



# SLOVENSKI STANDARD

## SIST ETS 300 098-4:1998

01-junij-1998

---

**Digitalno omrežje z integriranimi storitvami (ISDN) - Dopolnilna storitev: omejitev identifikacije (razpoznavanja) priključka v zvezi (COLR) - Protokol digitalne naročniške signalizacije št. 1 (DSS1) - 4. del: Abstraktni preskušalni niz (ATS) in delna dodatna informacija za preskušanje izvedbe protokola (PIXIT) - Proforma specifikacije za uporabnika**

Integrated Services Digital Network (ISDN); Connected Line Identification Restriction (COLR) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 4: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for the user

[SIST ETS 300 098-4:1998](https://standards.iteh.ai/catalog/standards/sist/a40c7fc8-9c62-4a5b-9216-eb50935f3ad1/sist-ets-300-098-4-1998)

<https://standards.iteh.ai/catalog/standards/sist/a40c7fc8-9c62-4a5b-9216-eb50935f3ad1/sist-ets-300-098-4-1998>

**Ta slovenski standard je istoveten z: ETS 300 098-4 Edition 1**

---

**ICS:**

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

**SIST ETS 300 098-4:1998**

**en**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST ETS 300 098-4:1998](#)

<https://standards.iteh.ai/catalog/standards/sist/a40c7fc8-9c62-4a5b-9216-eb50935f3ad1/sist-ets-300-098-4-1998>



**E**UROPEAN  
**T**ELECOMMUNICATION  
**S**TANDARD

**ETS 300 098-4**

May 1997

Source: ETSI TC-SPS

Reference: DE/SPS-05061-M-4

ICS: 33.020

**Key words:** ISDN, DSS1, supplementary service, COLR, testing, ATS, PIXIT, user

**Integrated Services Digital Network (ISDN);  
Connected Line Identification Restriction (COLR)  
supplementary service;  
Digital Subscriber Signalling System No. one (DSS1) protocol;  
Part 4: Abstract Test Suite (ATS) and partial Protocol  
Implementation eXtra Information for Testing (PIXIT) proforma  
specification for the user**

**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 4 92 94 42 00 - Fax: +33 4 93 65 47 16

**Copyright Notification:** No part may be reproduced except as authorized by written permission. The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 1997. All rights reserved.

## iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST ETS 300 098-4:1998](https://standards.iteh.ai/catalog/standards/sist/a40c7fc8-9c62-4a5b-9216-eb50935f3ad1/sist-ets-300-098-4-1998)

<https://standards.iteh.ai/catalog/standards/sist/a40c7fc8-9c62-4a5b-9216-eb50935f3ad1/sist-ets-300-098-4-1998>

## Contents

Foreword .....	5
1 Scope .....	7
2 Normative references .....	7
3 Definitions and abbreviations .....	8
3.1 Definitions .....	8
3.2 Abbreviations .....	8
4 Abstract Test Method (ATM) .....	9
5 Untestable test purposes .....	9
6 ATS conventions .....	9
6.1 Declarations part .....	9
6.1.1 Type definitions .....	9
6.1.1.1 Simple type definitions .....	9
6.1.1.2 Structured type definitions .....	10
6.1.1.2.1 TTCN structured type definitions .....	10
6.1.1.2.2 ASN.1 structured type definitions .....	10
6.1.1.3 ASP type definitions .....	10
6.1.1.3.1 TTCN ASP type definitions .....	10
6.1.1.3.2 ASN.1 ASP type definitions .....	11
6.1.1.4 PDU type definitions .....	11
6.1.1.4.1 TTCN PDU type definitions .....	11
6.1.1.4.2 ASN.1 PDU type definitions .....	11
6.1.2 Test suite constants .....	11
6.1.3 Test suite parameters .....	11
6.1.4 Variables .....	11
6.1.4.1 Test suite variables .....	11
6.1.4.2 Test case variables .....	11
6.1.5 Test suite operation definitions .....	11
6.1.6 Alias definitions .....	11
6.2 Constraints part .....	12
6.2.1 Structured type constraint declaration .....	12
6.2.2 ASN.1 type constraint declaration .....	12
6.2.3 ASP type constraint declaration .....	12
6.2.3.1 ASN.1 ASP type constraint declaration .....	12
6.2.3.2 TTCN ASP type constraint declaration .....	12
6.2.4 PDU type constraint declaration .....	12
6.2.4.1 ASN.1 PDU type constraint declaration .....	12
6.2.4.2 TTCN PDU type constraint declaration .....	12
6.2.5 Chaining of constraints .....	12
6.2.5.1 Static chaining .....	12
6.2.5.2 Dynamic chaining .....	12
6.2.6 Derived constraints .....	13
6.2.7 Parameterized constraints .....	13
6.2.8 Value assignment .....	13
6.2.8.1 Specific values .....	13
6.2.8.2 Matching values .....	13
6.3 Dynamic part .....	13
6.3.1 Test cases .....	13
6.3.2 Test steps .....	13
6.3.3 Defaults .....	13
7 ATS to TP map .....	13

