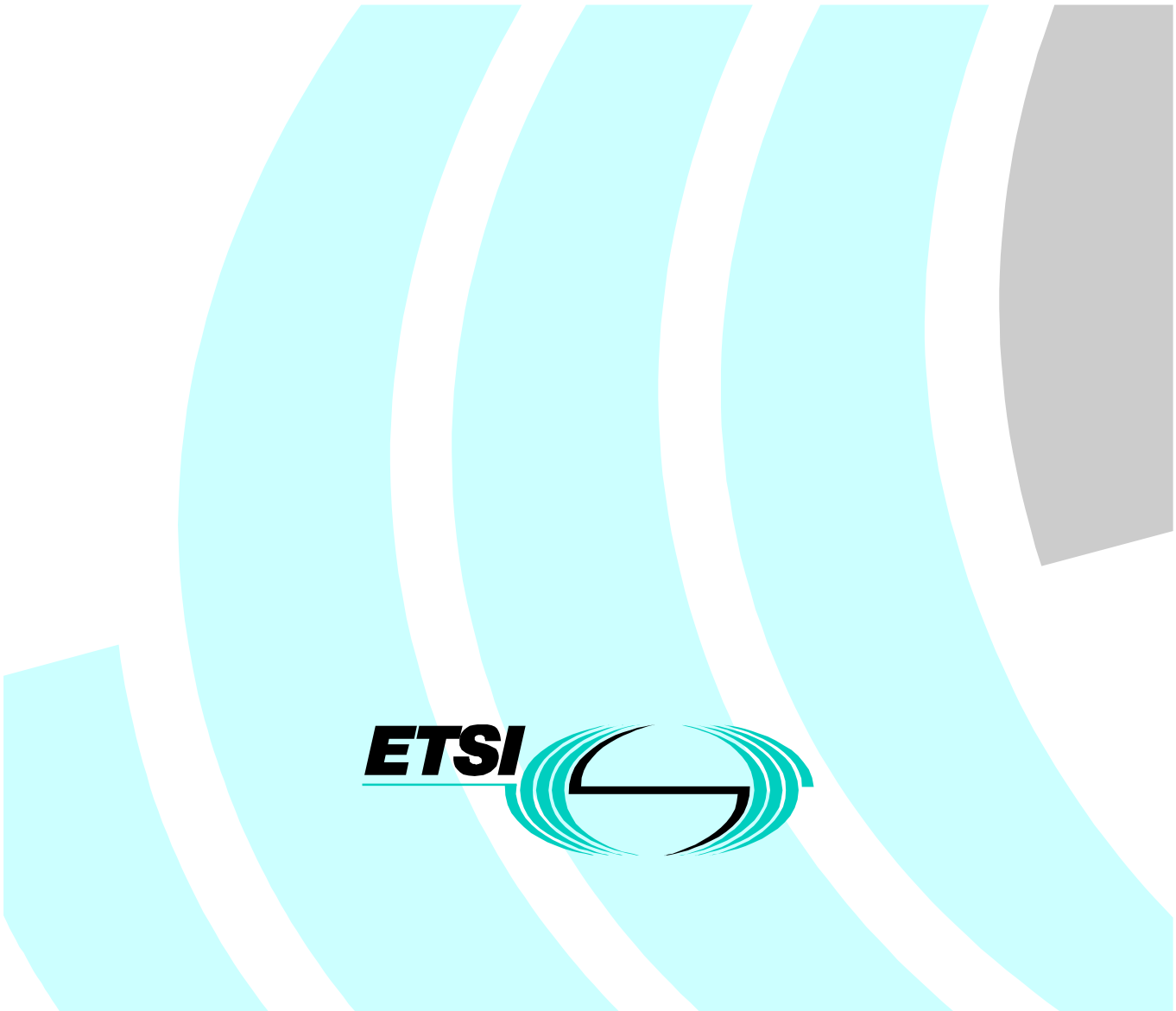
Draft EN 301 140-4-3 V1.1.2 (1999-06)

