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Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 2: Protocol testing specification for Voice plus Data (V+D); Sub-part 2: Abstract Test Suite (ATS) for Network (NWK) layer

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Contents

Foreword

This European Telecommunication Standard (ETS) has been produced by the Terrestrial Trunked Radio (TETRA) Project of the European Telecommunications Standards Institute (ETSI).

Every ETS prepared by ETSI is a voluntary standard. This ETS contains text concerning conformance testing of the equipment to which it relates. This text should be considered only as guidance and does not make this ETS mandatory.

This ETS will consist of two parts with various sub-parts:

Part 1: "Radio";

Part 2: "Protocol testing specification for Voice plus Data (V+D)".

Transposition dates	
Date of adoption of this ETS:	6 February 1998
Date of latest announcement of this ETS (doa):	31 May 1998
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	30 November 1998
Date of withdrawal of any conflicting National Standard (dow):	30 November 1998

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1 Scope

This European Telecommunication Standard (ETS) contains the Abstract Test Suite (ATS) to test the TETRA Voice plus Data (V+D) Network (NWK) layer. The NWK layer protocols are specified in ETS 300 392-2 [2]. The Test Suite Structure (TSS) and Test Purposes (TPs) for this ATS are defined in ETS 300 394-2-1 [1].

The objective of this test specification is to provide a basis for approval tests for TETRA equipment giving a high probability of air interface inter-operability between different manufacturer's TETRA equipment.

The ISO standard for the methodology of conformance testing, ISO/IEC 9646-1 [3], ISO/IEC 9646-2 [4], ISO/IEC 9646-3 [5] and ISO/IEC 9646-5 [6], as well as the ETSI rules for conformance testing, ETS 300 406 [8] and ETR 141 (see annex D), are used as a basis for the test methodology.

Annex A provides the Tree and Tabular Combined Notation (TTCN) part of this ATS.

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

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

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 300 394-2-1: "Radio Equipment and Systems (RES); Trans-European Trunked Radio (TETRA) system; Conformance testing specification; Part 2: Protocol testing specification for Voice plus Data (V+D); Part 2-1: Test suite structure and test purposes".

[2] ETS 300 392-2: "Radio Equipment and Systems (RES); Trans-European Trunked Radio (TETRA) system; Voice plus Data (V+D); Part 2: Air Interface (AI)".

[3] ISO/IEC 9646-1 (1991): "Information technology - Open Systems Interconnection - Conformance Testing Methodology and Framework - Part 1: General Concepts" (see also CCITT Recommendation X.290 (1991)).

[4] ISO/IEC 9646-2 (1991): "Information technology - Open Systems Interconnection - Conformance Testing Methodology and Framework - Part 2: Abstract Test Suite Specification" (see also CCITT Recommendation X.291 (1991)).

[5] ISO/IEC 9646-3 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 3: The tree and tabular combined notation" (see also CCITT Recommendation X.292 (1992)).

[6] ISO/IEC 9646-5 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 5: Requirements on test laboratories and clients for the conformance assessment process" (see also CCITT Recommendation X.292 (1992)).

[7] ISO/IEC 9646-6 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 6: Protocol profile test specification".

[8] ETS 300 406: "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".

3 Definitions and abbreviations

3.1 TETRA definitions

For the purposes of this ETS, the definitions given in ETS 300 392-2 [2] apply.

