequency Table to ensure that they are in compliance with relevant ITU regulation and recommendations, as Sri Lanka is mapped in ITU region 3.

Continued…..

– **Rules and Regulations, Circulars and Gazette Notices etc.**

*Spectrum allocation for short range devices on shared basis

**ISM band

***Regulatory guidelines for the use mainly of 2.4 GHz and 5GHz Bands to deploy outdoor Wireless Local Area Networks (WLAN), naturally apply for indoor usage, by the limited/ individual users of such devices imported from overseas.

Common problems faced due to the lack of C & I

- Brief description as experienced by the expert presenter as for this day, inclusive of resolved issues

Despite the rules and regulations in place, not only individual customers, but also some of the timely business grouping and some of the regular vendor license business holders(all denoted as **CX** hereafter), CX who bring latest & novel equipment with poor documented Technical specifications or data sheets or product catalogues, request for initial TRCSL clearance and we all undergo a hard struggle to approve it immediately, however we as a team of TRCSL staff we start to educate CX what required to determine to set the imported device falls under low power.

Continued…

Thereafter with several time consuming visits after some international home work by the CX, finally CX produces the device manufactures conformity certification the out put power in **dbm** or **mW** or in the worst case, the distance operating range in **meters or feet**, in a matter of fact devices are kept documentarily falls under the mandated rules and regulations, thereby an TRCSL clearance for security verification with Ministry of Defense for certain products, and or final issue of clearance for the Controller of Import(export), and for the Sri Lanka Customs, as related to the radio frequency of the Tel./ICT devices as derived from the CX submitted Proforma/Commercial invoice as addressed to them from overseas manufacturer/agent/shipper.

Conformity assessment processes in place
ICT Reference standards

- Device approval fees as per Gazette No.929/10, For Example, RFID/NFC Rs.120/=,WLAN (b/t, video, cord less phone, Access points, many others) Rs.100/=,R/C device (toy, machines, telemetry, detection, alarm, keyless,...) Rs.120/=

- Per year CX treated as individual can have maximum 5 devices for approval

- CX with Vendor license inclusive of wireless and/or GPS and/or R/C and/or WAN (supported SIM modules, can bring any number of devices provided TRCSL approved r.f. and out put power is met under the spectrum allocation for short range devices on shared basis.

Continued….

- RFID/NFC o/p<100mW, range<10m , WLAN (b/t, video, cord less phone, Access points, Com-ports, Routers, std. 802/11/b/g/n, std. 802.11/a/n/ac, inverters, many others) E.I.R.P approximated to 200mW or o/p<23dbm, R/C device (land toy, toy boat, machines, telemetry, detection, alarm, keyless,...) range< 10meter or o/p largely<10mW and for some o/p< 50mW, 100mW and depend on the application asked by CX , wi-fi and other r.f. drone/Quad copter/RC air craft/UAV o/p<23dbm, range depends up to several kilometer (!), weight, speed, battery power, etc considered but more importantly receive sensitivity to have more than >>> -100 dbm is considered for r.f. safe approvals for non interference.

Institutions responsible for C&I activities

– Institutions:

***Ministry office**-Office of the H.E. President, as the minister in-charge

****Regulator** -Telecommunications Regulatory Commission of Sri Lanka(TRCSL)

*****Certification and Accreditation Bodies, Laboratories**

-Type approval after testing by TRCSL

-All other international test reports from various test benches or manufacture sites accepted subjected TRCSL final approval

-manufacture's conformity certificates

Continued….

– Responsibilities:

***Who certifies** -TRCSL certifies

****Accept certificates-**TRCSL accept certificates

*****Enforce the law** -Commission(TRCSL) through Director General, Ministry of defense , Ministry of national security(Department of police)