8	PCTR conformance .....	14
9	PIXIT conformance .....	14
10	ATS conformance .....	14
	Annex A (normative): Protocol Conformance Test Report (PCTR) proforma .....	15
A.1	Identification summary .....	15
A.1.1	Protocol conformance test report .....	15
A.1.2	IUT identification .....	15
A.1.3	Testing environment .....	15
A.1.4	Limits and reservations .....	16
A.1.5	Comments .....	16
A.2	IUT conformance status .....	16
A.3	Static conformance summary .....	16
A.4	Dynamic conformance summary .....	16
A.5	Static conformance review report .....	17
A.6	Test campaign report .....	17
A.7	Observations .....	17
	Annex B (normative): Partial PIXIT proforma .....	18
B.1	Identification summary .....	18
B.2	Abstract test suite summary .....	18
B.3	Test laboratory .....	18
B.4	Client (of the test laboratory) .....	19
B.5	System Under Test (SUT) .....	19
B.6	Protocol information .....	20
B.6.1	Protocol identification .....	20
B.6.2	IUT information .....	20
B.6.2.1	Parameters .....	20
B.6.2.2	Parameter values .....	20
B.6.2.3	Sending of messages by IUT .....	20
	Annex C (normative): Abstract Test Suite (ATS) .....	21
C.1	The TTCN Graphical form (TTCN.GR) .....	21
C.1.1	ATS for basic access .....	21
C.1.2	ATS for primary rate access .....	21
C.2	The TTCN Machine Processable form (TTCN.MP) .....	21
C.2.1	ATS for basic access .....	21
C.2.2	ATS for primary rate access .....	21
	Annex D (informative): General structure of ATS .....	22
	History .....	23

TTCN STANDARD PREVIEW  
(standards.iteh.ai)

[SIST ETS 300 098-4:1998](https://standards.iteh.ai/catalog/standards/sist/a40c7fc8-9c62-4a5b-9216-eb50935f3ad1/sist-ets-300-098-4-1998)

<https://standards.iteh.ai/catalog/standards/sist/a40c7fc8-9c62-4a5b-9216-eb50935f3ad1/sist-ets-300-098-4-1998>

## 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 is part 4 of a multi-part standard covering the Digital Subscriber Signalling System No. one (DSS1) protocol specification for the Integrated Services Digital Network (ISDN) Connected Line Identification Restriction (COLR) supplementary service, as described below:

Part 1: "Protocol specification";

Part 2: "Protocol Implementation Conformance Statement (PICS) proforma specification";

Part 3: "Test Suite Structure and Test Purposes (TSS&TP) specification for the user";

**Part 4: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for the user";**

Part 5: "TSS&TP specification for the network";

Part 6: "ATS and partial PIXIT proforma specification for the network".

