Question 15/11 – Combating counterfeit and stolen telecommunication/ICT devices

(Continuation of Question 15/11)

1 Motivation

The work of this Question was mainly focused on the development of Recommendations and Technical Reports on combating counterfeit telecommunication/ICT device. The growing usage of telecommunication/ICT device in people's daily lives in recent years resulted in increased problems related to the sale, circulation and use of counterfeit device in most markets as well as their adverse consequences for manufacturers, users and governments.

A considerable number of telecommunication/ICT device have been found to be counterfeit and have created concerns about national security, performance, quality of service delivery and revenue losses for all stakeholders. This has led to calls by ITU Member States, particularly those in developing countries to address the issue, especially the negative effects and to study any positive impact of measures taken.

In addition, the demand for services, resulting in the increased production and availability of telecommunication/ICT device has also seen the rise of stolen device. Some of these devices are returned to the market after they have been tampered with and their identity modified, hence bypassing identity blacklisting solutions implemented by Governments and mobile network operators. Consequently, most countries around the world are not only engaged in combating counterfeit telecommunication/ICT device, but also have put in place measures against theft of telecommunication/ICT device and some of them to tackle stolen device with modified identities from reactivating on networks and to effectively manage the situation.

SG11 approved Recommendation ITU-T Q.5050 "Framework for solutions to combat counterfeit ICT devices", Recommendation ITU-T Q.5051 "Framework for combating the use of stolen mobile devices" and started a number of new work items.

Within ITU and around the world, there have been debates as to whether or not conformance and interoperability testing could be one of the solutions to combat counterfeit ICT devices. ITU Resolution 188 (Rev. Dubai, 2018) of the Plenipotentiary Conference, aware that tampering with telecommunication/ICT devices may diminish the effectiveness of solutions adopted by the countries to address counterfeiting, invites Member States to take all necessary measures to combat counterfeit telecommunication/ICT devices. Any unique and persistent identifiers could allow the recognition of genuine products. Additionally, special attention should be given to consider the potential growth of counterfeit IoT devices and the concern this may pose.

Moreover, ITU Resolution 189 (Rev. Dubai, 2018) of the Plenipotentiary Conference, on the combat of mobile devices theft, resolves to explore and encourage the development of ways and means to continue to combat and deter mobile device theft, and invites Member States to adopt the necessary actions to prevent, discover and control tampering and replication of mobile ICT device identifiers, and prevent devices with tampered/replicated identifiers from accessing mobile networks.

This Question intends to explore relevant possibilities to combat stolen and counterfeit telecommunication/ICT devices and, in particular, its relations to products supply chain identity management, traceability, security, privacy and trust of people and networks. Cooperation among ITU-T study groups, between ITU-T and ITU-D as well as with external bodies outside the ITU (in particular with SDOs), will be required to gather a complete information and understanding on the subject including the organization of seminar/workshops in collaboration with stakeholders. Coordination among relevant organizations is also necessary to fulfil these tasks.

This Question will maintain the ITU-T Q.5050-Q.5069 and ITU-T TR-CF.

2 Question

Study items to be considered include, but are not limited to:

– What Technical Reports are needed to raise awareness of the problem of counterfeiting of ICT device and the dangers they pose?

– Can conformity and interoperability testing and assessment schemes be used to combat counterfeit telecommunication/ICT device?

– What technologies may be used as a tool for combating counterfeit, tampered and stolen telecommunication/ICT device?

– What identity management frameworks are appropriate to combat counterfeit and stolen telecommunication/ICT device with their identity modified?

– What new categories of telecommunication/ICT devices must be considered for counterfeit and what appropriate unique device identifier should be considered for each category?

– What kind of Recommendations, Supplements, Technical Reports and Guidelines should be developed to combat and provide solutions to address ICT counterfeiting, tampering, modification and/or duplication of unique device identifiers?