European Standard (Telecommunications series)

Intelligent Network (IN); Intelligent Network Application Protocol (INAP); Capability Set 2 (CS2); Part 4: Abstract Test Suite (ATS) specification and Partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma for Service Switching Function (SSF); Sub-part 3: Specialized Resource Functions (SRF)



Reference
DEN/SPS-03038-4-3 (ak10ridc.PDF)

Keywords
IN, CS2, INAP, ATS, PIXIT

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Sous-Préfecture de Grasse (06) N° 7803/88

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Contents

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Services and Protocol for Advanced Networks (SPAN), and is now submitted for the Public Enquiry phase of the ETSI standards Two-step Approval Procedure.

The present document is part 4, sub-part 3 of a multi-part EN covering the Intelligent Network Application Protocol (INAP) capability set 2, as identified 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 Service Switching Function (SSF)";

Part 4: "Abstract Test Suite (ATS) specification and Partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma for Service Switching Function (SSF)";

Sub-part 1: "Basic capability set of CS-1 including CS-2 complements";

Sub-part 2: "Call Party Handling (CPH)";

Sub-part 3: "Specialized Resource Functions (SRF)";

Part 5: "Distributed Functional Plane (DFP) [ITU-T Recommendation Q.1224 [10] (1997) modified]".

Proposed national transposition dates	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

1 Scope

The present document provides the Abstract Test Suite (ATS) for testing of the Service Switching Function (SSF) and the Specialized Resource Function (SRF) of the core Intelligent Network Application Protocol (INAP) of Intelligent Network (IN) according to EN 301 140-1 [1].

In this part 4-3, the SRF is covered.

Annex A provides the Tree and Tabular Combined Notation (TTCN).

Annex B provides the Partial Protocol Implementation eXtra Information for Testing (PIXIT) Proforma.

Annex C provides the Protocol Conformance Test Report (PCTR) Proforma.

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] EN 301 140-1: "Intelligent Network (IN); Intelligent Network Application Protocol (INAP); Capability Set 2 (CS2); Part 1: Protocol specification".

[2] EN 301 140-4-1: "Intelligent Network (IN); Intelligent Network Application Protocol (INAP); Capability Set 2 (CS2); Part 4: Abstract Test Suite (ATS) specification and Partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma for Service Switching Function (SSF); Sub-part 1: Basic capability set of CS-1 including CS-2 complements".

[3] EN 301 140-2: "Intelligent Network (IN); Intelligent Network Application Protocol (INAP); Capability Set 2 (CS2); Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification".

[4] ISO/IEC 9646-6: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 6: Protocol profile test specification".

[5] ISO/IEC 9646-3: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 3: The Tree and Tabular Combined Notation (TTCN)".

Annex A (normative): TTCN of the ATS for INAP CS2 CPH

Refer to EN 301 140-4-1 [2] clauses 1 to 7 for the methodology to obtain the TTCN, as well as the ATS convention, etc.

This ATS has been produced using the Tree and Tabular Combined Notation (TTCN) according to ISO/IEC 9646-3 [5].

The ATS was developed on a separate TTCN software tool and therefore the TTCN tables are not completely referenced in the table of contents. The ATS itself contains a test suite overview part which provides additional information and references.

A1 The TTCN Graphical form (TTCN.GR)

The TTCN.GR representation of this ATS is contained in an Adobe Portable Document Format™ file (SFR_cs2_v5.PDF contained in archive ak10ridc.ZIP) which accompanies the present document.

A2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to this ATS is contained in an ASCII file (SFR_cs2_v5.MP contained in archive ak10ridc.ZIP) which accompanies the present document.

NOTE: According to ISO/IEC 9646-3 [5], in case of a conflict in interpretation of the operational semantics of TTCN.GR and TTCN.MP, the operational semantics of the TTCN.GR representation takes precedence.

Annex B (normative): Partial PIXIT proforma for SRF

The PIXIT proforma is based on ISO/IEC 9646-6 [4]. Any additional information needed can be found in this international standard document.

