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

International operation – Maritime mobile service and
public land mobile service

The international identification plan for public networks and subscriptions

Recommendation ITU-T E.212

ITU-T

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

Recommendation ITU-T E.212

The international identification plan for public networks and subscriptions

Summary

Recommendation ITU-T E.212 defines a unique international identification plan for public fixed and mobile networks providing users with access to public telecommunication services. The ITU-T E.212 identification plan was originally developed for use in public land mobile networks (PLMNs). The plan is hierarchical and identifies geographic areas, networks and subscriptions. The main body of this Recommendation describes the pure identification plan.

History

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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.

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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/>.

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Recommendation ITU-T E.212

The international identification plan for public networks and subscriptions

1 Scope

This Recommendation describes a unique and unambiguous identification plan for subscriptions and the format of the IMSI. It establishes procedures for the assignment of fields of the IMSI in a manner that prevents duplication.

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.

- [ITU-T E.101] Recommendation ITU-T E.101 (2009), *Definitions of terms used for identifiers (names, numbers, addresses and other identifiers) for public telecommunication services and networks in the E-series Recommendations*.
- [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 (2006), *Criteria and procedures for the reservation, assignment and reclamation of E.164 country codes and associated identification codes (ICs)*.
- [ITU-T E.190] Recommendation ITU-T E.190 (1997), *Principles and responsibilities for the management, assignment and reclamation of E-series international numbering resources*.

3 Definitions

Whenever the term "country", "destination country" or "originating country" is used in this Recommendation, it identifies a specific country, a group of countries in an integrated numbering plan or a specific geographical area.

The terms "Operator" and "National numbering plan administrator" are defined in [ITU-T E.101].

This Recommendation defines the following terms:

3.1 home network: The network responsible for the subscription identified by the elements within the IMSI.

3.2 international mobile subscription identity (IMSI): The IMSI is a string of decimal digits, up to a maximum length of 15 digits, which identifies a unique subscription. The IMSI consists of three fields: the mobile country code (MCC), the mobile network code (MNC), and the mobile subscription identification number (MSIN).

3.3 mobile country code (MCC): The MCC is the first field of the IMSI and is three digits in length and identifies a country. The Director of TSB may assign more than one MCC to a country. MCCs in the 90x range are non-geographic MCCs (country-agnostic) and are administered by the Director of TSB.

3.4 mobile network code (MNC): The MNC is the second field of the IMSI, it is two or three digits in length and is administered by the respective national numbering plan administrator. MNCs under MCC ranges 90x are administered by the Director of TSB. The MNC, in combination with the MCC, provides sufficient information to identify the home network.

3.5 mobile subscription identification number (MSIN): The MSIN is the third field of the IMSI, it is up to 10 digits in length, and is administered by the relevant MNC assignee to identify individual subscriptions.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

IMSI	International Mobile Subscription Identity
MCC	Mobile Country Code
MNC	Mobile Network Code
MSIN	Mobile Subscription Identification Number
TSB	Telecommunication Standardization Bureau
UPT	Universal Personal Telecommunication

5 Considerations

The considerations that form the basis for this international identification plan for networks and subscriptions are as follows:

- a) The assignment of E.212 resources is in conformance with the principles in [ITU-T E.190].
- b) There may be more than one public network offering such services in a country.
- c) The MNC consists of 2 or 3 digits and the length of the MNC is a national matter.
- d) The number of digits of the MSINs is determined by the relevant MNC assignee in accordance with the national policy.
- e) The IMSI shall not exceed 15 digits in length.
- f) For 90x MCCs, the length of MNCs is determined by the Director of TSB and the length of the MSINs is determined by the relevant MNC assignee in accordance with the relevant ITU-T Recommendations.
- g) The IMSI assigned to a subscription under this identification plan should not be directly related to numbers assigned to that same subscription under "The international public telecommunications numbering plan" [ITU-T E.164].
- h) The IMSI should, if necessary, enable:
 - 1) determination of the home network;
 - 2) identification of subscriptions, when information about a specific subscription is exchanged between networks;
 - 3) identification of subscriptions for charging and billing purposes;
 - 4) identification and management of subscription, e.g., for registering, authenticating, signalling, retrieving, providing, changing and updating of subscription data.
- i) The IMSI is not intended to be used for dialling purposes.

This list is not exhaustive.