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Note by the Secretary-General

CONTRIBUTION FROM THE REPUBLIC OF INDIA, the people’s republic of bangladesh, the federal republic of nigeria, the republic of uganda and tunisia

Proposal on IMEI Implementation In Mobile Phone Handsets To Address Security Challenges

I have the honour to transmit to the Member States of the Council a contribution submitted by **the Republic of India, the People’s Republic of Bangladesh, the Federal Republic of Nigeria, the Republic of Uganda and Tunisia**.

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 Secretary-General

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Proposal on IMEI Implementation In Mobile Phone Handsets To Address Security Challenges

**A. Introduction**

1. The Indian administration acknowledges the efforts and role played by ITU in building confidence and security in the use of ICTs (PP Resolution 130) and with regard to international public policy issues relating to the risk of illicit use of ICTs (Resolution 174).

2. The proposal aims to escalate the important issue on misuse of International Mobile Equipment Identity (IMEI) Numbers set in mobile handsets leading to serious security threats. The IMEI is a globally unique serial number, being issued by GSM Association (GSMA), apparently programmed into the Mobile Phone handsets’ memory during the production phase. IMEI is one of the key measures uniquely identifying the mobile handset to combat misuse of mobiles affecting security and also to combat counterfeiting, cloning, etc.

3. The proposal highlights the issue on the need to make it non-programmable in the field as per the 3GPP technical specifications.

**B. Discussion**

4. As mentioned, the IMEI is a unique 15-digit number used to identify mobile phones (e.g. GSM, UMTS, and LTE) in a telecom network. This mobile device identifier is envisaged to be a globally unique number of the Mobile device but the programmability of the number makes it prone to be changed or tampered by unscrupulous users. The feasibility of IMEI programmability in Mobile Phone Handsets has created vulnerability to duplicating, counterfeiting and cloning and most importantly an issue of security threat for law enforcement agencies. Further, the re-programming of the IMEI numbers with a valid IMEI number presents a practical difficulty for the Telecom Service Providers, respective global databases in maintaining the white List of unique equipment identities.

5. The proposal draws the reference to 3GPP technical specifications and GSMA guidelines. The 3GPP TS 22.016 V10.0.0 released in March 2011 and also the latest 3GPP TS 22.016 V14.0.0 specifies that *the IMEI shall be unique and shall not be changed after the ME’s final production process. It shall resist tampering, i.e. manipulation and change, by any means (e.g. physical, electrical and software).”* Accordingly, the GSMA has also issued its guidelines. In spite of the existing 3GPP specifications and GSMA guidelines on the requirement of non programmability of IMEI after factory production, still it is considered as a child’s play to reprogram and change the IMEI code in a mobile handset in the field.

6. Almost every administration is facing the challenge of increasing theft cases of mobile phones, and the use of illegal and non-genuine mobile handsets in the network. There are instances where several thousands of handsets are found with the same IMEI posing the issue of law & order issue and also security implications. Further, the fake and non-genuine IMEI numbers pose a major challenge in carrying out investigations.

7. Vide PP Resolution 174, the Member States have recognized that *global cooperation and collaboration between Member States, international organizations and all other stakeholders, are necessary in order to address and prevent the illicit use of ICTs; the moderating and facilitating role assigned to the Union under Action Line C5; that sharing information at global level on relevant security measures and practices is of particular value to developing countries[[1]](#footnote-1)1 in mitigating the effects of illicit use of ICTs.*

8. The resolution notes *the vulnerability of critical national infrastructures, their increasing dependence on ICTs and the threats resulting from the illicit use of ICTs.* It resolves *to instruct the SG to raise the awareness of Member States regarding the adverse impact that may result from the illicit use of information and communication* *resources; continue to raise awareness, within the mandate of ITU, of the need to mitigate the risks and related threats posed by illicit use of ICTs, and continue to promote cooperation among appropriate international and regional organizations.*

9. Implementation of IMEI in the handset in the factory should be such that the changing the IMEI renders the Mobile Equipment unviable if IMEI is tampered with.

**C. Proposal**

10. Implementation of the relevant specifications in true sense is essential in making the unique IMEI numbers not tamperable after production phase. Considering the criticality and need of non-erasable, non-programmable IMEI numbers in the Mobile Phone Handsets, it is imperative to flag the issue for the attention of ITU and distinguished Member States.

11. ITU is requested to take up with GSMA and other relevant organizations on the issue of implementing the guidelines due to security implications involved in the matter to make IMEI not changeable after the Mobile Equipment’s final production process. It shall resist tampering, i.e. manipulation and change, by any means (e.g. physical, electrical and software) as prescribed.

12. Member States are kindly invited and exhorted to take necessary measures to address the global menace of programmability of IMEIs in the field by suitably taking up the issue with Service Providers and mobile manufactures through necessary policy framework to mitigate the misuse as elaborated above.

13. The Telecommunication Standardization Bureau of ITU may study the issue to address the challenges of implementation of 3GPP technical specification and may provide necessary guidance in the matter.

1. 1 These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition. [↑](#footnote-ref-1)