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COMMUNICATIONS AND SECURITY

ITU-T X.1240 – Supplement on overall aspects of countering mobile messaging spam

ITU-T X-series Recommendations – Supplement 12



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Supplement 12 to ITU-T X-series Recommendations

ITU-T X.1240 – Supplement on overall aspects of countering mobile messaging spam

Summary

Supplement 12 to ITU-T X-series Recommendations, in particular to Recommendation ITU-T X.1240, describes the basic concept and characteristics of mobile messaging spam. It also introduces and analyses current technologies on countering mobile messaging spam. In addition, this supplement proposes a general implementation framework for countering mobile messaging spam. The relative activities in different organizations are introduced in Appendix I.

History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T X Suppl. 12	2012-03-02	17

Keywords

MMS, mobile messaging spam, SMS, spam.

FOREWORD

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Supplement 12 to ITU-T X-series Recommendations

ITU-T X.1240 – Supplement on overall aspects of countering mobile messaging spam

1 Scope

This supplement to Recommendation ITU-T X.1240 provides an overview of mobile messaging spam, including types, characteristics and delivery methods. Furthermore, this supplement analyses the current technologies on countering mobile messaging spam, and proposes an implementation framework for countering mobile messaging spam. The relevant activities in different standardization organizations and related organizations are introduced in Appendix I.

This supplement only focuses on mobile messaging spam, including SMS spam and MMS spam.

2 References

None.

3 Definitions

3.1 Terms defined elsewhere

This supplement uses the following terms defined elsewhere:

3.1.1 mobile handset [b-ITU-T K.49]: Not fixed terminal equipment used for data or voice communication and connected to a fixed telecommunications network via radio interface.

3.1.2 multimedia messaging service (MMS) [b-ITU-T X.1231]: Multimedia messaging service refers to a kind of messaging service after short message service which can transfer various multimedia messages including text, graphics, audio, video and so on through mobile network, wireless network or fixed network.

3.1.3 short message service (SMS) [b-ITU-T X.1231]: Short message service refers to a kind of message service, which allows mobile phones, telephones and other short message entities to transfer and receive text messages through a device-named service centre implementing functions such as saving and delivering.

3.1.4 SMS spam [b-ITU-T X.1242]: Spam sent via SMS.

3.1.5 spam [b-ITU-T X.1240]: The meaning of the word "spam" depends on each national perception of privacy and what constitutes spam from the national technological, economic, social and practical perspectives. In particular, its meaning evolves and broadens as technologies develop, providing novel opportunities for misuse of electronic communications. Although there is no globally agreed definition for spam, this term is commonly used to describe unsolicited electronic bulk communications over e-mail or mobile messaging for the purpose of marketing commercial products or services.

3.1.6 spammer [b-ITU-T X.1240]: An entity or a person creating and sending spam.

3.2 Terms defined in this supplement

This supplement defines the following terms:

3.2.1 false positive: A result that is erroneously positive when a situation is negative.

3.2.2 MMS spam: Spam sent via MMS.

3.2.3 mobile messaging spam: Unsolicited electronic communications over mobile messaging services, typically consisting of SMS spam and MMS spam.

4 Abbreviations and acronyms

This supplement uses the following abbreviations and acronyms:

CBCS	Categorization-Based Content Screening
CDR	Call Detail Record
CI	Contextual Information
CSCS	Client Side Content Screening
FMD	Filtered Messages Database
GSM	Global System for Mobile communications
HMM	Hidden Markov Models
HPLMN	Home Public Land Mobile Network
ID	Identity
IMR	Identification, Marking and Reacting
IMS	IP Multimedia Subsystem
MAP	Mobile Application Part
MMS	Multimedia Messaging Service
MMSC	Multimedia Messaging Service Centre
MT-SMs	Mobile Terminated-Short Messages
NB	Naive Bayes Algorithm
OPH	Open Proxy Handshake
OSBF-Lua	Orthogonal Sparse Bigrams with confidence Factor
PLMN	Public Land Mobile Network
PS	Packet Switched
PUCI	Protection against Unsolicited Communication for IMS
SCIDM	Secure Content IDentification Mechanism
SCM	Service Control Module
SIM	Subscriber Identity Module
SMS	Short Message Service
SMSC	Short Message Service Centre
SPIT	SPam over Internet Telephony
SS	Supplementary Services
SSFM	SMS Spam Filtering Module
SVM	Support Vector Machine
TCAP	Transaction Capabilities Application Part
UC	Unsolicited Communication