

SLOVENSKI STANDARD

SIST EN 301 464 V1.1.1:2005

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8 [[]HJbc`ca fYy`Y`n`]bhY[f]fUb]a]`g]c]f]h] Ua]`f]G8 B]L]E]G][bU]nUW]U`y]H`+`fGG+L]E]A YXgYVc`bc`j`d`]j Ub`Y`a YX`G8 B]i dcfUVb]y_]a `XY`ca ` Yf]h]f]Un`]]W]b Ud`] U]W]g_]a `XY`ca]bh]Y][Ybh]Y[Uca fYy`U]f]B5 D]L]E]`%`r]XY. `Gd]Y]W]Z_]U]W]U]df]c]h]c_]c`]U Q]f]j]d]c]f]c]]c`]H]`!H]E`%`\$`%`f]l]` -- l]Z]g]d]f]Ya Yb`Y]bc]Q

Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP) version 4 interactions with the Intelligent Network Application Part (INAP); Part 1: Protocol specification [ITU-T Recommendation Q.1601 (1999), modified]

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ICS:

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ETSI EN 301 464 V1.1.1 (2000-12)

European Standard (Telecommunications series)

**Integrated Services Digital Network (ISDN);
Signalling System No.7 (SS7);
ISDN User Part (ISUP) version 4 interactions with the
Intelligent Network Application Part (INAP);
Part 1: Protocol specification**

[ITU-T Recommendation Q.1601 (1999), modified]

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Reference

DEN/SPAN-01035

Keywords

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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).

National transposition dates	
Date of adoption of this EN:	8 December 2000
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Endorsement notice

The elements of ITU-T Recommendation Q.1601 (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.

Modifications to ITU-T Recommendation Q.1601

Replace clauses 1 and 2 (Scope and References) with the following:

1 Scope

The present document specifies the interaction between the ISUP and INAP.

The interaction between other signalling systems and INAP can be found by consulting the relevant interworking recommendation to the ISUP in combination with the ISUP/INAP interaction recommendation.

The present document specifies procedures in order to provide interaction between ISUP and INAP, i.e. to support IN services in an ISDN environment. In addition new protocol elements for the ISUP are defined in order to satisfy IN specific requirements. Based on the protocol inherent compatibility mechanism a stepwise upgrade of the ISUP functionality is possible. However, the new function is only available for an IN call, if supported in any of the affected exchanges.

The present document only considers the case where the SSP is located at a transit level. As a consequence this could lead to limitations for ISDN supplementary services.

The present document does not specify enhancements to the DSS1 protocol, which may be needed due to additional ISUP functions or IN requirements, respectively.

The main subjects of the present document are the following:

- description of specific call control functions for IN calls;
- impacts on the ISUP basic call and the ISDN supplementary services for IN calls;
- enhancement of the ISUP protocol due to IN specific requirements.

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2 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, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

- [1] ETSI EN 301 140-5: "Intelligent Network (IN); Intelligent Network Application Protocol (INAP); Capability Set 2 (CS2); Part 5: Distributed Functional Plane (DFP) [ITU-T Recommendation Q.1224 (1997), modified]".
- [2] ETSI EN 300 356-1: "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 4 for the international interface; Part 1: Basic services [ITU-T Recommendations Q.761 to Q.764 (2000) modified]".
- [3] ETSI EN 300 356-3: "Integrated Services Digital Network (ISDN); Signalling System No.7; 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]".

- [4] ETSI EN 300 356-4: "Integrated Services Digital Network (ISDN); Signalling System No.7; 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]".
- [5] ETSI EN 300 356-5: "Integrated Services Digital Network (ISDN); Signalling System No.7; 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]".
- [6] ETSI EN 300 356-6: "Integrated Services Digital Network (ISDN); Signalling System No.7; 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]".
- [7] ETSI EN 300 356-10: "Integrated Services Digital Network (ISDN); Signalling System No.7; 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]".
- [8] ETSI EN 300 356-11: "Integrated Services Digital Network (ISDN); Signalling System No.7; 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]".
- [9] ETSI EN 300 356-14: "Integrated Services Digital Network (ISDN); Signalling System No.7; 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]".
- [10] ETSI EN 300 356-15: "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 4 for the international interface; Part 15: Diversion supplementary services [ITU-T Recommendation Q.732, clauses 2 to 5 (2000) modified]".
- [11] ETSI EN 301 140-1: "Intelligent Network (IN); Intelligent Network Application Protocol (INAP); Capability Set 2 (CS2); Part 1: Protocol specification".
- [12] ETSI EN 300 403-1: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 1: Protocol specification [ITU-T Recommendation Q.931 (1993), modified]".

Throughout the text of ITU-T Recommendation Q.1601

Replace references as shown below.

