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European Standard (Telecommunications series)

**Integrated Services Digital Network (ISDN);
Signalling System No.7 (SS7);
ISDN User Part (ISUP) version 4 for the international interface;
Part 2: ISDN supplementary service**

[ITU-T Recommendation Q.730 (1999) modified]



Reference

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KeywordsISDN, ISUP, SS7, supplementary service,
endorsement**ETSI**

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Services and Protocols for Advanced Networks (SPAN).

The present document is part 2 of a multi-part deliverable covering the ISDN User Part (ISUP) version 4 for the international interface, as identified below:

- Part 1: "Basic services [ITU-T Recommendations Q.761 to Q.764 (1999) modified]";
- Part 2: "ISDN supplementary service [ITU-T Recommendation Q.730 (1999) modified]";**
- Part 3: "Calling Line Identification Presentation (CLIP) supplementary service [ITU-T Recommendation Q.731, clause 3 (1993) modified]";
- Part 4: "Calling Line Identification Restriction (CLIR) supplementary service [ITU-T Recommendation Q.731, clause 4 (1993) modified]";
- Part 5: "Connected Line Identification Presentation (COLP) supplementary service [ITU-T Recommendation Q.731, clause 5 (1993) modified]";
- Part 6: "Connected Line Identification Restriction (COLR) supplementary service [ITU-T Recommendation Q.731, clause 6 (1993) modified]";
- Part 7: "Terminal Portability (TP) supplementary service [ITU-T Recommendation Q.733, clause 4 (1993) modified]";
- Part 8: "User-to-User Signalling (UUS) supplementary service [ITU-T Recommendation Q.737, clause 1 (1997) modified]";
- Part 9: "Closed User Group (CUG) supplementary service [ITU-T Recommendation Q.735, clause 1 (1993) modified]";
- Part 10: "Subaddressing (SUB) supplementary service [ITU-T Recommendation Q.731, clause 8 (1992) modified]";
- Part 11: "Malicious Call Identification (MCID) supplementary service [ITU-T Recommendation Q.731, clause 7 (1997) modified]";
- Part 12: "Conference Call, add-on (CONF) supplementary service [ITU-T Recommendation Q.734, clause 1 (1993) and implementors guide (1998) modified]";
- Part 14: "Explicit Call Transfer (ECT) supplementary service [ITU-T Recommendation Q.732, clause 7 (1996) and implementors guide (1998) modified]";
- Part 15: "Diversion supplementary service [ITU-T Recommendation Q.732, clauses 2 to 5 (1999) modified]";
- Part 16: "Call Hold (HOLD) supplementary service [ITU-T Recommendation Q.733, clause 2 (1993) modified]";
- Part 17: "Call Waiting (CW) supplementary service [ITU-T Recommendation Q.733, clause 1 (1992) modified]";

- Part 18: "Completion of Calls to Busy Subscriber (CCBS) supplementary service [ITU-T Recommendation Q.733, clause 3 (1997) modified]";
- Part 19: "Three-Party (3PTY) supplementary service [ITU-T Recommendation Q.734, clause 2 (1996) and implementors guide (1998) modified]";
- Part 20: "Completion of Calls on No Reply (CCNR) supplementary service [ITU-T Recommendation Q.733, clause 5 (1999) modified]";
- Part 21: "Anonymous Call Rejection (ACR) supplementary service [ITU-T Recommendation Q.731, clause 4 (1993)]";
- Part 31: "Protocol Implementation Conformance Statement (PICS) proforma specification for basic services";
- Part 32: "Test Suite Structure and Test Purposes (TSS&TP) specification for basic services";
- Part 33: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for basic services";
- Part 34: "Protocol Implementation Conformance Statement (PICS) proforma specification for supplementary services";
- Part 35: "Test Suite Structure and Test Purposes (TSS&TP) specification for supplementary services";
- Part 36: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for supplementary services".

