

ITU-D Workshop - Assistance to developing countries in implementing conformance and interoperability programmes (C&I) and combating counterfeit ICT equipment and theft of mobile devices

Overview of ITU-T activities on combating counterfeiting and stolen ICT

João Alexandre Zanon

Vice-Chairman SG11 - Chairman WP4/11

Anatel - Brazil

May 2024



Plenipotentiary conference – PP Resolution 188 – Combating counterfeit and tampered telecommunication/information and communication technology devices

Resolves

to explore all ways and **means to combat counterfeit** and tampered telecommunication/ICT devices in order **to protect ITU members** and other stakeholders **from their negative impacts**,

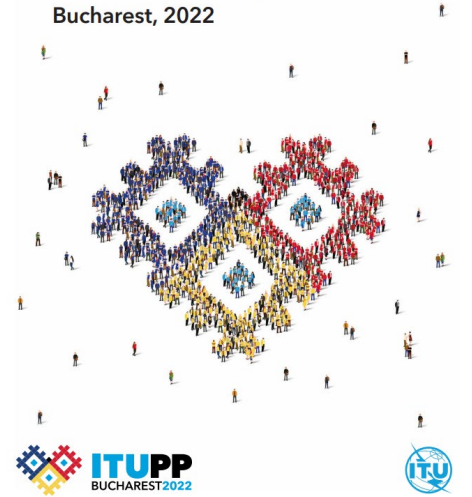
invites Member States

...

4 to work in close collaboration with relevant stakeholders, such as, WTO, WIPO and WCO, on activities relating to combating counterfeit and tampered telecommunication/ICT devices, **including restricting the trading, export/import and circulation of these telecommunication/ICT devices internationally**

instructs the Directors of the three Bureaux

2 to assist all the membership, considering relevant ITU-T recommendations, and **collaborate with other telecommunication/ICT SDOs and regional and international organizations** related to combating counterfeiting, in taking the necessary actions to prevent and detect the tampering (unauthorized changing) and/or replication of unique telecommunication/ICT device identifiers;



Plenipotentiary conference – PP

Resolution 189 – Assisting Member States to combat and deter mobile device theft

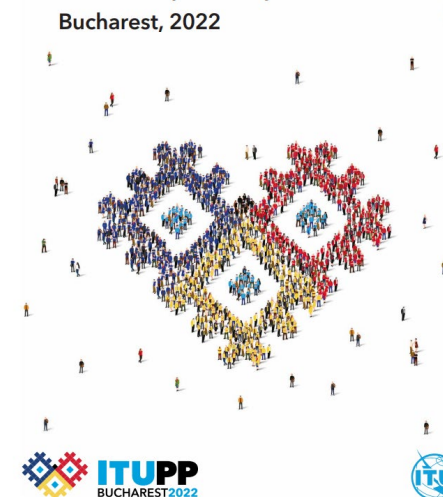
Resolves

to explore and encourage the development of ways and means to continue to **combat and deter mobile device theft and its negative effects**, taking into account considering d) above,

invites Member States and Sector Members

1. to contribute to the studies and experiences in this area;
2. to facilitate education and awareness initiatives, as needed, in order to reduce the use of stolen mobile devices by users;
3. to adopt measures to exchange information on the unique identifiers of mobile telecommunication/ICT devices reported as stolen or lost in other countries and regions, taking necessary actions to protect users' data, taking into account national and regional legal frameworks, and measures to block the use of these devices in their mobile networks;
4. to take the necessary actions to prevent, discover and control tampering (unauthorized changing) and replication of unique mobile telecommunication/ICT device identifiers, and prevent devices with tampered/replicated identifiers from accessing mobile networks;
5. to urge the industry and manufacturers of mobile devices to adopt measures to prevent the tampering (unauthorized changing) of unique mobile telecommunication/ICT device identifiers;

Final Acts
of the Plenipotentiary Conference
Bucharest, 2022



Key achievements: Counterfeit & ICT theft (2017-2024)