B.1 Identification summary

Table B.1

PIXIT number:	
Test laboratory name:	
Date of issue:	
Issued to:	

B.2 ATS summary

Table B.2

Protocol specification:	EN 301 140-1
Protocol to be tested:	
ATS specification:	EN 301 140-4-3
Abstract test method:	Remote test method, embedded variant

B.3 Test laboratory

Table B.3

Test laboratory identification:	
Test laboratory manager:	
Means of testing:	
SAP address:	

B.4 Client identification

Table B.4

Client identification:	
Client test manager:	
Test facilities required:	

B.5 SUT

Table B.5

Name:	
Version:	
SCS number:	
Machine configuration:	
Operating system identification:	
IUT identification:	
PICS reference for IUT:	
Limitations of the SUT:	
Environmental conditions:	

B.6 Protocol layer information

B.6.1 Protocol identification

Table B.6

Name:	EN 301 140-1
Version:	
PICS references:	EN 301 140-2

B.6.2 IUT information

B.6.2.1 Implicit send events

Table B.7 Implicit send events

Item	PIXIT (See note)	Related implicit send message (PDU)	Invocation description
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
NOTE: The PIXIT names for the implicit send events in this table are the same as those of the test steps in which the implicit send events are used.			

B.6.2.2 Core INAP Parameter values

Table B.8 Parameter values

Item	Parameter	Parameter type	Explanation/Format	Value
	PIX_AChBillingChargingCharacteristics	AChBillingChargingCharacteristics	"xx"H	
	PIX_AlertingPattern	AlertingPattern	"xxx"H	
	PIX_AlertingPattern_ICA	AlertingPattern	"xxx"H	
	PIX_APtyAbandonCause	Cause	"xx"H	
	PIX_APtyDiscCause	Cause	"xx"H	
	PIX_AssistingSSPIRoutingAddress	AssistingSSPIRoutingAddress	"xxxx"H	
	PIX_BPtyBusy_UDUBCause	Cause	"xx"H	
	PIX_BPtyNoAnswerCause	Cause	"xx"H	
	PIX_CalledPartyNumber1_CON	CalledPartyNumber	LegId 2 "xxxx"H	
	PIX_CalledPartyNumber2_CON	CalledPartyNumber	LegId 3 "xxxx"H	
	PIX_CalledPartyNumber3_CON	CalledPartyNumber	LegId 4 "xxxx"H	
	PIX_CalledPartyNumber4_CON	CalledPartyNumber	LegId 5 "xxxx"H	
	PIX_CalledPartyNumber5_CON	CalledPartyNumber	LegId 6 "xxxx"H	
	PIX_CalledPartyNumber6_CON	CalledPartyNumber	LegId 7 "xxxx"H	
	PIX_CalledPartyNumber7_CON	CalledPartyNumber	LegId 8 "xxxx"H	
	PIX_CalledPartyNumber8_CON	CalledPartyNumber	LegId 9 "xxxx"H	
	PIX_CalledPartyNumberInvalid_CON	CalledPartyNumber	"xxxx"H	
	PIX_CalledPartyNumber1_ICA	CalledPartyNumber	LegId 2 "xxxx"H	
	PIX_CalledPartyNumber2_ICA	CalledPartyNumber	LegId 3 "xxxx"H	
	PIX_CalledPartyNumber3_ICA	CalledPartyNumber	LegId 4 "xxxx"H	
	PIX_CalledPartyNumber4_ICA	CalledPartyNumber	LegId 5 "xxxx"H	
	PIX_CalledPartyNumber5_ICA	CalledPartyNumber	LegId 6 "xxxx"H	
	PIX_CalledPartyNumber6_ICA	CalledPartyNumber	LegId 7 "xxxx"H	
	PIX_CalledPartyNumber7_ICA	CalledPartyNumber	LegId 8 "xxxx"H	
	PIX_CalledPartyNumber1_SetupInd	CalledPartyNumber	"xxxx"H	
	PIX_CalledPartyNumber2_SetupInd	CalledPartyNumber	"xxxx"H	
	PIX_CallingPartyNumber1	CallingPartyNumber	"xxxx"H	
	PIX_CallingPartyNumber2	CallingPartyNumber	"xxxx"H	
	PIX_CallingPartysCategory_CON	CallingPartysCategory	"xx"H	
	PIX_CallingPartysCategory_SetupInd	CallingPartysCategory	"xx"H	
	PIX_DateAndTime	DateAndTime	YYMMDDHHMMSS	
	PIX_Duration	Duration	Seconds	
	PIX_EventTypeCharging1	EventTypeCharging		
	PIX_EventTypeCharging2	EventTypeCharging		
	PIX_FCIBillingChargingCharacteristics	FCIBillingChargingCharacteristics		
	PIX_InbandInfo_message	InbandInfo	InformationToSend	
	PIX_Interval	Integer	Seconds	
	PIX_IPRoutingAddress	IPRoutingAddress	"xxx"H	
	PIX_LocationNumber	LocationNumber	"xxxx"H	
	PIX_MaximumNumberOfCounters	MaximumNumberOfCounters	"xx"H	
	PIX_NumberOfCalls	Integer	xx	
	PIX_OriginalCalledPartyNumber	CalledPartyNumber	"xxxx"H	
	PIX_RedirectingPartyNumber	CalledPartyNumber	"xxxx"H	
	PIX_RedirectionInformation	RedirectionInformation	"xx"H	
	PIX_ReleaseCause	Cause	"xx"H	
	PIX_RouteSelectFailure1Cause	Cause	"xx"H	
	PIX_RouteSelectFailure2Cause	Cause	"xx"H	
	PIX_ScfID	ScfID	"xxxx"H	
	PIX_ServiceInteractionIndicators	ServiceInteractionIndicators	"xx"H	
	PIX_ServiceKey1	ServiceKey	"xx"H	
	PIX_ServiceKey2	ServiceKey	"xx"H	
	PIX_SFBillingChargingCharacteristics	SFBillingChargingCharacteristics	"xxxx"H	
	PIX_StartTime	DateAndTime	YYMMDDHHMMSS	
	PIX_StopTime	DateAndTime	YYMMDDHHMMSS	