National transposition dates	
Date of adoption of this EN:	13 July 2001
Date of latest announcement of this EN (doa):	31 October 2001
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 April 2002
Date of withdrawal of any conflicting National Standard (dow):	30 April 2002

Endorsement notice

The elements of ITU-T Recommendation Q.730 (1999) apply, with the following modifications.

- NOTE: New or modified text is indicated using sidebars. In addition, underlining and/or strike-out are used to highlight detailed modifications where necessary.

Global modifications to ITU-T Recommendation Q.730

Replace the two clauses "Scope" and "References" with the following two clauses (Scope and References).

Scope

The present document specifies procedures that are common to multiple supplementary services defined for the pan-European Integrated Services Digital Network (ISDN) as provided by the European public telecommunications operators by means of the Signalling System No.7 protocol for the ISDN User Part (ISUP). The present document identifies the protocol procedures and switching functions needed to support telecommunication services (see ITU-T Recommendation I.130 [1]).

The present document does not specify the additional protocol requirements where the service is provided to the user via a telecommunications network that is not an ISDN.

The present document does not specify the additional protocol requirements for the national signalling interface.

Although the present document applies only to the international interconnection, the specification of functions, formats and codes of messages and signals, and actions performed at originating and destination local exchanges are retained.

Formats, codes and procedures marked for national use are included for informative purposes for the international interface specification. If these items so marked are supported within a national network and operator's network, then it is proposed that they shall be supported in this manner.

Items in the present document marked "Not Required" are not required to be supported.

NOTE: In the case where a national signalling system behaves differently, the international gateway exchange is to support both the concerned national and international network.

References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

- [1] ITU-T Recommendation I.130 (1988): "Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN".
- [2] ETSI ETS 300 121 (1992): "Integrated Services Digital Network (ISDN); Application of the ISDN User Part (ISUP) of CCITT Signalling System No.7 for international ISDN interconnections (ISUP version 1)".
- [3] ETSI EN 300 356-1: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 1: Basic services [ITU-T Recommendations Q.761 to Q.764 (1999) modified]".
- [4] ETSI EN 300 356-3: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 3: Calling Line Identification Presentation (CLIP) supplementary service [ITU-T Recommendation Q.731, clause 3 (1993) modified]".

- [5] ETSI EN 300 356-4: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 4: Calling Line Identification Restriction (CLIR) supplementary service [ITU-T Recommendation Q.731, clause 4 (1993) modified]".
- [6] ETSI EN 300 356-5: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 5: Connected Line Identification Presentation (COLP) supplementary service [ITU-T Recommendation Q.731, clause 5 (1993) modified]".
- [7] ETSI EN 300 356-6: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 6: Connected Line Identification Restriction (COLR) supplementary service [ITU-T Recommendation Q.731, clause 6 (1993) modified]".
- [8] ETSI EN 300 356-7: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 7: Terminal Portability (TP) supplementary service [ITU-T Recommendation Q.733, clause 4 (1993) modified]".
- [9] ETSI EN 300 356-8: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 8: User-to-User Signalling (UUS) supplementary service [ITU-T Recommendation Q.737, clause 1 (1997) modified]".
- [10] ETSI EN 300 356-9: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 9: Closed User Group (CUG) supplementary service [ITU-T Recommendation Q.735, clause 1 (1993) modified]".
- [11] ETSI EN 300 356-10: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 10: Subaddressing (SUB) supplementary service [ITU-T Recommendation Q.731, clause 8 (1992) modified]".
- [12] ETSI EN 300 356-11: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 11: Malicious Call Identification (MCID) supplementary service [ITU-T Recommendation Q.731, clause 7 (1997) modified]".
- [13] ETSI EN 300 356-12: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 12: Conference Call, add-on (CONF) supplementary service [ITU-T Recommendation Q.734, clause 1 (1993) and implementors guide (1998) modified]".
- [14] ETSI EN 300 356-14: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 14: Explicit Call Transfer (ECT) supplementary service [ITU-T Recommendation Q.732, clause 7 (1996) and implementors guide (1998) modified]".
- [15] ETSI EN 300 356-15: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 15: Diversion supplementary service [ITU-T Recommendation Q.732, clauses 2 to 5 (1999) modified]".
- [16] ETSI EN 300 356-16: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 16: Call Hold (HOLD) supplementary service [ITU-T Recommendation Q.733, clause 2 (1993) modified]".
- [17] ETSI EN 300 356-17: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 17: Call Waiting (CW) supplementary service [ITU-T Recommendation Q.733, clause 1 (1992) modified]".
- [18] ETSI EN 300 356-18: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 18: Completion of Calls to Busy Subscriber (CCBS) supplementary service [ITU-T Recommendation Q.733, clause 3 (1997) modified]".