Reference in ITU-T Recommendation Q.1601	Modified reference
ITU-T Recommendation Q.1224	ITU-T Recommendation Q.1224 as modified by EN 301 140-5 [1]
ITU-T Recommendation Q.1228	EN 301 140-1 [11]
ITU-T Recommendation Q.731	ITU-T Recommendation Q.731 as modified by EN 300 356, parts 3, 4, 5, 6, 10 and 11 [3] to [8]
ITU-T Recommendation Q.732	ITU-T Recommendation Q.732 as modified by EN 300 356, parts 14 [9] and 15 [10]
ITU-T Recommendation Q.763	ITU-T Recommendation Q.763 as modified by EN 300 356-1 [2]
ITU-T Recommendation Q.764	ITU-T Recommendation Q.764 as modified by EN 300 356-1 [2]
ITU-T Recommendation Q.931	ITU-T Recommendation Q.931 as modified by EN 300 403-1 [12]

Table 2

Amend the table as shown:

Operation	Influence on ISUP call handling	Reference
⋮	⋮	⋮
AnalyseInformation	For further study (Note)	
⋮	⋮	⋮
CancelStatusReportRequest	For further study (Note)	
⋮	⋮	⋮
HoldCallInNetwork	For further study (Note)	
⋮	⋮	⋮
RequestCurrentStatusReport	For further study (Note)	
RequestEveryStatusChangeReport	For further study (Note)	
RequestFirstStatusMatchReport	For further study (Note)	
⋮	⋮	⋮
SelectFacility	For further study (Note)	
SelectRoute	For further study (Note)	
⋮	⋮	⋮

Subclause 10.1.1.1, Successful call set-up

Modify the first sentence as follows:

"If an IAM is received in a SSP and the call is recognised as IN call, i.e. by detecting a DP as TDP-R (see subclause 10.1.3 Detection Point processing), an InitialDP operation or a DP specific operation for a TDP-R is sent from the SSF to the SCF. If the IAM had been segmented the remainder of the call set-up information is awaited (see subclause 10.1.1.1.7 Simple segmentation). The mapping of parameters is shown in the table below."

Table 4

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Amend the table as shown:

ISUP message IAM (Note 1)	INAP operation InitialDP
⋮	⋮
Calling party subaddress IE contained in access transport	callingPartySubaddress
⋮	⋮

Table 5

Amend the table as shown:

INAP operation Connect (Note 1)	ISUP message IAM
⋮	⋮
callingPartyNumber	(Note 4) (see also Annex ZA)
locationNumber	Location number (Note 7)
⋮	⋮

Table 5, note 3

Replace reference to "[5], subclause 3.3.16" with "[11], subclause 18.29".

Table 5, note 7

Add note 7 to table 5.

"NOTE 7: The semantics of the Location Number parameter are network specific. Use of this parameter across a network boundary only has significance where a bilateral agreement on the NNI has been made as to its format. Restrictions to the mapping may be imposed in the future when the SSF-SCF is an internetwork interface."

Subclause 10.1.1.2, Normal call release

Replace reference to "[5], subclause 3.1.1.5" with "[11], subclause 12.5".

Subclause 10.1.1.3, Suspend, resume

Modify the first paragraph as follows:

"Upon receipt of a SUS message with the indication "network initiated" the timer T_{SUS} is started to ensure that a RES message with the indication "network initiated" or a REL message is received. In the case that at least one DP monitor mode is set to 'interrupted'. ~~The received SUS message is not passed on.~~ If the timer T_{SUS} expires, the procedures described in ~~[10]~~ Q.764/subclause 2.4.3 apply. The value of timer T_{SUS} depends on the time limits received in serviceInteractionIndicatorsTwo parameter."

Subclause 10.1.2, IN call with SCP request to collect further digits

Modify the first two paragraphs as follows:

"After sending the InitialDP operation to the SCP a RequestReportBCSMEvent operation to arm DP2 accompanied by a CollectInformation operation may be received from the SCP (see ~~[5]~~ subclause 3.3.15 [11] subclause 18.26). In this case the specified number of digits will be collected in the SSP. Encountering DP2, i.e. the specified number of digits has been received, will result in sending an EventReportBCSM operation ~~or a CollectInformation operation, respectively,~~ to the SCP.

In addition to subclause 10.1.1.5 the digits sent to the SCP in the EventReportBCSM operation ~~or the CollectInformation operation~~ shall be taken into account when constructing the called IN number parameter."

Subclause 10.1.3.1, General

Modify the second and third paragraph as follows:

"In the "notifyAndContinue" mode the event is reported as EDP-N (notification mode) in the EventReportBCSM operation ~~or a DP specific operation, respectively,~~ to the SCF and normal call processing continues as described in subclause 10.1.1 (IN basic call).

In the "interrupted" mode the event is reported as EDP-R (request mode) in the EventReportBCSM operation ~~or a DP specific operation, respectively,~~ and the SSF will wait for instructions from the SCF."

Subclause 10.1.3.1.3, Release message

Replace reference to "[5], subclause 3.1.1.5" with "[11], subclause 12.5".

Subclause 10.1.4, Set-up of an IN call to destination B

Modify the first paragraph as follows:

"This section describes the set-up of an IN call to destination B after an user interactive dialogue has been performed or after the SSF has reported an EDP-R in the EventReportBCSM operation ~~or a DP specific operation, respectively,~~ to the SCF. In these situations the call set-up differs from the normal call set-up for the "IN basic call"."