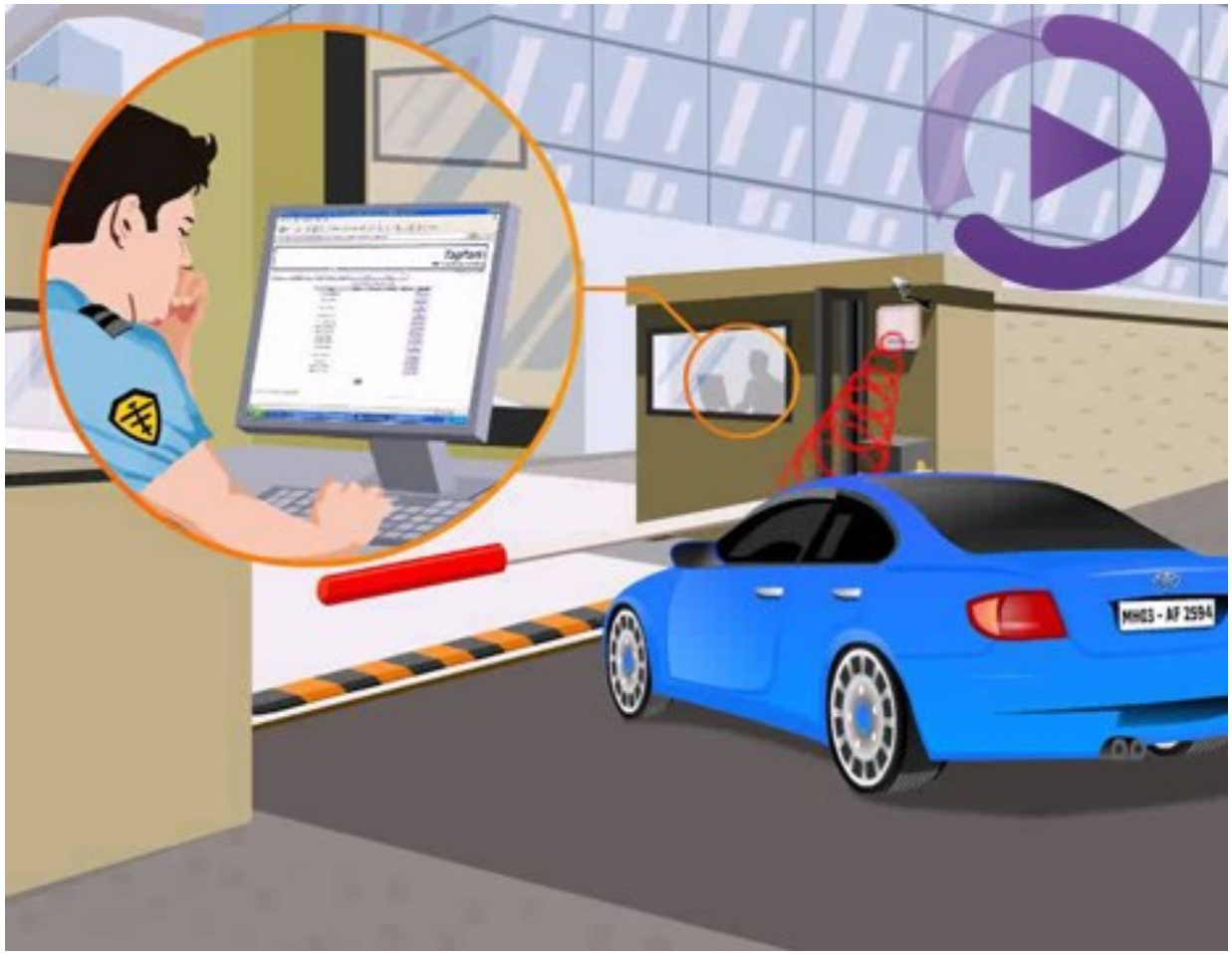
******Control borders** -ITU & TRCSL, Department of Customs

*******Executes market -surveillance**-Controller of Import and export, Business community, individual users, Telecom operators and TRCSL