Combating counterfeiting of ICT devices

Resolution 96 of WTSA-16

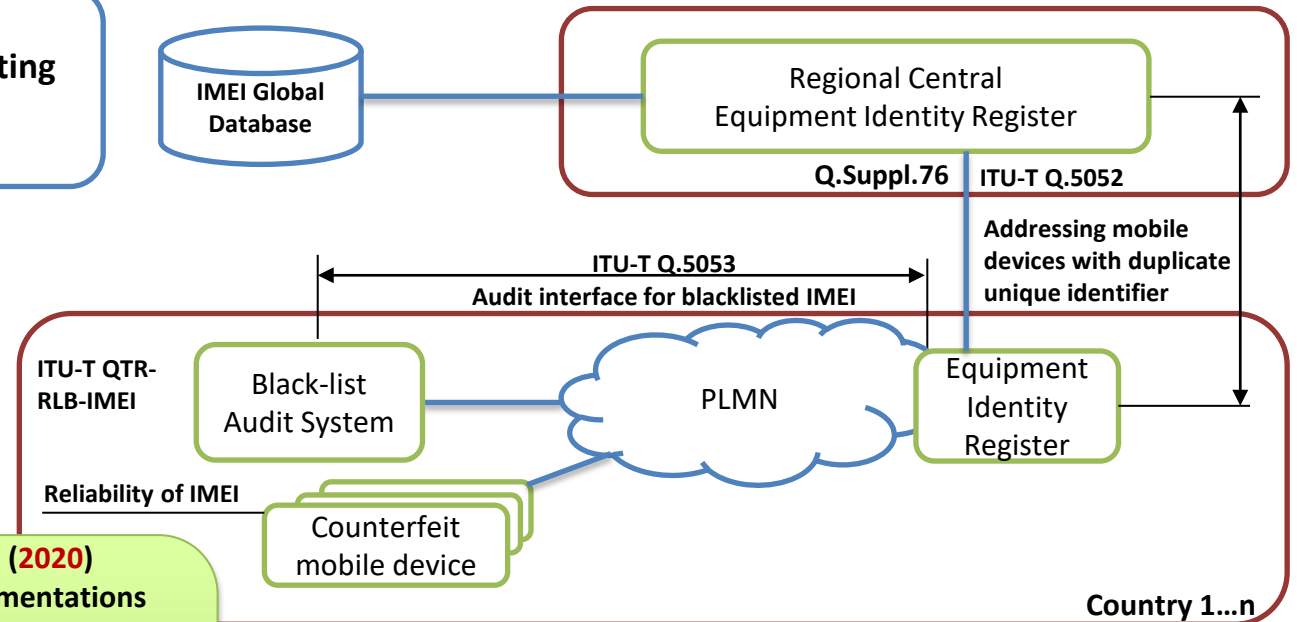
ITU Telecommunication Standardization Sector studies for combating counterfeit telecommunication/information and communication technology devices

- Technical Report on Counterfeit ICT Equipment (2015)
- QTR-CICT - Survey report on counterfeit ICT devices in Africa region (2017)
- ITU-T Q.5050 “Framework for solutions to combat counterfeit ICT devices” (2019)
- Questionnaire on Reliability of International Mobile Equipment Identity (IMEI) – (2019)

- ITU-T Q.5052 “Addressing mobile devices with a duplicate unique identifier” (2020)
- ITU-T Q Suppl.73 “Guidelines for Permissive versus Restrictive System Implementations to address counterfeit, stolen and illegal mobile devices” (2021)
- ITU-T Q Suppl.74 “Roadmap for the Q.5050-series - Combat of Counterfeit ICT and Stolen Mobile Devices” (2021)
- ITU-T Q.Suppl.75 “Use cases on the combat of counterfeit ICT and stolen mobile devices” (2021)
- ITU-T Q.Suppl.76 “Common approaches and interfaces for data exchange between CEIR and EIR” (2023)

Resolution 97 of WTSA-20

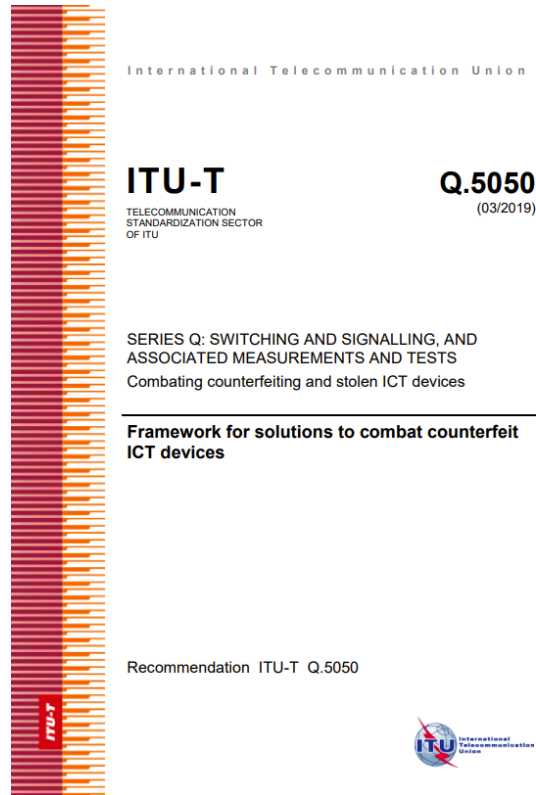
Combating mobile telecommunication device theft