Transposition dates	
Date of adoption:	23 May 1997
Date of latest announcement of this ETS (doa):	31 August 1997
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	28 February 1998
Date of withdrawal of any conflicting National Standard (dow):	28 February 1998

<https://standards.iteh.ai/catalog/standards/sist/a40c7fc8-9c62-4a5b-9216-eb50935f3ad1/sist-ets-300-098-4-1998>

Blank page

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST ETS 300 098-4:1998](https://standards.iteh.ai/catalog/standards/sist/a40c7fc8-9c62-4a5b-9216-eb50935f3ad1/sist-ets-300-098-4-1998)

[https://standards.iteh.ai/catalog/standards/sist/a40c7fc8-9c62-4a5b-9216-  
eb50935f3ad1/sist-ets-300-098-4-1998](https://standards.iteh.ai/catalog/standards/sist/a40c7fc8-9c62-4a5b-9216-eb50935f3ad1/sist-ets-300-098-4-1998)



## 1 Scope

This fourth part of ETS 300 098 specifies the Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma for the User side of the T reference point or coincident S and T reference point (as defined in ITU-T Recommendation I.411 [10]) of implementations conforming to the stage three standard for the Connected Line Identification Restriction (COLR) supplementary service for the pan-European Integrated Services Digital Network (ISDN) by means of the Digital Subscriber Signalling System No. one (DSS1) protocol, ETS 300 098-1 [2].

ETS 300 098-3 [4] specifies the Test Suite Structure and Test Purposes (TSS&TP) related to this ATS and partial PIXIT proforma specification. Other parts specify the TSS&TP and the ATS and partial PIXIT proforma for the Network side of the T reference point or coincident S and T reference point of implementations conforming to ETS 300 098-1 [2].

## 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 300 102-1: "Integrated Services Digital Network (ISDN); User-network interface layer 3; Specifications for basic call control".
- [2] ETS 300 098-1 (1992): "Integrated Services Digital Network (ISDN); Connected Line Identification Restriction (COLR) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [3] ETS 300 098-2 (1995): "Integrated Services Digital Network (ISDN); Connected Line Identification Restriction (COLR) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification".  
<https://standards.iteh.ai/catalog/standards/sist/a40c71c8-9c62-4a5b-9216-eb50935f3ad1/sist-ets-300-098-4-1998>
- [4] ETS 300 098-3: "Integrated Services Digital Network (ISDN); Connected Line Identification Restriction (COLR) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 3: Test Suite Structure and Test Purposes (TSS&TP) specification for the user".
- [5] ISO/IEC 9646-1: "Information technology - OSI Conformance Testing Methodology and Framework; Part 1: General Concepts".
- [6] ISO/IEC 9646-2: "Information technology - OSI Conformance Testing Methodology and Framework; Part 2: Abstract Test Suite Specification".
- [7] ISO/IEC 9646-3: "Information technology - OSI Conformance Testing Methodology and Framework; Part 3: The Tree and Tabular Combined Notation".
- [8] ISO/IEC 9646-4: "Information technology - OSI Conformance Testing Methodology and Framework; Part 4: Test realization".
- [9] ISO/IEC 9646-5: "Information technology - OSI Conformance Testing Methodology and Framework; Part 5: Requirements on test laboratories and clients for the conformance assessment process".
- [10] ITU-T Recommendation I.411 (1993): "ISDN user-network interfaces - Reference configurations".

