

INTERNATIONAL STANDARD

**ISO/IEC
14842**

First edition
1996-09-15

Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Do not disturb and do not disturb override supplementary services

*Technologies de l'information — Télécommunications et échange
d'information entre systèmes — Réseau privé à intégration de services —
Spécification, modèle fonctionnel et débit d'information — Services
supplémentaires ne pas déranger et dérogation à ne pas déranger*



Reference number
ISO/IEC 14842:1996(E)

Contents

Foreword	v
Introduction	vi
1 Scope	1
2 Conformance	1
3 Normative references	1
4 Definitions	2
4.1 External definitions	2
4.2 Other definitions	3
5 List of acronyms	3
6 SS-DND stage 1 specification	4
6.1 Description	4
6.1.1 General description	4
6.1.2 Qualifications on applicability to telecommunication services	4
6.2 Procedures	4
6.2.1 Provision/withdrawal	4
6.2.2 Normal procedures	5
6.2.3 Exceptional procedures	6
6.3 Interactions with other supplementary services and ANFs	7
6.3.1 Calling Line Identification Presentation (SS-CLIP)	7
6.3.2 Connected Line Identification Presentation (SS-COLP)	7
6.3.3 Calling/Connected Line Identification Restriction (SS-CLIR)	7
6.3.4 Calling Name Identification Presentation (SS-CNIP)	7
6.3.5 Connected Name Identification Presentation (SS-CONP)	7
6.3.6 Calling/Connected Name Identification Restriction (SS-CNIR)	7
6.3.7 Completion of Calls to Busy Subscriber (SS-CCBS)	7
6.3.8 Completion of Calls on No Reply (SS-CCNR)	7
6.3.9 Call Transfer (SS-CT)	7
6.3.10 Call Forwarding Unconditional (SS-CFU)	7
6.3.11 Call Forwarding Busy (SS-CFB)	8
6.3.12 Call Forwarding No Reply (SS-CFNR)	8
6.3.13 Call Deflection (SS-CD)	8
6.3.14 Path Replacement (ANF-PR)	8
6.3.15 Do Not Disturb Override (SS-DNDO)	8
6.3.16 Call Offer (SS-CO)	8
6.3.17 Call Intrusion (SS-CI)	8
6.4 Interworking considerations	9

6.5 Overall SDL	9
7 SS-DNDO stage 1 specification	12
7.1 Description	12
7.1.1 General description	12
7.1.2 Qualifications on applicability to telecommunication services	12
7.2 Procedures	12
7.2.1 Provision/withdrawal	12
7.2.2 Normal procedures	12
7.2.3 Exceptional procedures	13
7.3 Interactions with other supplementary services and ANFs	13
7.3.1 Calling Line Identification Presentation (SS-CLIP)	13
7.3.2 Connected Line Identification Presentation (SS-COLP)	13
7.3.3 Calling/Connected Line Identification Restriction (SS-CLIR)	13
7.3.4 Calling Name Identification Presentation (SS-CNIP)	13
7.3.5 Connected Name Identification Presentation (SS-CONP)	13
7.3.6 Calling/Connected Name Identification Restriction (SS-CNIR)	13
7.3.7 Completion of Calls to Busy Subscriber (SS-CCBS)	13
7.3.8 Completion of Calls on No Reply (SS-CCNR)	13
7.3.9 Call Transfer (SS-CT)	13
7.3.10 Call Forwarding Unconditional (SS-CFU)	13
7.3.11 Call Forwarding Busy (SS-CFB)	14
7.3.12 Call Forwarding No Reply (SS-CFNR)	14
7.3.13 Call Deflection (SS-CD)	14
7.3.14 Path Replacement (ANF-PR)	14
7.3.15 Do Not Disturb (SS-DND)	14
7.3.16 Call Offer (SS-CO)	14
7.3.17 Call Intrusion (SS-CI)	14
7.4 Interworking considerations	15
7.5 Overall SDL	15
8 SS-DND stage 2 specification	19
8.1 Functional model	19
8.1.1 Functional model description	19
8.1.2 Description of functional entities	19
8.1.3 Relationship of functional model to basic call functional model	20
8.2 Information flows	20
8.2.1 Definition of information flows	20
8.2.2 Relationship of information flows to basic call information flows	24
8.2.3 Examples of information flow sequences	25
8.3 Functional entity actions	30
8.3.1 Functional entity actions of FE1	30
8.3.2 Functional entity actions of FE2	30
8.3.3 Functional entity actions of FE3	30
8.3.4 Functional entity actions of FE4	30
8.3.5 Functional entity actions of FE5	30
8.3.6 Functional entity actions of FE6	31
8.4 Functional entity behaviour	31
8.4.1 Behaviour of FE1	31