Combating the use of stolen ICT devices

- ITU-T Q.5051 “Framework for combating the use of stolen mobile devices” (2020)

ITU-T Q.5050 “Framework for solutions to combat counterfeit ICT devices” (2019)



It describes a reference framework, with high-level challenges and requirements that should be considered when deploying solutions to combat the circulation and use of counterfeit ICT devices

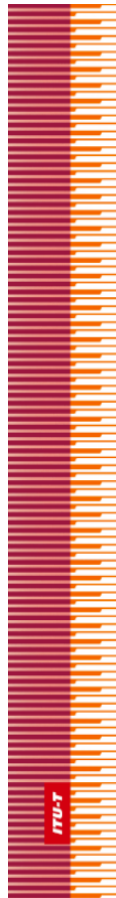
ITU-T Q.5051 “Framework for combating the use of stolen mobile devices” (2020)

It is important not only to combat the use of **Stolen Mobile Devices**, but also to prevent the devices with **unauthorized reprogrammed unique identifiers** from returning to the network.

The **global database** should provide appropriate information if available (e.g. device characteristics, country where the device was stolen, date of event, etc.).

If the stolen device identifiers were found in multiple countries, the global database should provide that information in its results.

This **global database** should be available to all **stakeholders** from anywhere in the world to verify whether a device has been reported stolen.



International Telecommunication Union

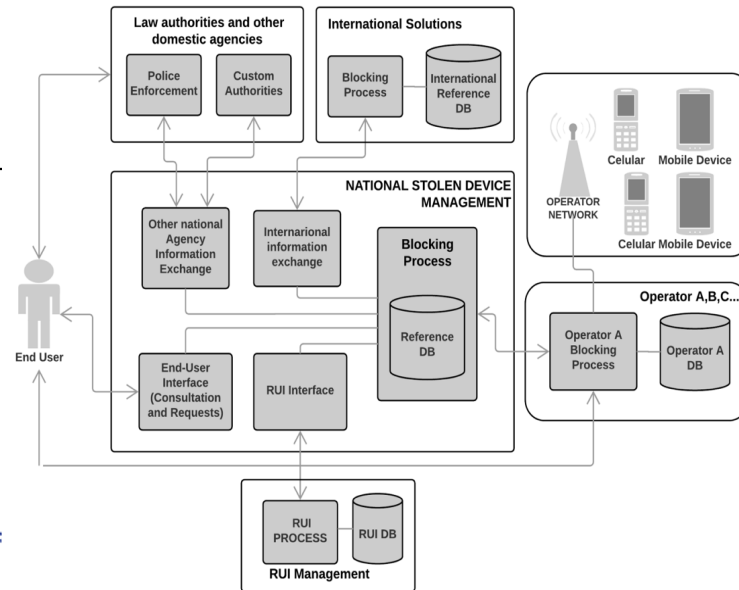
ITU-T
TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Q.5051
(03/2020)

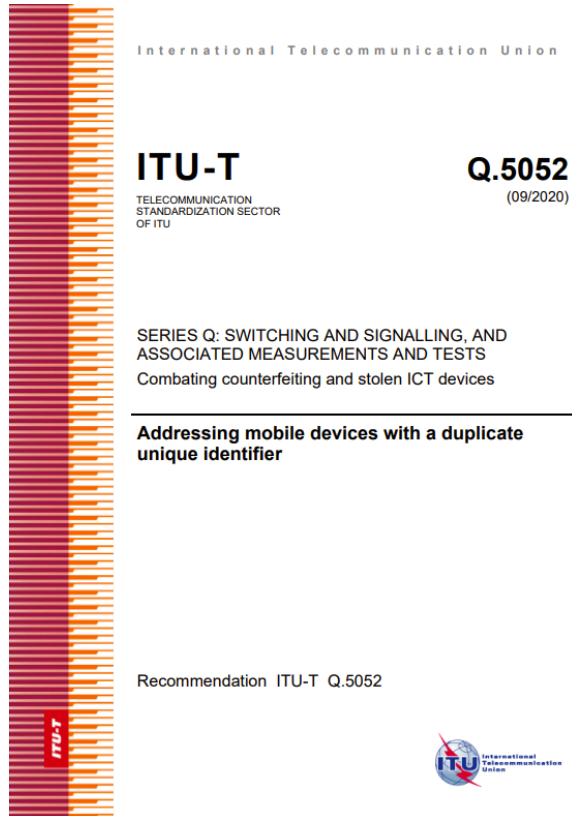
SERIES Q: SWITCHING AND SIGNALLING, AND
ASSOCIATED MEASUREMENTS AND TESTS
Combating counterfeiting and stolen ICT devices