### 3 Definitions and abbreviations

#### 3.1 Definitions

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

**Abstract Test Suite (ATS):** See ISO/IEC 9646-1 [5].

**Implementation Under Test (IUT):** See ISO/IEC 9646-1 [5].

**Lower Tester (LT):** See ISO/IEC 9646-1 [5].

**Point Of Control And Observation (PCO):** See ISO/IEC 9646-1 [5].

**Protocol Implementation Conformance Statement (PICS):** See ISO/IEC 9646-1 [5].

**PICS proforma:** See ISO/IEC 9646-1 [5].

**Protocol Implementation Extra Information For Testing (PIXIT):** See ISO/IEC 9646-1 [5].

**PIXIT proforma:** See ISO/IEC 9646-1 [5].

**System Under Test (SUT):** See ISO/IEC 9646-1 [5].

**Upper Tester (UT):** See ISO/IEC 9646-1 [5].

#### 3.2 Abbreviations

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

ASP	Abstract Service Primitive
ATM	Abstract Test Method
ATS	Abstract Test Suite
BER	Basic Encoding Rules
COLR	Connected Line Identification Restriction
ExTS	Executable Test Suite
IUT	Implementation Under Test
LT	Lower Tester
MOT	Means Of Testing
PCO	Point of Control and Observation
PCTR	Protocol Conformance Test Report
PDU	Protocol Data Unit
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
SUT	System Under Test
TCP	Test Co-ordination Procedures
TP	Test Purpose
TTCN	Tree and Tabular Combined Notation
UT	Upper Tester

iTeh STANDARD PREVIEW

(standards.itteh.ai)

SIST ETS 300 098-4:1998

https://standards.it-europe.eu/catalog/standards/sist/a40c7fc8-9c62-4a5b-9216-

53ad1/sist-ets-300-098-4-1998

## 4 Abstract Test Method (ATM)

The remote test method is applied for the COLR user ATS. The Point of Control and Observation (PCO) resides at the service access point between layers 2 and 3. This PCO is named "L" (for Lower). The L PCO is used to control and observe the behaviour of the Implementation Under Test (IUT) and test case verdicts are assigned depending on the behaviour observed at this PCO.

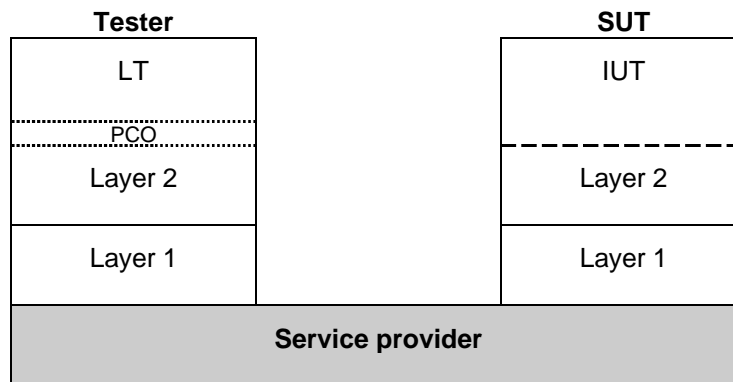


Figure 1: Remote test method

ISO/IEC 9646-2 [6] allows the informal expression of Test Co-ordination Procedures (TCP) between the System Under Test (SUT) upper layer(s) and the Lower Tester (LT). In the ATS contained in annex C, TCP is achieved by use of a second "informal" PCO, called "O" (for Operator). This PCO is used to specify control but not observation above the IUT and consequently, events at this PCO are never used to generate test case verdicts. The use of this O PCO is regarded as a preferred alternative to the use of the implicit send event, in that it allows the ATS to specify in a clear and meaningful way what actions are required to be performed on the IUT.

## 5 Untestable test purposes

There are no untestable test purposes associated with this ATS.

## 6 ATS conventions

This clause is structured similarly to the structure of a TTCN ATS. However, the names of the subclauses are arranged in a way more suitable to this ETS.

### 6.1 Declarations part

#### 6.1.1 Type definitions

##### 6.1.1.1 Simple type definitions

Where appropriate, simple types have a length, a value list or a range restriction attached.

Simple types defined as being of some string type (e.g. BIT STRING, OCTET STRING), have a length restriction or a value list attached.

Simple types, defined as being of INTEGER type, have a value list or a range restriction attached.