



INTERNATIONAL TELECOMMUNICATION UNION

**ITU-T**

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

**Q.1000**

**PUBLIC LAND MOBILE NETWORKS**

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**STRUCTURE OF THE Q.1000-SERIES  
RECOMMENDATIONS FOR PUBLIC LAND  
MOBILE NETWORKS**

**ITU-T Recommendation Q.1000**

(Extract from the *Blue Book*)

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## NOTES

1 ITU-T Recommendation Q.1000 was published in Fascicle VI.12 of the *Blue Book*. This file is an extract from the *Blue Book*. While the presentation and layout of the text might be slightly different from the *Blue Book* version, the contents of the file are identical to the *Blue Book* version and copyright conditions remain unchanged (see below).

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

## **Recommendation Q.1000**

### **STRUCTURE OF THE Q.1000-SERIES RECOMMENDATIONS FOR PUBLIC LAND MOBILE NETWORKS**

#### **1 General**

This Recommendation provides an overview of the Q.1000-Series Recommendations specifically aimed at specifying the requirements for the Public Land Mobile Network.

The purpose of the Q.1000-Series Recommendations is to provide smoothly:

- 1) realization of roaming and interworking between PLMNs,
- 2) portability of terminal equipments, and
- 3) independent evolution of each PLMN and terminal equipments.

In addition some Recommendations of other series are indicated in section 7 because of their interest to the Q. 1000-Series.

#### **2 General Recommendations on Public Land Mobile Networks**

Q.1000: Structure of the Q.1000-Series Recommendations for Public Land Mobile Networks

This Recommendation gives an overview of the Q.1000-Series and some other Recommendations of interest to them.

Q.1001: General aspects of Public Land Mobile Networks

This Recommendation covers definitions, architectures and services in public land mobile networks.

Q.1002: Network functions

This Recommendation defines network functions requiring signalling on the radio path either as subscriber line signalling or as mobile management signalling necessary to support services and facilities provided by PLMNs.

Q.1003: Location registration procedures

This Recommendation identifies the procedures related to location registration, location cancellation, periodic registration and international mobile subscriber identity attach/detach operations.

Q.1004: Location register restoration procedures

This Recommendation describes methods that provide security of the data stored in the location registers and details procedures required to restore the location data and supplementary services data after a location register failure.

Q.1005: Handover

This Recommendation identifies the handling procedures between: radio channels of the same base station; base stations of the same MSC; base stations of different MSCs of the same PLMN; and base stations of MSCs in different PLMNs during handover operations.

### **3 Technical aspects of the services offered in the Public Land Mobile Networks**

Q.1012: Handling of supplementary services

This Recommendation contains the stage 2 descriptions of the supplementary services which can be provided in a PLMN.

*Note* - This Recommendation is not published in the Blue Book. It will be finalized and brought into the accelerated procedure early in the next study period.

### **4 Interworking with ISDN/PSTN**

Q.1031: General signalling requirements on interworking between ISDN or PSTN and a PLMN

This Recommendation specifies the general signalling requirements to be met in order to ensure a correct integration of the mobile service in the fixed networks.

Q.1032: Signalling requirements relating to routing of calls to mobile subscribers

This Recommendation specifies the signalling requirements that the fixed networks have to comply with, in order to route a mobile terminating call to the actual MSC.

### **5 Mobile application part**

Q.1051: Mobile application part

This Recommendation describes network procedures and relevant protocols required to provide the functions listed in Recommendation Q.1002. The mobile application part is based on Signalling System No. 7.

### **6 Digital PLMN access interfaces**

Q.1061: General aspects and principles relating to digital PLMN access signalling reference points

This Recommendation introduces the concept and definition of access signalling reference points which are used as the basis for the specification of signalling required at the Mobile Station and the Base Station.

Q.1062: Digital PLMN access signalling reference configurations

This Recommendation describes the reference configurations used to identify the various possible physical access arrangements to the digital PLMN.

Q.1063: Digital PLMN channel structures and access capabilities at the radio interface (Um reference point)

This Recommendation defines the set of channel types, access capabilities and channel configurations with respect to the radio interface.

### **7 Other Recommendations of interest to the Q.1000-Series**

#### **7.1 Charging**

D.93: Charging and accounting in the international land mobile telephone service (provided via cellular radio systems)

This Recommendation covers principles for charging, accounting and settlements between PLMNs. An annex to the Recommendation gives examples of the practical use of the established principles.

## 7.2 *Numbering and Routing*

### E.212: Identification plan for land mobile stations

This Recommendation covers definitions and mobile station identification plan principles. An annex to the Recommendation contains a list of mobile country or geographical area codes.

### E.213: Telephone and ISDN numbering plan for land mobile stations in public land mobile networks (PLMN)

This Recommendation covers basic requirements for a numbering plan to be used for public land mobile networks.

### E.214: The structure of the land mobile global title for the signalling connection control part (SCCP).

This Recommendation defines and describes the structure of the mobile global title.