**Framework for combating the use of stolen
mobile devices**

Recommendation ITU-T Q.5051



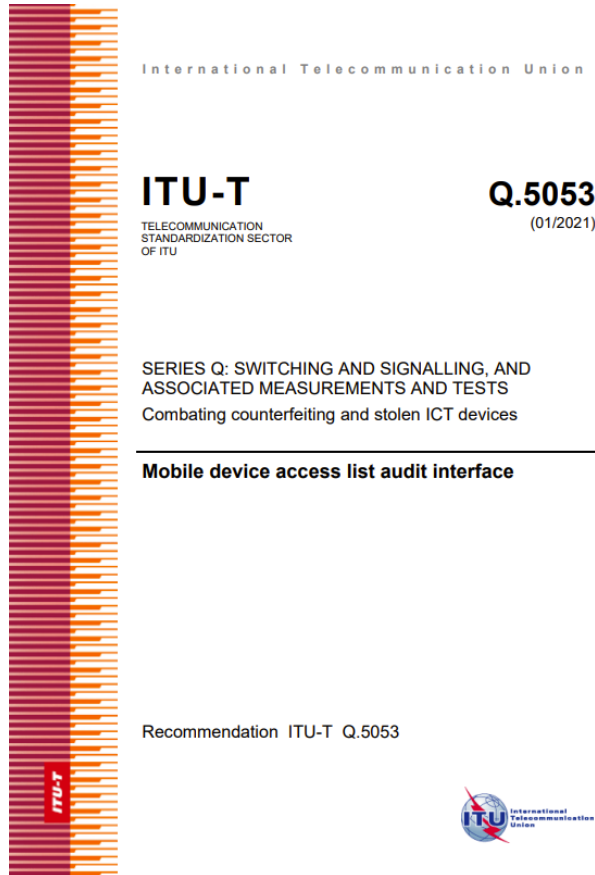
ITU-T Q.5052 “Addressing mobile devices with a duplicate unique identifier” (2020)



It identifies challenges and proposes mechanisms to enable the **detection of mobile devices with duplicate identifiers** present on operator networks, as well as recommending **mechanisms for validating the legitimacy** of such devices

The detection mechanisms for duplicate unique identifiers (UIDs) defined in this standard are based on **post-processing mobile network data to identify devices for blocking** purposes based on criteria defined by individual national regulatory bodies.

ITU-T Q.5053 “Mobile device access list audit interface” (2021)



In some countries, international mobile equipment identities (IMEIs) to be restricted (**blocked list**), thus blocking access to the mobile network, or to be allowed (**permitted list**) by the mobile network operators (MNOs), may be provided by a telecom authority or law enforcement agency (LEA) via mobile device identifier database (MDID).

This standard **describes** different types of **methodologies and interfaces to check and reconcile the mobile device access list** used by the MNOs to comply with the regulations for the mobile device access list audit system (MDALAS).

ITU-T Q Suppl.74 “Roadmap for the Q.5050-series - Combat of Counterfeit ICT and Stolen Mobile Devices” (2021)

Provide an overall index and relation of the ITU-T Q.5050-series of Recommendations.

