



SLOVENSKI STANDARD

SIST ETS 300 140:1997

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Digitalno omrežje z integriranimi storitvami (ISDN) - Dopolnilna storitev: zadržanje klica (HOLD) - Funkcijske zmožnosti in informacijski tokovi

Integrated Services Digital Network (ISDN); Call Hold (HOLD) supplementary service; Functional capabilities and information flows

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ICS:

33.080	Digitalno omrežje z integriranimi storitvami (ISDN)	Integrated Services Digital Network (ISDN)
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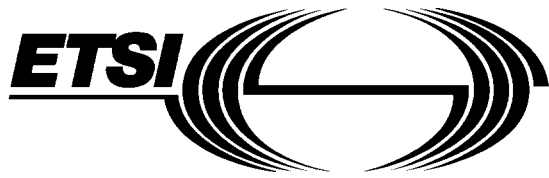
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ETSI

European Telecommunications Standards Institute

ETSI Secretariat

Postal address: F-06921 Sophia Antipolis CEDEX - FRANCE

Office address: 650 Route des Lucioles - Sophia Antipolis - Valbonne - FRANCE

X.400: c=fr, a=atlas, p=etsi, s=secretariat - **Internet:** secretariat@etsi.fr

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

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Foreword

This European Telecommunication Standard (ETS) has been produced by the Signalling Protocols & Switching (SPS) Technical Committee of the European Telecommunications Standards Institute (ETSI) and was adopted having passed through the ETSI standards approval procedure.

In accordance with CCITT Recommendation I.130 [1], the following three level structure is used to describe the supplementary telecommunications services as provided by European public telecommunications operators under the pan-European Integrated Services Digital Network (ISDN):

- Stage 1: is an overall service description, from the user's stand-point;
- Stage 2: identifies the functional capabilities and information flows needed to support the service described in stage 1; and
- Stage 3: defines the signalling system protocols and switching functions needed to implement the service described in stage 1.

This ETS details the stage 2 aspects (functional capabilities and information flows) needed to support the Call Hold (HOLD) supplementary service. The stage 1 and stage 3 aspects are detailed in ETS 300 139 (1992) and ETS 300 141 (1992), respectively.

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1 Scope

This standard defines the stage two of the Call Hold (HOLD) supplementary service for the pan-European Integrated Services Digital Network (ISDN) as provided by European public telecommunications operators. Stage two identifies the functional capabilities and the information flows needed to support the service description. The stage two description also identifies user operations not directly associated with a call (see CCITT Recommendation I.130 [1]).

This standard is specified according to the methodology specified in CCITT Recommendation Q.65 [2].

This standard does not formally describe the relationship between this supplementary service and the basic call but, where possible, this information is included for guidance.

In addition this standard does not specify the requirements where the service is provided to the user via a private ISDN. This standard does not specify the requirements for the allocation of defined functional entities within a private ISDN; it does however define which functional entities may be allocated to a private ISDN.

This standard does not specify the additional requirements where the service is provided to the user via a telecommunications network that is not an ISDN.

The HOLD supplementary service allows a user to interrupt communications on an existing call and then subsequently, if desired, re-establish communications.

This standard is applicable to the stage three standards for the ISDN HOLD supplementary service. The terms "stage three" is also defined in CCITT Recommendation I.130 [1]. Where the text indicates the status of a requirement (i.e. as strict command or prohibition, as authorisation leaving freedom, or as a capability or possibility) this shall be reflected in the text of the relevant stage three standards.

Furthermore, conformance to this standard is met by conforming to the stage three standards with the field of application appropriate to the equipment being implemented. Therefore no method of testing is provided for this standard.