- [19] ETSI EN 300 356-19: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 19: Three-Party (3PTY) supplementary service [ITU-T Recommendation Q.734, clause 2 (1996) and implementors guide (1998) modified]".
- [20] ETSI EN 300 356-20: "Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 for the international interface; Part 20: Completion of Calls on No Reply (CCNR) supplementary service [ITU-T recommendation Q.733, clause 5 (1999) modified]".

Throughout the text of ITU-T Recommendation Q.730

Replace references as shown in table 1.

Table 1

Reference in ITU-T Recommendation Q.730	Modified reference
ITU-T Recommendation Q.731.3	ITU-T Recommendation Q.731.3 as modified by EN 300 356-3 [4]
ITU-T Recommendation Q.731.4	ITU-T Recommendation Q.731.4 as modified by EN 300 356-4 [5]
ITU-T Recommendation Q.731.5	ITU-T Recommendation Q.731.5 as modified by EN 300 356-5 [6]
ITU-T Recommendation Q.731.6	ITU-T Recommendation Q.731.6 as modified by EN 300 356-6 [7]
ITU-T Recommendation Q.731.7	ITU-T Recommendation Q.731.7 as modified by EN 300 356-11 [12]
ITU-T Recommendation Q.731.8	ITU-T Recommendation Q.731.8 as modified by EN 300 356-10 [11]
ITU-T Recommendation Q.732.2	ITU-T Recommendation Q.732.2 as modified by EN 300 356-15 [15]
ITU-T Recommendation Q.732.3	ITU-T Recommendation Q.732.3 as modified by EN 300 356-15 [15]
ITU-T Recommendation Q.732.4	ITU-T Recommendation Q.732.4 as modified by EN 300 356-15 [15]
ITU-T Recommendation Q.732.5	ITU-T Recommendation Q.732.5 as modified by EN 300 356-15 [15]
ITU-T Recommendation Q.732.7	ITU-T Recommendation Q.732.7 as modified by EN 300 356-14 [14]
ITU-T Recommendation Q.733.1	ITU-T Recommendation Q.733.1 as modified by EN 300 356-17 [17]
ITU-T Recommendation Q.733.2	ITU-T Recommendation Q.733.2 as modified by EN 300 356-16 [16]
ITU-T Recommendation Q.733.3	ITU-T Recommendation Q.733.3 as modified by EN 300 356-18 [18]
ITU-T Recommendation Q.733.4	ITU-T Recommendation Q.733.4 as modified by EN 300 356-7 [8]
ITU-T Recommendation Q.733.5	ITU-T Recommendation Q.733.5 as modified by EN 300 356-20 [20]
ITU-T Recommendation Q.734.1	ITU-T Recommendation Q.734.1 as modified by EN 300 356-12 [13]
ITU-T Recommendation Q.734.2	ITU-T Recommendation Q.734.2 as modified by EN 300 356-19 [19]
ITU-T Recommendation Q.735.1	ITU-T Recommendation Q.735.1 as modified by EN 300 356-9 [10]
ITU-T Recommendation Q.737.1	ITU-T Recommendation Q.737.1 as modified by EN 300 356-8 [9]
ITU-T Recommendation Q.761	ITU-T Recommendation Q.761 as modified by EN 300 356-1 [3]
ITU-T Recommendation Q.762	ITU-T Recommendation Q.762 as modified by EN 300 356-1 [3]
ITU-T Recommendation Q.763	ITU-T Recommendation Q.763 as modified by EN 300 356-1 [3]
ITU-T Recommendation Q.764	ITU-T Recommendation Q.764 as modified by EN 300 356-1 [3]
ITU-T Recommendation Q.767	ETS 300 121 [2]

Subclause 1.3.2, first paragraph

Delete the third sentence:

"Whether or not (...) for further study".