3.2 TETRA abbreviations

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

CC	Call Control
CMCE	Circuit Mode Control Entity
MAC	Medium Access Control
MLE	Mobile Link Entity
MM	Mobility Management
MS	Mobile Station
PC	Protocol Control
SCLNP	Specific Connectionless Network Protocol
SDS	Short Data Service
SDU	Service Data Unit

3.3 ISO 9646 definitions

For the purposes of this ETS, the following ISO/IEC 9646-1 [3] definitions apply:

Abstract Test Suite (ATS)
Abstract Test Method (ATM)
Implementation Conformance Statement (ICS)
Implementation Under Test (IUT)
Implementation eXtra Information for Testing (IXIT)
Lower Tester (LT)
PICS proforma
PIXIT proforma
Point of Control and Observation (PCO)
Protocol Implementation Conformance Statement (PICS)
Protocol Implementation eXtra Information for Testing (PIXIT)
Service Access Point (SAP)
Single Party Testing (SPyT)
System Under Test (SUT)
Upper Tester (UT)

For the purposes of this ETS, the following ISO/IEC 9646-3 [5] definitions apply:

TTCN.GR
TTCN.MP

For the purposes of this ETS, the following ISO/IEC 9646-5 [6] definitions apply:

Protocol Conformance Test Report (PCTR)
PCTR proforma

3.4 ISO 9646 abbreviations

For the purposes of this ETS, the following ISO/IEC 9646-1 [3] abbreviations apply:

ASP	Abstract Service Primitive
ATM	Abstract Test Method
ATS	Abstract Test Suite
IUT	Implementation Under Test
LT	Lower Tester
NWK	Network Layer
PCO	Point of Control and Observation

PDU	Protocol Data Unit
PICS	Protocol Implementation Conformance Statements
PIXIT	Protocol Implementation eXtra Information for Testing
SAP	Service Access Point
SPyT	Single Party Testing
SUT	System Under Test
TC	Test Case
TP	Test Purpose
TTCN	Tree and Tabular Combined Notation
TSS	Test Suite Structure
UT	Upper Tester

For the purposes of this ETS, the following ISO/IEC 9646-5 [6] abbreviations apply:

PCTR	Protocol Conformance Test Report

4 Abstract Test Method (ATM)

This clause describes the ATM used for testing the TETRA NWK layer protocol. It is the embedded variant of the remote test method used in Single Party Testing (SPyT) context, as defined in ISO/IEC 9646-2 [4], clause 11. This test method has been selected, because:

- this test method implies no specific requirements from the Implementation Under Test (IUT);
- the upper Service Access Point (SAP) of the IUT cannot be directly observed;
- the variety of the possible TETRA implementations is a serious technical obstacle for the adoption of a different ATM;
- this test method places minimum limitations in the realization of conformance testing.

The selected test method is illustrated in figure 1.

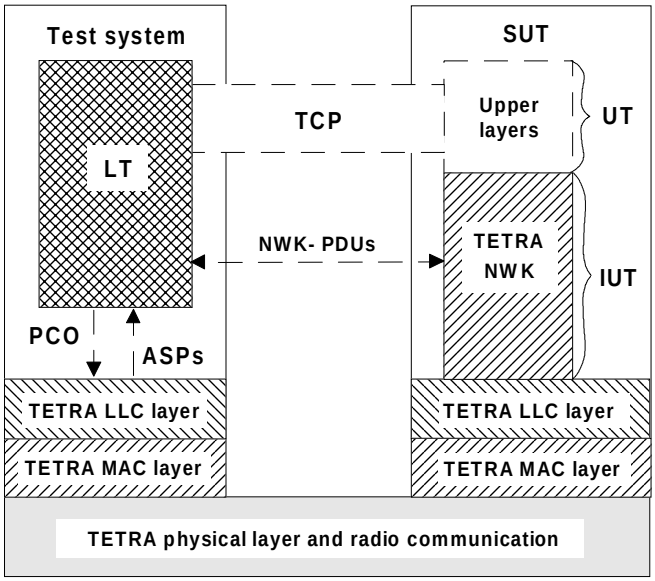

Figure 1: Remote SPyT test method for TETRA NWK layer

4.1 Lower Tester (LT)

A LT is located in a remote TETRA test system. It controls and observes the behaviour of the IUT.

4.2 Upper Tester (UT)

There is no explicit UT in the remote test method, but the TETRA Network (NWK) layer and the layers above inside the System Under Test (SUT) are used implicitly for testing the NWK layer.