8.4.2 Behaviour of FE2	32
8.4.3 Behaviour of FE3	33
8.4.4 Behaviour of FE4	36
8.4.5 Behaviour of FE5	37
8.4.6 Behaviour of FE6	38
8.5 Allocation of functional entities to physical equipment	39
8.6 Interworking considerations	39
9 SS-DNDO stage 2 specification	40
9.1 Functional model	40
9.1.1 Functional model description	40
9.1.2 Description of functional entities	40
9.1.3 Relationship of functional model to basic call functional model	41
9.2 Information flows	41
9.2.1 Definition of information flows	41
9.2.2 Relationship of information flows to basic call information flows	43
9.2.3 Examples of information flow sequences	44
9.3 Functional entity actions	57
9.3.1 Functional entity actions of FE1	57
9.3.2 Functional entity actions of FE2	57
9.3.3 Functional entity actions of FE3	58
9.4 Functional entity behaviour	58
9.4.1 Behaviour of FE1	58
9.4.2 Behaviour of FE2	58
9.4.3 Behaviour of FE3	67
9.5 Allocation of functional entities to physical equipment	70
9.6 Interworking considerations	70

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. 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.

International Standard ISO/IEC 14842 was prepared by ECMA (as Standard ECMA-193) 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 of International Standards 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 Do Not Disturb and Do Not Disturb Override supplementary services.

Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Specification, functional model and information flows - Do not disturb and do not disturb override supplementary services

1 Scope

This International Standard specifies the Supplementary Services Do Not Disturb (SS-DND) and Do Not Disturb Override (SS-DNDO), which are applicable to various basic services supported by Private Integrated Services Networks (PISN). Basic services are specified in ISO/IEC 11574.

SS-DND is a supplementary service which enables a served user to cause the PISN to reject any calls, or just those associated with a specified basic service, addressed to the served user's PISN number. The calling user is given an appropriate indication. Incoming calls are rejected as long as the service is active. The served user's outgoing service is unaffected.

SS-DNDO is a supplementary service which enables a served user to override SS-DND at a called user; that is, to allow the call to proceed as if the called user had not activated SS-DND.

SS-DND and SS-DNDO are described separately because SS-DND is a service used by a called user, and SS-DNDO is a service used by a calling user. This leads to describing two very related state machines.

Note 1 - It is possible to implement SS-DND without implementing SS-DNDO.

Supplementary service specifications are produced in three stages, according to the method described in CCITT Recommendation I.130. This International Standard contains the stage 1 and stage 2 specifications of SS-DND and SS-DNDO. The stage 1 specifications (clauses 6 and 7) specify the supplementary service as seen by users of PISNs. The stage 2 specification (clauses 8 and 9) identify 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 International 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 International Standard is required to be adequate for the support of those aspects of clauses 6 to 9 which are relevant to the interface or equipment to which the stage 3 International Standard applies.

The stage 1 and stage 2 clauses which a stage 3 International Standard for the Do Not Disturb supplementary service is required to support are clauses 6 and 8.

The stage 1 and stage 2 clauses which a stage 3 International Standard for the Do Not Disturb Override supplementary service is required to support are clauses 7 and 9.

3 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO/IEC 11571:1994, *Information technology - Telecommunications and information exchange between systems - Numbering and sub-addressing in private integrated services networks.*

ISO/IEC 11574:1994, *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 13863:1995, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Specification, functional model and information flows - Path replacement additional network feature.*

ISO/IEC 13864:1995, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Specification, functional model and information flows - Name identification supplementary services.*

ISO/IEC 13865:1995, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Specification, functional model and information flows - Call transfer supplementary service.*

ISO/IEC 13866:1995, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Specification, functional model and information flows - Call completion supplementary services.*

ISO/IEC 13872:1995, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Specification, functional model and information flows - Call diversion supplementary services.*

ISO/IEC 14136:1995, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Specification, functional model and information flows - Identification supplementary services.*

ISO/IEC 14841:1996, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Specification, functional model and information flows - Call offer supplementary service.*

CCITT Rec. I.112:1988, *Vocabulary of terms for ISDNs (Blue Book).*

CCITT Rec. I.210:1988, *Principles of telecommunication services supported by an ISDN and the means to describe them (Blue Book).*

CCITT Rec. Z.100:1988, *Specification and Description Language (Blue Book).*