Subclause 1.3.5, first paragraph

Delete the last sentence:

"Whether or not (...) for further study".

Subclause 1.3.6, subclause title

Add:

"Not required".

Subclause 1.4, subclause title

Add:

"Not required".

Subclause 1.5

Add the following:

The agreed format for a document covering a supplementary service (and not endorsing an ITU-T Recommendation) is indicated below:

Foreword;

- 1 Scope;
- 2 Normative references;
- 3 Definitions;
- 4 Symbols and abbreviations;
- 5 Description;
- 6 Operational requirements;
 - 6.1 Provision and withdrawal;
 - 6.2 Requirements on the originating network side;
 - 6.3 Requirements on the destination network side;
- 7 Coding requirements;
- 8 State definitions;
- 9 Signalling procedures;
 - 9.1 Activation, deactivation and registration;
 - 9.2 Actions at the originating local exchange;
 - 9.2.1 Normal operation;
 - 9.2.2 Exceptional procedures;
 - 9.3 Actions at a transit exchange;
 - 9.3.1 Normal operation;
 - 9.3.2 Exceptional procedures;
 - 9.4 Actions at the outgoing international gateway exchange;
 - 9.4.1 Normal operation;
 - 9.4.2 Exceptional procedures;
 - 9.5 Actions at the incoming international gateway exchange;
 - 9.5.1 Normal operation;
 - 9.5.2 Exceptional procedures;
 - 9.6 Actions at the destination local exchange;
 - 9.6.1 Normal operation;
 - 9.6.2 Exceptional procedures;
- 10 Interactions with other networks;
- 11 Interactions with other supplementary services;
 - 11.1 Advice of charge services;
 - 11.1.1 Charging information at call set-up time;
 - 11.1.2 Charging information during the call;
 - 11.1.3 Charging information at the end of a call;
 - 11.2 Call waiting;
 - 11.3 Call hold;
 - 11.4 Call transfer;
 - 11.4.1 Explicit call transfer;
 - 11.5 Number identification services;
 - 11.5.1 Calling line identification presentation;
 - 11.5.2 Calling line identification restriction;
 - 11.5.3 Connected line identification presentation;
 - 11.5.4 Connected line identification restriction;
 - 11.6 Closed user group;
 - 11.7 Call completion services;
 - 11.7.1 Completion of calls to busy subscriber;
 - 11.7.2 Completion of calls on no reply;
 - 11.8 Conference call, add-on;

- 11.9 Direct dialling in;
- 11.10 Diversion services;
 - 11.10.1 Call forwarding unconditional;
 - 11.10.2 Call forwarding busy;
 - 11.10.3 Call forwarding no reply;
 - 11.10.4 Call deflection;
- 11.11 Malicious call identification;
- 11.12 Message waiting indication;
- 11.13 Multiple subscriber number;
- 11.14 Subaddressing;
- 11.15 Terminal portability;
- 11.16 Three party service;
- 11.17 User-to-user signalling;
- 12 Parameter values (timers);
- 13 Dynamic description;
- Annex A (informative): Signalling flows;
- Annex B (informative): Interworking aspects.

Appendix II

Appendix II has the status of an informative annex, describing a network option.

History

Document history		
Edition 1	February 1995	Publication as ETS 300 356-2
V3.2.2	August 1998	Publication
V4.1.1	September 2000	Public Enquiry PE 20010126: 2000-09-27 to 2001-01-26
V4.1.2	May 2001	Vote V 20010713: 2001-05-14 to 2001-07-13
V4.1.2	July 2001	Publication