

INTERNATIONAL  
STANDARD

ISO/IEC  
20116

First edition  
2004-05-15

---

---

**Information technology —  
Telecommunications and information  
exchange between systems — Private  
Integrated Services Network —  
Specification, functional model and  
information flows — Message centre  
monitoring and mailbox identification  
supplementary services**

*Technologies de l'information — Télécommunications et échange  
d'information entre systèmes — Réseau privé à intégration de  
services — Spécification, modèle fonctionnel et flux d'informations —  
Services supplémentaires de surveillance du centre du message et  
d'identification de boîte aux lettres*



Reference number  
ISO/IEC 20116:2004(E)

© ISO/IEC 2004

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO/IEC 2004

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

## Contents

	Page
<b>Foreword</b> .....	iv
<b>Introduction</b> .....	v
<b>1 Scope</b> .....	1
<b>2 Conformance</b> .....	1
<b>3 Normative references</b> .....	1
<b>4 Terms and definitions</b> .....	2
<b>4.1 External definitions</b> .....	2
<b>4.2 Other definitions</b> .....	2
<b>5 Acronyms</b> .....	4
<b>6 SS-MCM stage 1 specification</b> .....	4
<b>6.1 Description</b> .....	4
<b>6.2 Procedures</b> .....	5
<b>6.3 Interactions with other Supplementary Services / Additional Network Features</b> .....	9
<b>6.4 Interworking considerations</b> .....	12
<b>6.5 Overall SDL</b> .....	12
<b>7 SS-MID stage 1 specification</b> .....	15
<b>7.1 Description</b> .....	15
<b>7.2 Procedures</b> .....	15
<b>7.3 Interactions with other Supplementary Services / Additional Network Features</b> .....	16
<b>7.4 Interworking considerations</b> .....	19
<b>7.5 Overall SDL</b> .....	19
<b>8 SS-MCM stage 2 specification</b> .....	21
<b>8.1 Functional model</b> .....	21
<b>8.2 Information flows</b> .....	22
<b>8.3 Functional Entity actions</b> .....	31
<b>8.4 Functional Entity behaviour</b> .....	33
<b>8.5 Allocation of Functional Entities to physical equipment</b> .....	52
<b>8.6 Interworking considerations</b> .....	52
<b>9 SS-MID stage 2 specification</b> .....	52
<b>9.1 Functional model</b> .....	52
<b>9.2 Information flows</b> .....	53
<b>9.3 Functional Entity actions</b> .....	56
<b>9.4 Functional Entity behaviour</b> .....	56
<b>9.5 Allocation of Functional Entities to physical equipment</b> .....	62
<b>9.6 Interworking considerations</b> .....	62

## Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 20116 was prepared by ECMA (as ECMA-346) and was adopted, under a special "fast-track procedure", by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, in parallel with its approval by national bodies of ISO and IEC.

## Introduction

This International Standard is one of a series defining services and signalling protocols applicable to Private Integrated Services Networks (PISNs). The series uses ISDN concepts as developed by ITU-T and conforms to the framework of International Standards for Open Systems Interconnection as defined by ISO/IEC.

This particular International Standard specifies the Message Centre Monitoring and Mailbox Identification supplementary service.

SS-MCM is based on SS-MWI and includes its entire functionality. The interoperability with SS-MWI is guaranteed. Compared to SS-MWI, SS-MCM offers an enhanced functionality for monitoring status changes of messages stored in the Served User's Mailbox as follows:

- individual activation and deactivation for the monitoring of messages of different Message Type(s) within the Mailbox as well as interrogation of the actual SS-MCM configuration;
- retrieval of information about all messages (i.e. new and retrieved messages) in the mailbox independent of the Message Status;
- request of detailed updated information about messages stored in the mailbox at every time.

This International Standard is based upon the practical experience of ECMA member companies and the results of their active and continuous participation in the work of ISO/IEC JTC1, ITU-T, ETSI and other international and national standardization bodies. It represents a pragmatic and widely based consensus.

# Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Message centre monitoring and mailbox identification supplementary services

## 1 Scope

This International Standard specifies supplementary service Message Centre Monitoring/Mailbox Identification (SS-MCM/MID), which is related, but not limited, to various basic services supported by Private Integrated Services Networks (PISNs). Basic services are specified in ISO/IEC 11574.

The supplementary service MCM enables a Served User to get informed by a Message Centre about the status and status changes of messages stored in that Served Users Mailbox.

The supplementary service MID enables a Message Centre to identify a specific mailbox of a Served User in case that the Served User has more than one Mailbox within the Message Centre. In addition SS-MID enables a Served User to authenticate himself/herself at a specific Mailbox located within the Message Centre.

Service specifications are produced in three stages, according to the method described in ETS 300 387. This International Standard contains the stage 1 and stage 2 specifications of SS-MCM/MID. The stage 1 specification (Clauses 6 and 7) specifies the supplementary service as seen by users of PISNs. The stage 2 specification (Clauses 8 and 9) specifies the functional entities involved in the supplementary service and the information flows between them.

## 2 Conformance

In order to conform to this International Standard, a stage 3 standard shall specify signalling protocols and equipment behaviour that are capable of being used in a PISN which supports the supplementary service specified in this International Standard. This means that, to claim conformance, a stage 3 standard is required to be adequate for the support of those aspects of Clauses 6 and 7 (stage 1) and Clauses 8 and 9 (stage 2) which are relevant to the interface or equipment to which the stage 3 standard applies.

## 3 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 11574:2000, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Circuit-mode 64 kbit/s bearer services — Service description, functional capabilities and information flows*

ISO/IEC 11579-1:1994, *Information technology — Telecommunications and information exchange between systems — Private integrated services network — Part 1: Reference configuration for PISN Exchanges (PINX)*

ISO/IEC 15505:2003, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Message Waiting Indication supplementary service*

ETS 300 387:1994, *Private Telecommunication Network (PTN); Method for the specification of basic and supplementary services*

ITU-T Rec. I.112:1993, *Vocabulary of terms for ISDNs*

ITU-T Rec. I.210:1993, *Principles of telecommunication services supported by an ISDN and the means to describe them*

ITU-T Rec. Z.100:1999, *Specification and Description Language*