

**POLICY FRAMEWORK AND RECOMMENDATIONS TO  
MINIMIZE THE USAGE OF SUBSTANDARD,  
COUNTERFEIT AND STOLEN MOBILE  
COMMUNICATION DEVICES**

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Thesis submitted in partial fulfillment of the requirements for the degree Master of  
Science in Telecommunication

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## **DECLARATION**

I declare that this is my own work and this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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Name of the supervisor: Eng. A.T.L.K. Samarasinghe

Signature of the supervisor:

Date:

## **ABSTRACT**

Telecommunication sector is one of the technologically advanced sectors, globally. The mobile device market is always growing and it is very competitive. Counterfeit and substandard devices are collectively known as black market devices. Availability of black market and stolen mobile devices is a global issue.

When buying a mobile device, most of the people focus on cost, brand and model. The important factors that represent the standard of mobile devices such as validity of International Mobile Equipment Identity (IMEI) and the Specific Absorption Rate (SAR) value are neglected.

It is important to adhere to a proper policy framework and introduce systems such as Equipment Identity Registers (EIRs) to minimize the usage of black market and stolen mobile communication devices. Mobile device blocking and regulation have become difficult tasks due to the unavailability of proper systems and policies. This has allowed stolen and black market mobile device usage.

As per the user survey conclusions, it was identified that user behavior patterns, limitations of existing EIR and prevailing policies should be changed to address the issue.

A policy framework that includes the steps of increasing user awareness, establishing a proper blocking mechanism and adding reforms to regulations is recommended as a solution.

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## **LIST OF ABBREVIATIONS**

Abbreviation	Description
GSMA	Global System for Mobile communications Association
SIM	Subscriber Identity Module
4G	4th Generations
5G	5th Generations
QoS	Quality of Service
OECD	Organization for Economic Co-operation and Development
MMF	Mobile Manufacturers' Forum
TRCSL	Telecommunication Regulatory Commission of Sri Lanka
ITU	International Telecommunication Union
IMEI	International Mobile Equipment Identity
SAR	Specific Absorption Rate
3GPP	3 <sup>rd</sup> Generation Partnership Project
PTA	Pakistan Telecommunication Authority
CEIR	Central Equipment Identity Register
EIR	Equipment Identity Register
MSC	Mobile Switching Center
IMSI	International Mobile Subscriber Identity
DB	Data Base
GUI	Graphical User Interface
VIP	Very Important Person
DR	Disaster Recovery
OS	Operating System