Item	Parameter	Parameter type	Explanation/Format	Value
	PIX_ElementaryMessageID	integer	xxx	
	PIX_CorrelationId	correlationID	"xxx"H	
	PIX_UiScriptID1	integer	xxx	
	PIX_UiScriptID2	integer	xxx	
	PIX_UiScriptIDInvalid	integer	xxx	
	PIX_UiScriptResult	UiScriptResult	"xxxx"H	
	PIX_UiScriptSpecificInfo	UiScriptSpecificInfo	"xxxx"H	

Annex C (normative): Protocol Conformance Test Report (PCTR) proforma for SRF

The PCTR Proforma is based on ISO/IEC 9646-6 [4]. Any additional information needed can be found in this document.

C.1 Identification summary

C.1.1 Protocol conformance test report

Table C.1

PCTR number:	
PCTR date:	
Corresponding SCTR number:	
Corresponding SCTR date:	
Test laboratory identification:	
Test laboratory manager:	
Signature:	

C.1.2 IUT identification

Table C.2

Name:	
Version:	
Protocol specification:	
PICS:	
Previous PCTR if any:	

C.1.3 Testing environment

Table C.3

PIXIT number:	
ATS specification:	
Abstract test method:	
Means of testing identification:	
Date of testing:	
Conformance log reference(s):	
Retention date for log reference(s):	

C.1.4 Limits and reservation

Additional information relevant to the technical contents or further use of the test report, or the rights and obligations of the test laboratory and the client, may be given here. Such information may include restriction on the publication of the report.

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C.1.5 Comments

Additional comments may be given by either the client or the test laboratory on any of the contents of the PCTR, for example, to note disagreement between the two parties.

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C.2 IUT conformance status

This IUT has or has not been shown by conformance assessment to be non-conforming to the specified protocol specification.