2 Normative references

This standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to, or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- [1] CCITT Recommendation I.130 (1988): "Method for the characterisation of telecommunication services supported by an ISDN and network capabilities of an ISDN".
- [2] CCITT Recommendation Q.65 (1988): "Stage 2 of the method for the characterisation of services supported by an ISDN".
- [3] CCITT Recommendation I.210 (1988): "Principles of telecommunication services supported by an ISDN and the means used to describe them".
- [4] CCITT Recommendation I.112 (1988): "Vocabulary of terms for ISDNs".
- [5] CCITT Recommendation Q.71 (1988): "ISDN 64 kbit/s circuit mode switched bearer service".
- [6] CCITT Recommendation Z.100 (1988): "Functional Specification and Description Language (SDL)".

3 Definitions

For the purposes of this standard, the following definitions apply:

Integrated Services Digital Network (ISDN): see CCITT Recommendation I.112 [4], § 2.3, definition 308.

Service; telecommunications service: see CCITT Recommendation I.112 [4], § 2.2, definition 201.

Supplementary service: see CCITT Recommendation I.210 [3], § 2.4.

4 Symbols and abbreviations

FE	Functional Entity
CC	Call Control, typically a LE
CCA	Call Control Agent, typically a TE
HOLD	Call Hold
FEA	Functional Entity Action
ISDN	Integrated Services Digital Network
LE	Local Exchange
PTNX	Private Telecommunications Network Exchange
SDL	Specification Description Language

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5 Description

Not applicable.

6 Derivation of the functional model

6.1 Functional model description

The functional model for the HOLD supplementary service is shown in figure 1.

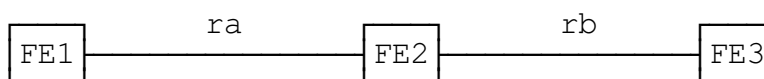


Figure 1

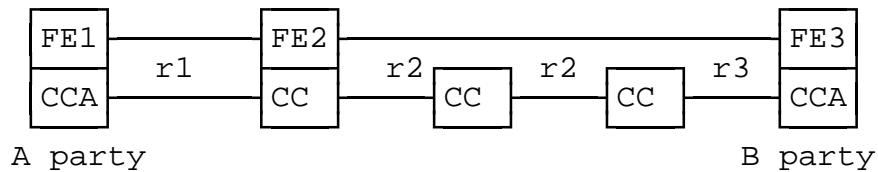
6.2 Description of the functional entities

The functional entities required by the HOLD supplementary service above those of the basic call are:

FE1	User's service agent
FE2	Hold service control entity
FE3	Held party agent

6.3 Relationship with a basic service

The relationship with a basic call is shown in figure 2.



NOTE: The basic call model is defined in CCITT Recommendation Q.71 [5], § 2.1, with the exception that r1 represents an outgoing call relationship from a Call Control Agent (CCA) and r3 represents an incoming call relationship to a CCA.

Figure 2

7 Information flows

7.1 Information flow diagrams

Figures 3 and 4 show the information flows for the holding and retrieval of a simple call.

