

International Telecommunication Union

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Series E
Supplement 11
(06/2020)

SERIES E: OVERALL NETWORK OPERATION,
TELEPHONE SERVICE, SERVICE OPERATION AND
HUMAN FACTORS

**Criteria for M2M/IoT-related assignments Under
Recommendation ITU-T E.164.1 and
Recommendation ITU-T E.212 Annex A**

ITU-T E-series Recommendations – Supplement 11

ITU-T



ITU-T E-SERIES RECOMMENDATIONS

OVERALL NETWORK OPERATION, TELEPHONE SERVICE, SERVICE OPERATION AND HUMAN FACTORS

INTERNATIONAL OPERATION	
Definitions	E.100–E.103
General provisions concerning Administrations	E.104–E.119
General provisions concerning users	E.120–E.139
Operation of international telephone services	E.140–E.159
Numbering plan of the international telephone service	E.160–E.169
International routing plan	E.170–E.179
Tones in national signalling systems	E.180–E.189
Numbering plan of the international telephone service	E.190–E.199
Maritime mobile service and public land mobile service	E.200–E.229
OPERATIONAL PROVISIONS RELATING TO CHARGING AND ACCOUNTING IN THE INTERNATIONAL TELEPHONE SERVICE	
Charging in the international telephone service	E.230–E.249
Measuring and recording call durations for accounting purposes	E.260–E.269
UTILIZATION OF THE INTERNATIONAL TELEPHONE NETWORK FOR NON-TELEPHONY APPLICATIONS	
General	E.300–E.319
Phototelegraphy	E.320–E.329
ISDN PROVISIONS CONCERNING USERS	E.330–E.349
INTERNATIONAL ROUTING PLAN	E.350–E.399
NETWORK MANAGEMENT	
International service statistics	E.400–E.404
International network management	E.405–E.419
Checking the quality of the international telephone service	E.420–E.489
TRAFFIC ENGINEERING	
Measurement and recording of traffic	E.490–E.505
Forecasting of traffic	E.506–E.509
Determination of the number of circuits in manual operation	E.510–E.519
Determination of the number of circuits in automatic and semi-automatic operation	E.520–E.539
Grade of service	E.540–E.599
Definitions	E.600–E.649
Traffic engineering for IP-networks	E.650–E.699
ISDN traffic engineering	E.700–E.749
Mobile network traffic engineering	E.750–E.799
QUALITY OF TELECOMMUNICATION SERVICES: CONCEPTS, MODELS, OBJECTIVES AND DEPENDABILITY PLANNING	
Terms and definitions related to the quality of telecommunication services	E.800–E.809
Models for telecommunication services	E.810–E.844
Objectives for quality of service and related concepts of telecommunication services	E.845–E.859
Use of quality of service objectives for planning of telecommunication networks	E.860–E.879
Field data collection and evaluation on the performance of equipment, networks and services	E.880–E.899
OTHER	E.900–E.999
INTERNATIONAL OPERATION	
Numbering plan of the international telephone service	E.1100–E.1199
NETWORK MANAGEMENT	
International network management	E.4100–E.4199

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

Supplement 11 to ITU-T E-series Recommendations

Criteria for M2M/IoT-related assignments Under Recommendation ITU-T E.164.1 and Recommendation ITU-T E.212 Annex A

Summary

Supplement 11 to ITU-T E-series of Recommendations defines criteria for assigning ITU-T E.164 identification codes and ITU-T E.212 mobile network codes under shared mobile country codes (MCCs) for machine to machine (M2M)/Internet of things (IoT) services.

History

Edition	Recommendation	Approval	Study Group	Unique ID*
1.0	ITU-T E Suppl. 11	2020-06-05	2	11.1002/1000/14321

Keywords

Assignment, closed user group, E.164.1, E.212 Annex A, E.118, IC, Internet of things, IoT, machine to machine, MCC, MNC, M2M, telephony.

* 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

This is an informative ITU-T publication. Mandatory provisions, such as those found in ITU-T Recommendations, are outside the scope of this publication. This publication should only be referenced bibliographically in ITU-T Recommendations.

INTELLECTUAL PROPERTY RIGHTS

ITU draws attention to the possibility that the practice or implementation of this publication 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 publication development process.

As of the date of approval of this publication, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this publication. 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 Supplement	1
4 Abbreviations and acronyms	1
5 Conventions	2
6 Criteria for M2M/IoT-related assignments under Recommendation ITU-T E.164.1 and Recommendation ITU-T E.212 Annex A.....	2

Supplement 11 to ITU-T E-series Recommendations

Criteria for M2M/IoT-related assignments Under Recommendation ITU-T E.164.1 and Recommendation ITU-T E.212 Annex A

1 Scope

This supplement defines criteria for assigning ITU-T E.164 identification codes and ITU-T E.212 mobile network codes under shared mobile country codes (MCCs) for machine to machine (M2M)/Internet of things (IoT) services.