International Telecommunication Union


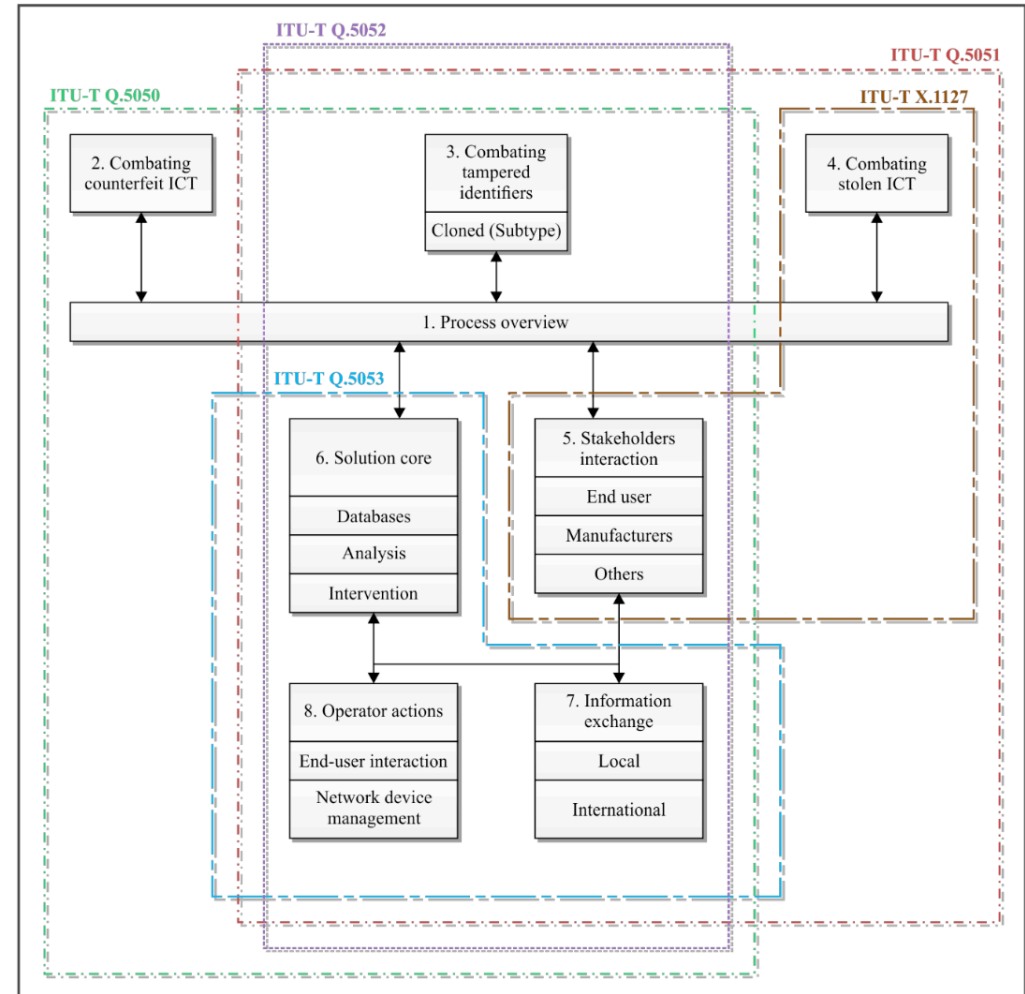
ITU-T
TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Series Q
Supplement 74
(03/2021)

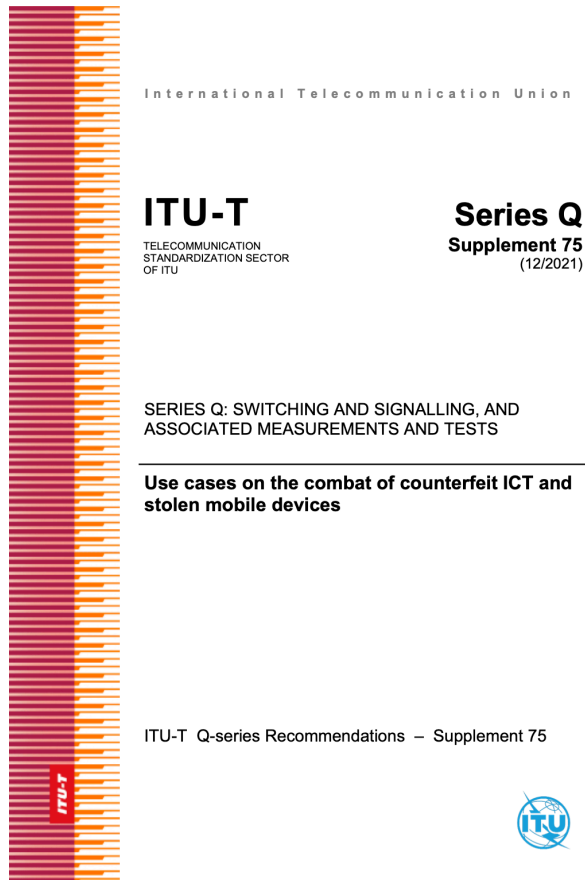
SERIES Q: SWITCHING AND SIGNALLING, AND
ASSOCIATED MEASUREMENTS AND TESTS

**Roadmap for the ITU-T Q.5050-series – Combat
of counterfeit ICT and stolen mobile devices**

ITU-T Q-series Recommendations – Supplement 74

ITU-T Q.Suppl.75 “Use cases on the combat of counterfeit ICT and stolen mobile devices” (2021)