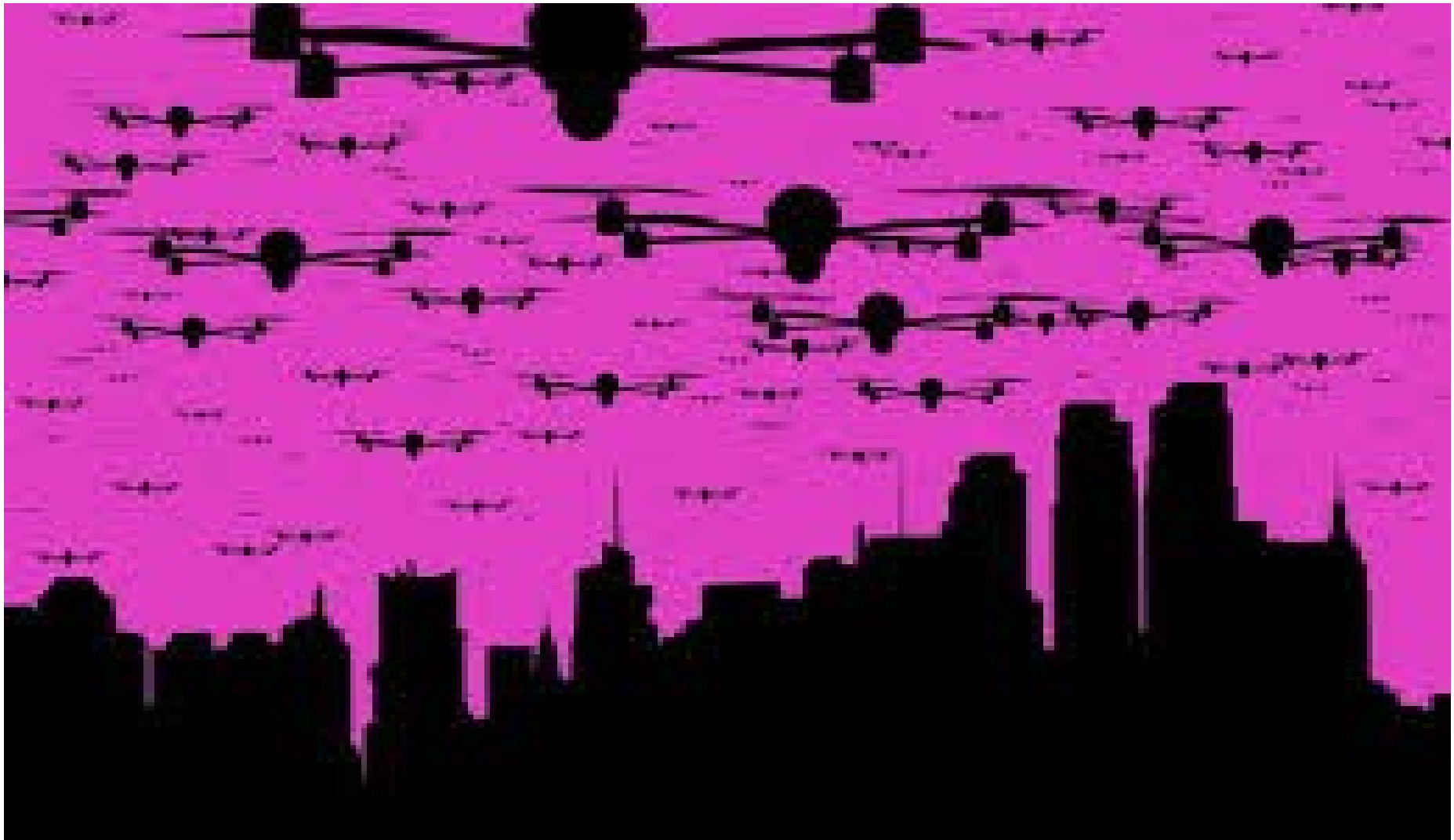
Vision of the future

- **Harmonization of C&I procedures**
  *Presently most of the devices produced are from China
  **Invite non differentiation of branded & non branded
  ***Call all manufactures to improve their catalogues to have full telecommunication/ICT technical specification or data sheet to cover all assessed during testing of r.f.
  ****Test reports of different results from different test benches internationally narrowing the values arrived at FCC, CE, SRRC, NCC,MIC
- **Capacity building needs**
  *invite CX to read equipment in detailed manner during or before invoicing, making a handshake transaction, before shipping by having a complete technical document
  **GPS,GLONASS identifier
  ***FCC,CE,SRRC,NCC,MIC test methods
- **Regional collaboration/integration, etc**
  *CAICT-ITU-EXPERTS,** CAICT-APT-EXPERTS,*** CAICT-ITU-APT-TRCSL+OTHER NATIONS

RFID



Q/C



Conclusion