2 References

- [ITU-T E.105] Recommendation ITU-T E.105 (1992), *International telephone service*.
- [ITU-T E.118] Recommendation ITU-T E.118 (2006), *The international telecommunication charge card*.
- [ITU-T E.164] Recommendation ITU-T E.164 (2010), *The international public telecommunication numbering plan*.
- [ITU-T E.164.1] Recommendation ITU-T E.164.1 (2008), *Criteria and procedures for the reservation, assignment and reclamation of E.164 country codes and associated identification codes (ICs)*.
- [ITU-T E.212 Annex A] Recommendation ITU-T E.212 Annex A (2016), *Criteria and procedures for the assignment and reclamation of shared ITU-T E.212 mobile country codes (MCC) for networks and their respective mobile network codes (MNCs)*.

3 Definitions

None.

3.1 Terms defined elsewhere

None.

3.2 Terms defined in this Supplement

None.

4 Abbreviations and acronyms

This Supplement uses the following abbreviations and acronyms:

IC	Identification Code
IIN	Issuer Identifier Number
MCC	Mobile Country Code
M2M	Machine-to-machine
IoT	Internet of Things

5 Conventions

None.

6 Criteria for M2M/IoT-related assignments under Recommendation ITU-T E.164.1 and Recommendation ITU-T E.212 Annex A

Under [ITU-T E.164.1] and [ITU-T E.212 Annex A], applications can be made to provide M2M/IoT services. If explicitly requested by the applicant, an ITU-T E.118 IIN may be assigned too. These M2M/IoT applications must meet the criteria as specified in these Recommendations. In the description of the use cases provided in the context of these applications, it is sufficient for the applicant to state that they are going to use the global resource for M2M/IoT, which is data only. The use of the ITU-T E.164.1 global resource may include voice limited to two way communication between end users and a dedicated access point (without onward routing) using the global resources that are being requested. In this case, the applicant must fully explain and justify this in the initial application.

6.1 Global resources ITU-T E.212 MNCs, and when applicable ITU-T E.164 identification codes (ICs) and/or ITU-T E.118 issuer identifier numbers (IINs) can be used on a specific device both for IoT and voice service under the condition:

6.1.1 The M2M/IoT use case is not intended to duplicate any existing public service in particular the public telephony service which is primarily intended for the exchange of information in the form of speech, whereby users can communicate directly and temporarily between themselves in conversational mode (*taken from [ITU-T E.105]*). Such communication is between an end user and a dedicated end point. The communication is not intended for general communication between two end users other than the service for which the numbers were allocated. For example, communications in a closed user group do not duplicate the public telephony service.

6.1.2 No sub-assignment of the ITU-T E.164 identification code is made by the assignee.

6.2 Beyond this, if the assignee changes the M2M/IoT services described in the initial application, this does not require an extension request to review the scope of assignment of the ITU-T E.212 MNC (and ITU-T E.164 IC, ITU-T E.118 IIN if applicable) but needs to be notified in the annual report.

SERIES OF ITU-T RECOMMENDATIONS

Series A	Organization of the work of ITU-T
Series D	Tariff and accounting principles and international telecommunication/ICT economic and policy issues
Series E	Overall network operation, telephone service, service operation and human factors
Series F	Non-telephone telecommunication services
Series G	Transmission systems and media, digital systems and networks
Series H	Audiovisual and multimedia systems
Series I	Integrated services digital network
Series J	Cable networks and transmission of television, sound programme and other multimedia signals
Series K	Protection against interference
Series L	Environment and ICTs, climate change, e-waste, energy efficiency; construction, installation and protection of cables and other elements of outside plant
Series M	Telecommunication management, including TMN and network maintenance
Series N	Maintenance: international sound programme and television transmission circuits
Series O	Specifications of measuring equipment
Series P	Telephone transmission quality, telephone installations, local line networks
Series Q	Switching and signalling, and associated measurements and tests
Series R	Telegraph transmission
Series S	Telegraph services terminal equipment
Series T	Terminals for telematic services
Series U	Telegraph switching
Series V	Data communication over the telephone network
Series X	Data networks, open system communications and security
Series Y	Global information infrastructure, Internet protocol aspects, next-generation networks, Internet of Things and smart cities
Series Z	Languages and general software aspects for telecommunication systems