4.3 Test Co-ordination Procedures (TCP)

The implicit send events defined by the provider of an implementation in annex B serve the purpose of the TCP. They are used as an input to the IUT communicating with the UT to initiate test events at the NWK layer.

4.4 Point of Control and Observation (PCO)

The PCOs for NWK layer testing are located inside the NWK protocols, e.g. inside Circuit Mode Control Entity (CMCE) between Call Control (CC) and Protocol Control (PC). Two different test configurations are assumed. One for testing the upper protocols in NWK layer, Mobility Management (MM), CMCE, and Specific Connectionless Network Protocol (SCLNP), and another one for testing Mobile Link Entity (MLE). In the first case PCOs for upper protocols are to be used with test system providing the underlying MLE functionality and in the latter case the PCO inside MLE protocol is to be used.

All test events at the PCOs carrying service user data are specified in terms of NWK layer PDUs. The mapping of the NWK PDUs to possible Logical Link Control (LLC) or Medium Access Control (MAC) layer service primitives is left to the test implementation. Additionally some Abstract Service Primitives (ASPs) are defined for control and observation purposes.

5 ATS conventions

This clause describes the conventions applied to define the ATS and gives the naming conventions chosen for the different elements of the ATS.

The ATS conventions are intended to give a better understanding of the ATS but they describe also the conventions made for the development of the ATS, thus for any later maintenance purposes or further development of the ATS, the conventions described in this clause shall be considered.

5.1 Naming conventions

5.1.1 Declarations part

This subclause describes the naming conventions chosen for the elements of the ATS declarations part.

5.1.1.1 Test suite type and structured type definitions

The test suite type and test suite structured type identifiers describe the information elements, and each whole word included in the name is written in lowercase starting by an uppercase letter:

EXAMPLE:	CallOwnershipType	simple type
	SSI_Type	simple type
	ITSI_Type	structured type

In the case an abbreviation is included in the declaration name, there is an underscore ("_") before and/or after it, separating it from the rest of the identifier. This rule with abbreviations apply to all the naming conventions in the whole test suite.

5.1.1.2 Test suite operations definitions

The test suite operation identifiers are composed of strings in uppercase letters starting by the uppercase string "TSO_". The different strings in the definition are separated with underscores.

EXAMPLE: TSO_RADIO_LINK_FAILURE

5.1.1.3 Test suite parameter declarations

The test suite parameter identifiers are composed of strings in uppercase letters starting by the uppercase string "PIC_" or "PIX_" and separated by underscores.

If the test suite parameter references a PICS item, the prefix "PIC_" is used.

EXAMPLE: PIC_INDIVIDUAL_CALL

If the test suite parameter references a PIXIT item, the prefix "PIX_" is used.

EXAMPLE: PIX_MS_ITSI

Complete names as defined in the specifications are used.

5.1.1.4 Test case selection expression definitions

The naming conventions for the test case selection expression definitions use free text starting with an uppercase letter. The name of the expression shall explain clearly the selection rule. The test case selection expressions are generally logical combinations of the test suite parameter definitions.

5.1.1.5 Test suite constant declarations

The test suite constant identifiers are composed of strings in uppercase letters starting by the uppercase string "TSC_".

EXAMPLE: TSC_MS_VITSI
TSC_MS_HOME_LOCATION_AREA

Complete names as defined in the specifications are used. However, in the parameters including a dot character, the dot is replaced by an underscore.

5.1.1.6 Test suite variable declarations

The test suite variable identifiers are composed of string in lowercase letters starting by the lowercase string "tsv_".

EXAMPLE: tsv_call_active

If the test suite variable represents a system parameter or value, the name defined in the specifications is used. However, in the variables including a dot character, the dot is replaced by an underscore.

5.1.1.7 Test case variable declarations

The test case variable identifiers are composed of strings in lowercase letters starting by the lowercase string "tcv_".