Collects use cases provided by ITU Members that reflects challenges, opportunities and results on the combat of counterfeit ICT and stolen mobile devices.

ITU announces call for updating use cases on the combat of counterfeit ICT and/or stolen mobile devices and implementation of Central Equipment Identity Register (CEIR)

[TSB Circular 181](#)

Appendix I – Use Cases.....	3
I.I Africa	3
I.I.I Congo	3
I.I.II Republic of Botswana.....	4
I.I.III Chad.....	5
I.I.IV Republic of Ghana.....	7
I.I.V Guinea.....	7
I.I.VI Republic of Kenya.....	7
I.I.VII Republic of Madagascar.....	9
I.I.VIII Federal Republic of Nigeria	10
I.I.IX Republic of Senegal.....	11
I.I.X United Republic of Tanzania.....	11
I.I.XI Republic of Zimbabwe	13
I.II South America	13
I.II.I Federative Republic of Brazil.....	13
I.II.II Republic of Colombia.....	18
I.III Asia	26
I.III.I Republic of India.....	26
I.III.II Federal Democratic Republic of Nepal	27
I.III.III Sultanate of Oman	30
I.III.IV Islamic Republic of Pakistan.....	30
I.III.V Republic of Uzbekistan	31
I.IV Europe.....	37
I.IV.I Republic of Turkey.....	37
I.IV.II Ukraine	39

ITU-T Q.Suppl.76 “Common approaches and interfaces for data exchange between CEIR and EIR” (2023)

ITU Publications
Recommendations

International Telecommunication Union
Standardization Sector

Supplement

ITU-T Q Suppl. 76 (10/2023)

SERIES Q: Switching and signalling, and associated measurements and tests

Supplements to ITU-T Q-series Recommendations

Common approaches and interfaces for data exchange between the central equipment identity register and the equipment identity register

It aims to identify current industry approach on the data exchange between CEIR and EIR and propose common approaches and interfaces on this topic.

Note:

CEIR – Central Equipment Identity Register

Ongoing ITU-T SG11 activities



- **Draft Recommendation ITU-T Q.5054 (ex. Q.CCF-CCSD)** “Consumer centric framework for combating counterfeit and stolen ICT mobile devices”. *It provides a consumer centric framework through unified platform combining all scenarios for combating counterfeit and stolen devices as covered in ITU-T Q.5050 Recommendation Series.*
- **Draft Recommendation Q.5055 (ex. Q.CEIR)** “Technical requirement, interfaces and generic functions of CEIR”. *It provides detailed technical description of the CEIR system, its requirements, interfaces and basic functions that should be provided by the system and also some optional features.*
- **Draft Supplement Q.GIR** “Technical requirement and implementation strategy for Global International Mobile Equipment Identity Registry”. *It contains the requirement for implementation of Global IMEI Registry and suggests strategy through which it could be implemented.*
- **Draft Technical Report TR-CF-QoS** “Impact of Counterfeit Mobile devices on Quality of Service”. *It aims to study the negative effects and impact of counterfeit mobile devices on network’s quality of service along with the negative effects and service degradation experienced by the mobile subscribers*
- **Draft Supplement Q.Sup.CFS-AFR** (ex. TR-FCM) “Guidelines on combating counterfeit and stolen mobile devices in African region”. *It proposes a guideline to combat the circulation and use of counterfeit and stolen mobile devices in the African region, based on the Q.5050 series and also the African region members’ experiences.*

How about to join the battle ?!

ITU-T portal on the topic:

**Combating counterfeit and
stolen telecommunication/
ICT devices and tampered
software**

<https://itu.int/go/CS-ICT>



<http://itu.int/go/CS-ICT>

Contacts

Joao Zanon

zanon@anatel.gov.br

TSB secretariat

tsbsg11@itu.int

<http://itu.int/go/tsg11>

