



# SLOVENSKI STANDARD

## SIST ETS 300 303:1997

01-maj-1997

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**Digitalno omrežje z integriranimi storitvami (ISDN) - Signalizacijski vmesnik ISDN - globalni sistem mobilnih komunikacij (GSM) javnega kopenskega mobilnega omrežja (PLMN)**

Integrated Services Digital Network (ISDN); ISDN - Global System for Mobile communications (GSM) Public Land Mobile Network (PLMN) signalling interface

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Ta slovenski standard je istoveten z: **ETS 300 303 Edition 1**

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**ICS:**

33.080	Digitalno omrežje z integriranimi storitvami (ISDN)	Integrated Services Digital Network (ISDN)
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**E**UROPEAN  
**T**ELECOMMUNICATION  
**S**TANDARD

**ETS 300 303**

July 1994

Source: ETSI TC-SPS

Reference: DE/SPS-01008

ICS: 33.080

**Key words:** ISDN, SS7, ISUP, GSM, mobile, radio, PLMN, interworking

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**Integrated Services Digital Network (ISDN);**  
**ISDN - Global System for Mobile communications (GSM)**  
**Public Land Mobile Network (PLMN) signalling interface**

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http://standards.iteh.ai/en/standard/etsi-ets-300-303-1994-0c02c9e037ec/sist-ets-300-303-1997

**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 and Switching (SPS) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This ETS specifies the first version of the Integrated Services Digital Network (ISDN) - Global System for Mobile communications (GSM) Public Land Mobile Network (PLMN) signalling interface.

ETS 300 121 (1992) containing the specification of ISDN User Part (ISUP) version 1 is used as a basis for this interface. The appropriate modifications to ETS 300 121 are described in this ETS.

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## 1 Scope

This European Telecommunication Standard (ETS) specifies a first version of the Integrated Services Digital Network (ISDN) - Global System for Mobile communications (GSM) Public Land Mobile Network (PLMN) signalling interface. This ETS is applicable to the first interconnection of PLMN and ISDN.

NOTE: A future ETS may cover the application of the ISDN User Part (ISUP) version 2 on the signalling interface.

The ISUP interface defined is the trunk signalling interface between the PLMN and the ISDN. It is assumed that the interface between PLMN and ISDN can occur in any point in a national network.

This signalling interface is based on ISUP version 1 (as given in ETS 300 121 [2]) which supports the following services:

### Bearer services:

- 64 kbit/s unrestricted;
- Speech;
- 3,1 kHz audio.

### Teleservices:

- Telephony;
- Teletex;
- Telefax Group 4;
- Mixed mode;
- Videotex;
- Telefax Group 2/3.

### Supplementary services:

- Calling Line Identification Presentation (CLIP)/Calling Line Identification Restriction (CLIR) supplementary services;
- Connected Line Identification Presentation (COLP)/Connected Line Identification Restriction (COLR) supplementary services;
- Closed User Group (CUG) supplementary service;
- User-to-User Signalling service 1 implicit (UUS1i) supplementary service.

The Direct Dialling In (DDI) supplementary service and Multiple Subscriber Number (MSN) supplementary service have no impact on this interface. The Subaddressing (SUB) supplementary service and Terminal Portability (TP) supplementary service are implicitly supported, as part of the basic ETS 300 121 [2] procedures.

An additional parameter is added to prevent looping of forwarded calls across this interface.

The support of the above mentioned services on this interface does not necessarily imply that the services are supported in one or the other of the networks interconnected.

As this interface is used within national networks, ETS 300 121 [2] is modified to be suitable for ISDN/PLMN applications. The application of the echo control procedures is described.

## 2 Normative references

This ETS incorporates by dated and 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] ETS 300 008 (1991): "Integrated Services Digital Network (ISDN); CCITT Signalling System No.7; Message Transfer Part (MTP) to support international interconnection".
- [2] 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] ETS 300 540: "European digital cellular telecommunications system (Phase 2); Transmission planning aspects of the speech service in the GSM Public Land Mobile Network (PLMN) system (GSM 03.50)".
- [4] CCITT Recommendation Q.767 (1991): "Application of the ISDN user part of CCITT signalling system No.7 for international ISDN interconnections".

## 3 Symbols and abbreviations

For the purposes of this ETS, the following abbreviations apply:

ACM	Address Complete Message
CLIP	Calling Line Identification Presentation
CLIR	Calling Line Identification Restriction
COLP	Connected Line Identification Presentation
COLR	Connected Line Identification Restriction
CUG	Closed User Group
DDI	Direct Dialling In
GMSC	Gateway MSC (the exchange where the interrogation of the home location register is performed)
GSM	Global System for Mobile communications
IAM	Initial Address Message
ISDN	Integrated Services Digital Network
ISUP	ISDN User Part
MS	Mobile Station
MSC	Mobile-service Switching Centre
MSISDN	Mobile Station ISDN number
MSN	Multiple Subscriber Number
MSRN	Mobile Station Roaming Number
MTP	Message Transfer Part
NI	Network Indicator
PLMN	Public Land Mobile Network
SUB	Subaddressing
TP	Terminal Portability
UUS	User-to-User Signalling
UUS1	UUS service 1
VMSC	Visited MSC

## 4 Deviations from the provisions of ETS 300 121

### 4.1 Formats and codes

The formats and codes specified in CCITT Recommendation Q.767 [4] with the exceptions and clarifications described in tables B.1 and B.2 shall be applicable.

### 4.2 Basic call

The gateway exchanges in both networks behave like international incoming or outgoing gateway or international transit exchanges in the relevant cases as described in CCITT Recommendation Q.767 [4], with the exceptions indicated in this ETS. The basic call procedures of CCITT Recommendation Q.767 [4] are applicable with the following amendments and clarifications.

#### 4.2.1 Calls from the PLMN to the fixed network

##### 4.2.1.1 Gateway in the PLMN

The Initial Address Message (IAM) sent by the gateway in the PLMN is coded taking into account the following exceptions and clarifications.

##### 4.2.1.1.1 Initial address message

###### Called party number

The called party number parameter may contain a Mobile Station Roaming Number (MSRN).

- internal network number indicator:

0	if the MSRN is included;
1	otherwise.

###### Calling party number

If the calling party number parameter contains the Mobile Station ISDN number (MSISDN), it is coded as follows:

- nature of address indicator:

000 0100	(international number) in case of a foreign Mobile Station (MS);
000 0011	(national significant number) in case of a national MS.

###### User service information

The IAM shall always include a user service information parameter for calls to the fixed network when the ISDN access indicator is set to ISDN.

#### 4.2.2 Calls from the fixed network to the PLMN

##### 4.2.2.1 Gateway in the fixed network

##### 4.2.2.1.1 Initial address message

###### Called party number

The called party number parameter contains the MSISDN or MSRN.

- nature of address indicator:

000 0011	(national number) the called subscriber's number is a national number.
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