

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

M.3362

(06/2020)

SERIES M: TELECOMMUNICATION MANAGEMENT,
INCLUDING TMN AND NETWORK MAINTENANCE

Telecommunications management network

Requirements for telecommunication anti-fraud management in the telecommunication management network

Recommendation ITU-T M.3362



International
Telecommunication
Union

Documents
Document Sharing Hub

ITU-T M-SERIES RECOMMENDATIONS

TELECOMMUNICATION MANAGEMENT, INCLUDING TMN AND NETWORK MAINTENANCE

Introduction and general principles of maintenance and maintenance organization	M.10–M.299
International transmission systems	M.300–M.559
International telephone circuits	M.560–M.759
Common channel signalling systems	M.760–M.799
International telegraph systems and phototelegraph transmission	M.800–M.899
International leased group and supergroup links	M.900–M.999
International leased circuits	M.1000–M.1099
Mobile telecommunication systems and services	M.1100–M.1199
International public telephone network	M.1200–M.1299
International data transmission systems	M.1300–M.1399
Designations and information exchange	M.1400–M.1999
International transport network	M.2000–M.2999
Telecommunications management network	M.3000–M.3599
Integrated services digital networks	M.3600–M.3999
Common channel signalling systems	M.4000–M.4999

For further details, please refer to the list of ITU-T Recommendations.

Recommendation ITU-T M.3362

Requirements for telecommunication anti-fraud management in the telecommunication management network

Summary

Recommendation ITU-T M.3362 describes the requirements for telecommunication anti-fraud management in the telecommunication management network (TMN), the functional framework for combating telecommunication fraud management and the functional description. The requirements for telecommunication anti-fraud management include fraud detection management, fraud monitoring management, fraud mitigation management and fraud information sharing management. This Recommendation also describes telecommunication fraud scenarios including nuisance calls and spoofing calls.

History

Edition	Recommendation	Approval	Study Group	Unique ID*
1.0	ITU-T M.3362	2020-06-05	2	11.1002/1000/14197

Keywords

Telecommunication anti-fraud management, TMN.

* To access the Recommendation, type the URL <http://handle.itu.int/> in the address field of your web browser, followed by the Recommendation's unique ID. For example, <http://handle.itu.int/11.1002/1000/11830-en>.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure, e.g., interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

INTELLECTUAL PROPERTY RIGHTS

ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at <http://www.itu.int/ITU-T/ipr/>.

© ITU 2020

All rights reserved. No part of this publication may be reproduced, by any means whatsoever, without the prior written permission of ITU.

Table of Contents

		Page
1	Scope.....	1
2	References.....	1
3	Definitions	1
	3.1 Terms defined elsewhere	1
	3.2 Terms defined in this Recommendation.....	1
4	Abbreviations and acronyms	2
5	Conventions	2
6	Telecommunication fraud scenarios	2
7	Overview of telecommunication anti-fraud management in the TMN	4
	7.1 Telecommunication anti-fraud management function entity in telecommunication network	4
	7.2 Telecommunication anti-fraud management function requirement	4
	7.3 Functional framework for telecommunication anti-fraud management.....	5
8	Fraud detection management.....	6
	8.1 Management function set of intelligent fraud detection.....	6
	8.2 Management function set of fraud call behaviour features analysis	7
	8.3 Management function set of fraud call risk evaluation	7
9	Fraud monitoring management.....	7
	9.1 Management function set of suspicious number monitoring	7
	9.2 Management function set of fraud call source backtracking.....	8
	9.3 Management function set of call data statistics analysis	8
10	Fraud mitigation management	8
	10.1 Management function set of fraud reminding	9
	10.2 Management function set of fraud interception.....	9
	10.3 Management function set of mitigation result evaluation	9
11	Fraud information sharing management.....	10
	11.1 Management function set of suspicious number list	10
	11.2 Management function set of number classification label	10
	Appendix I – Potential telecommunication fraud scenarios	11
	I.1 Nuisance calls.....	11
	I.2 Spoofing calls	11
	Bibliography.....	13

Recommendation ITU-T M.3362

Requirements for telecommunication anti-fraud management in the telecommunication management network

1 Scope

This Recommendation describes the requirements for telecommunication anti-fraud management in the telecommunication management network (TMN), the functional framework for combating telecommunication fraud management and the functional description.

NOTE – This Recommendation shall be governed, construed, subject to, and enforced in accordance with the national laws and regulations of the individual Member States of the ITU-T. The obligations, rights, disputes, and remedies of the individual Member States regarding the Recommendation shall be determined in accordance exclusively within their respective national jurisdictions.

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

None.

3 Definitions

3.1 Terms defined elsewhere

This Recommendation uses the following terms defined elsewhere:

3.1.1 fraud [b-ITU-T Y.140.1]: The act of acquiring pecuniary advantage by misrepresentation or unauthorized action.

NOTE – Fraud is use of numbers in the manner for which they were prescribed, but in a manner intended to generate revenue. It is the use of a number in the manner for which it was allocated but for the purpose of generating cash at the expense of the customer and/or operators. While fraud, in general, relates to Member States' application of legal and policy principles which are within their sovereign rights, in this context the term fraud is associated only with fraudulent activities related to misappropriation and misuse of international numbering resources, which are described in [b-ITU-T E.156 Sup.1].

3.1.2 telecommunication fraud [b-ITU-T Y.140.1]: Fraud which is committed directly against the telecommunication network or its subscribers.

3.2 Terms defined in this Recommendation

This Recommendation defines the following terms:

3.2.1 blacklist: A list of fraudulent numbers which need to be monitored and mitigated.

3.2.2 greylist: A list of suspicious fraudulent numbers which need to be monitored.

3.2.3 nuisance call: Any type of unsolicited or annoying telephone call. May be originated from a telemarketer, robot-caller, prankster or otherwise.