Strike the appropriate words in this sentence. If the PICS for this IUT is consistent with the static conformance requirements as specified in clause C.3 in this report and there are no "FAIL" verdicts to be recorded in clause C.6 strike the words "has or". otherwise strike the words "or has not".

C.3 Static conformance summary

The PICS for this IUT is or is not consistent with the static conformance requirements in the specified protocol.

Strike the appropriate words in this sentence.

C.4 Dynamic conformance summary

The test campaign did or did not reveal errors in the IUT.

Strike the appropriate words in this sentence. If there are no "FAIL" verdicts to be recorded in clause C.6 of this report strike the words "did or" otherwise strike the words "or did not".

Summary of the results of groups of test:

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C.5 Static conformance review report

If clause C.3 indicates non-conformance, this subclause itemises the mismatches between the PICS and the static conformance requirements of the specified protocol specification.

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C.6 Test campaign report

Table C.4

ATS reference	Selected	Run	Verdict	Observations (see note)
CR				
IN2_A_BASIC_CR_CA_01	Yes/No	Yes/No		
IN2_A_BASIC_CR_CA_02	Yes/No	Yes/No		
IN2_A_BASIC_CR_BI_01	Yes/No	Yes/No		
DF				
IN2_A_BASIC_DF_CA_01	Yes/No	Yes/No		
IN2_A_BASIC_DF_BO_01	Yes/No	Yes/No		
DFW				
IN2_A_BASIC_DFW_CA_01	Yes/No	Yes/No		
IN2_A_BASIC_DFW_BO_01	Yes/No	Yes/No		
PA				
IN2_A_BASIC_PA_BV_01	Yes/No	Yes/No		
IN2_A_BASIC_PA_BV_02	Yes/No	Yes/No		
IN2_A_BASIC_PA_BV_03	Yes/No	Yes/No		
PC				
IN2_A_BASIC_PC_BV_01	Yes/No	Yes/No		
IN2_A_BASIC_PC_BV_02	Yes/No	Yes/No		
IN2_A_BASIC_PC_BI_01	Yes/No	Yes/No		
PR				
IN2_A_BASIC_PR_BV_01	Yes/No	Yes/No		
IN2_A_BASIC_PR_BV_02	Yes/No	Yes/No		
IN2_A_BASIC_PR_BO_01	Yes/No	Yes/No		
SC				
IN2_A_BASIC_SC_CA_01	Yes/No	Yes/No		
IN2_A_BASIC_SC_BO_01	Yes/No	Yes/No		
IN2_A_BASIC_SC_BI_01	Yes/No	Yes/No		
SE				
IN2_A_BASIC_SE_CA_01	Yes/No	Yes/No		
SI				
IN2_A_BASIC_SI_CA_01	Yes/No	Yes/No		
IN2_A_BASIC_SI_CA_02	Yes/No	Yes/No		
IN2_A_BASIC_SI_BO_01	Yes/No	Yes/No		
IN2_A_BASIC_SI_BI_01	Yes/No	Yes/No		
SR				
IN2_A_BASIC_SR_CA_01	Yes/No	Yes/No		
IN2_A_BASIC_SR_CA_02	Yes/No	Yes/No		
IN2_A_BASIC_SR_BO_01	Yes/No	Yes/No		
IN2_A_BASIC_SR_BI_01	Yes/No	Yes/No		
EC				
IN2_A_BASIC_EC_CA_01	Yes/No	Yes/No		
IN2_A_BASIC_EC_BV_01	Yes/No	Yes/No		
IN2_A_BASIC_EC_BI_01	Yes/No	Yes/No		
AR				
IN2_A_BASIC_AR_CA_01	Yes/No	Yes/No		
IN2_A_BASIC_AR_BV_01	Yes/No	Yes/No		

C.7 Observations

Additional information relevant to the technical content of the PCTR are given here.

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History

Document history				
V1.1.2	June 1999	Public Enquiry	PE 9947:	1999-06-23 to 1999-11-19