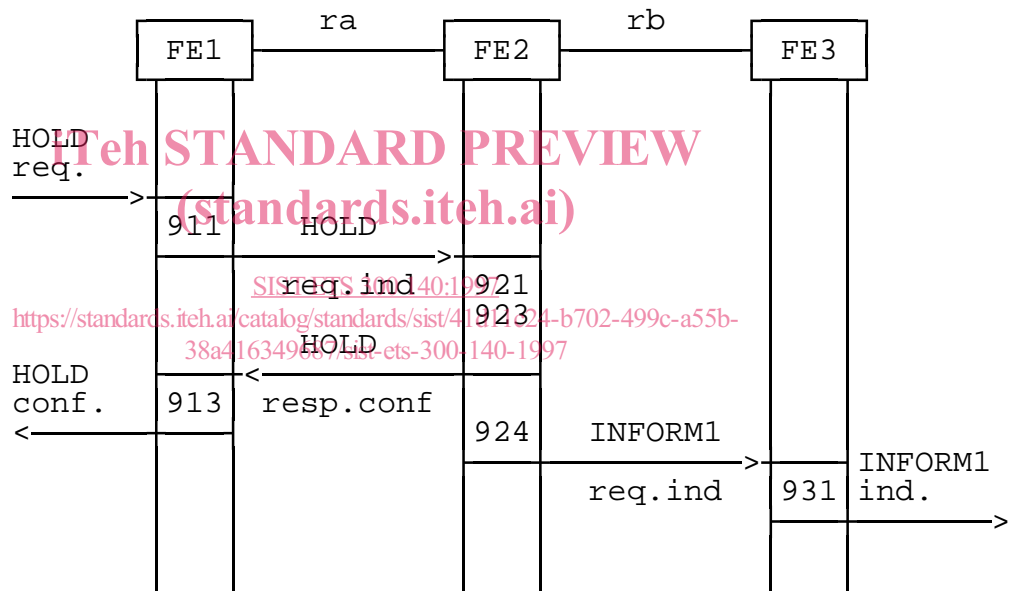


Figure 3: Holding a call

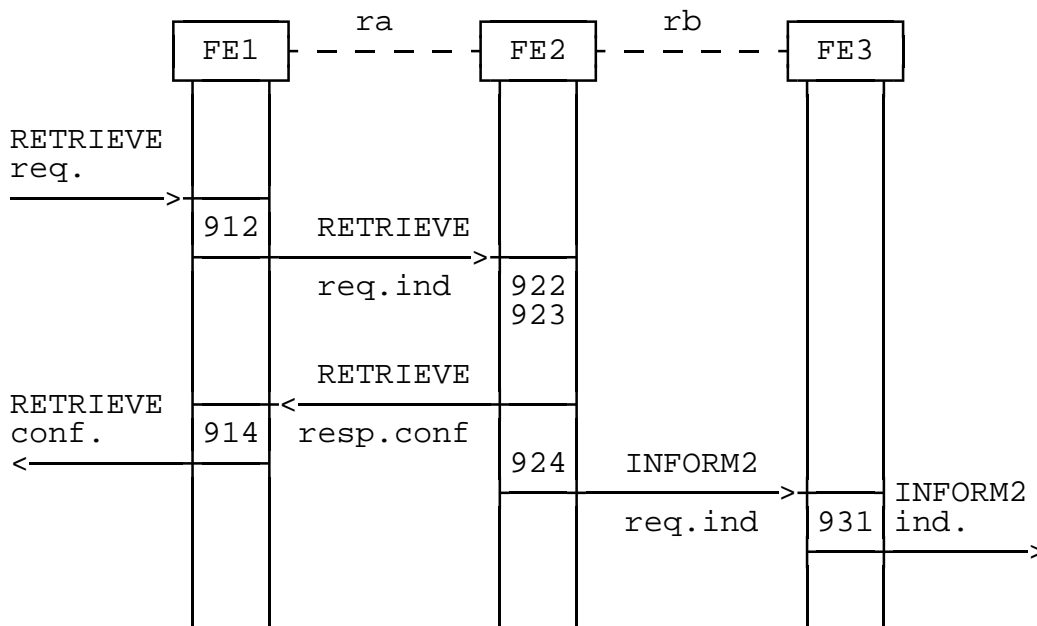


Figure 4: Retrieving a call

7.2 Definition of the individual information flows

7.2.1 Relationship ra

7.2.1.1 Contents of HOLD

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HOLD is a confirmed request. It can only be sent by FE1 co-located with a CCA engaged in a call. It shall be an indication to FE2 that it shall perform those actions which shall allow the user to access a range of services as if he was not already engaged in a call, while retaining the possibility of re-establishing the original call.

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There are no contents of the HOLD information flow.

7.2.1.2 Contents of HOLD REJECT

Table 1 shows the contents of the HOLD REJECT information flow.

Table 1

HOLD REJECT	req.ind
Reason	Mandatory

7.2.1.3 Contents of RETRIEVE

RETRIEVE is a confirmed request which can only be sent by FE1 co-located with a CCA which has a call on hold. It shall indicate to the Call Control (CC) that it shall re-establish the connection. If the user requesting the retrieval has established another call while the first was held, he may dispose of it by clearing or holding before he retrieves the first.

The contents of the RETRIEVE information flow are shown in table 2.