– What kind of Recommendations, Supplements, Technical Reports and Guidelines should be developed to assist ITU Members, in cooperation with ITU-D Sector, on combating counterfeit and mitigate the use of stolen ICT device?

– What ITU Recommendations, Supplements, Technical Reports and Guidelines are required to secure the supply chain management (from manufacturing, importation, distribution and marketing) to enhance traceability, security, privacy and trust of people, products and networks?

– What ITU Recommendations, Supplements, Technical Reports and Guidelines are appropriate to combat counterfeit IoT devices and the concerns this may pose?

– In this field, what should be taken into account to provide energy savings, directly or indirectly, in ICTs or in other industries?

3 Tasks

Tasks include, but are not limited to:

– develop Recommendations, Supplements, Technical Reports and Guidelines to assist ITU Members, in cooperation with ITU-D Sector, on combating counterfeit telecommunication/ICT device and the concerns they may pose;

– develop Recommendations, Supplements, Technical Reports and Guidelines to assist ITU Members, in cooperation with ITU-D Sector, on combating counterfeit IoT devices;

– develop Recommendations, Supplements, Technical reports and Guidelines to address the problem of stolen telecommunication/ICT device and to assist the Member States, in cooperation with ITU-D Sector, in deploying solutions to mitigate the use of stolen device;

– develop Recommendations, Supplements, Technical Reports and Guidelines to identify new categories of telecommunication/ICT devices that may benefit from combatting counterfeit, and what device identifier should be considered for each category;

– study appropriate solutions, including identity management frameworks, to combat counterfeit and stolen telecommunication/ICT device with tampered or duplicated unique identifiers;

– study relevant technologies that can be used as a tool for combating counterfeit, tampered and stolen telecommunication/ICT device and the dangers they pose;

– organise workshops and events across ITU regions in cooperation with the ITU-D Sector to promote the work of ITU-T in this field and involve stakeholders;

– study possible conformity and interoperability testing (C&I) solutions to combat counterfeiting and tampering of telecommunication/ICT device, taking into account the activities of the ITU-T CASC;

– study results achieved by various international standardization bodies and develop technical specifications to feed the standardization work of the Question.

An up-to-date status of work under Q15/11 is contained in the SG11 work programme (https://www.itu.int/ITU-T/workprog/wp_search.aspx?sp=17&q=15/11).

4 Relationships

Resolutions:

– Resolution 188 of the Plenipotentiary Conference (Rev. Dubai, 2018) "Combating counterfeit telecommunication/information and communication technology devices";

– Resolution 189 of the Plenipotentiary Conference (Rev. Dubai, 2018) "Assisting Member States to combat and deter mobile device theft";

– Resolution 79 of the WTDC (Rev. Buenos Aires, 2017) "The role of telecommunications/information and communication technologies in combating and dealing with counterfeit telecommunication/information and communication devices";

– Resolution 76 of the WTSA (Rev. Geneva, 2022) "Studies related to conformance and interoperability testing, assistance to developing countries, and a possible future ITU Mark programme";

– Resolution 96 of the WTSA (Rev. Hammamet, 2016) "ITU Telecommunication Standardization Sector studies for combating counterfeit telecommunication/information and communication technology devices";

– Resolution 97 of the WTSA (Rev. Geneva, 2022) "Combating mobile telecommunication device theft".

Recommendations:

– ITU-T X.1255, ITU-T X.660, ITU-T Q.5050, ITU-T Q.5051

Questions:

– All Questions of SG11, especially Questions relating to control, signalling architectures, protocols, conformance and interoperability testing

Study Groups:

– ITU-T SG2
– ITU-T SG3
– ITU-T SG5
– ITU-T SG12
– ITU-T SG13
– ITU-T SG17
– ITU-T SG20
– ITU-D SG1 and SG2

Other bodies:

– ETSI
– IEC
– IEEE

- IETF
- ISO/IEC JTC 1

WSIS action lines:

- C2, C5, C11

Sustainable Development Goals:

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