EXAMPLE: tcv_energy_economy_group

5.1.1.8 PCO declarations

The point of control and observation identifiers are composed of three to six capital letters, beginning with an "L", as there are only LTs.

EXAMPLE:

LCC	represents a PCO on NWK interface for call control PDUs as LT in the test equipment.
LMLE	represents a PCO on NWK interface for MLE PDUs as LT in the test equipment.

5.1.1.9 Timer declarations

Two kinds of timers can be distinguished:

1) standardized:

   Those defined in the standard, e.g. T.301, use the same name as in the standard, beginning with a capital "T", except that the dot is replaced by an underscore.

   As there is a tolerance margin accepted for these timers, two values are needed:

   - the maximum value allowed, which will use the suffix "_Max";
   - the minimum value allowed, which will use the suffix "_Min".

EXAMPLE 1: T_301_Min, T_301_Max

2) non-standardized:

   Those not defined in the standard, i.e. for execution use, e.g. a timer waiting for a response. These timers begin with the prefix "T_", followed by a string in lowercase letters with each word in the following string starting with an uppercase letter.

EXAMPLE 2: T_IUT_Response
T_NoResponse

5.1.1.10 ASP type definitions

ASP definitions follow the specification in the ETS 300 392-2 [2] when a corresponding definition exists. If not, a free name is used.

EXAMPLE: MLE_LINK_indication
RESET_MS.

5.1.1.11 PDU type definitions

The identifier of a PDU is given in a string in uppercase letters, which represents the layer message.

EXAMPLE 1: D_STATUS for the D-STATUS layer 3 PDU reception;
U_DISCONNECT for the DISCONNECT layer 3 PDU transmission.

Where the message is a composite word, an underscore character appears in the string.

EXAMPLE 2: D_CALL_PROCEEDING is the D-CALL PROCEEDING layer 3 message.

5.1.1.12 Alias definitions

No alias definitions are used in the test suite.

5.1.2 Constraints part

This subclause describes the naming conventions chosen for the elements of the ATS constraints part.

Constraint identifiers commence with uppercase. The remaining part of the name is separated from the beginning with an underscore and is written in lowercase with each word starting with an uppercase letter.

Identifier names of elements concerning the same subject have equivalent names in the declaration and the constraint part:

- Declaration part: U_STATUS
- Constraint part: U_STATUS_IgnoreAll

The name of the modified constraint describes the particularity of the modified constraint:

EXAMPLE: D_LOCATION_UPDATE_ACCEPT_HomeNetwork

If formal parameter lists are used, the variable names are written in lowercase. The variable name is the same as the name of the element it is representing starting with prefix "cpa_".

EXAMPLE: U_STATUS_No_EG(cpa_Status: StatusType)

5.1.3 Dynamic part

This subclause describes the naming conventions chosen for the elements of the ATS dynamic part.

5.1.3.1 Test case identifier

The identifier of a TC is built according to table 1:

Table 1: TC naming convention

<ts>_<fm>_<x>_<s>_<nn>		
<ts> = test suite	NWK	Network layer
<fm> = functional module or subentity	CMCE/IC	Circuit Mode Control Entity/Individual Call
	CMCE/GC	Circuit Mode Control Entity/Group Call
	CMCE/SDS	Circuit Mode Control Entity/Short Data Srv.
	MM	Mobility Management
	SCLNP	Specific Connectionless Network Protocol
	MLE	Mobile Link Entity
x = Type of testing	CA	Capability tests
	BV	Valid Behaviour tests
	BI	Invalid Behaviour tests
	TI	Timer expiry and counter mismatch tests
s = test subgroup (as many subgroups as required)		as defined in the test suite structure
<nn> = sequential number	(01-99)	TC Number

5.1.3.2 Test step identifier

The test step identifier is built with a string of lowercase letters leaded by a string of capital letter and joined by an underscore character. The first string indicates the main function of the test step; e.g. PRE for preamble, PST for postamble, LTS for local tree name and STP for general step. The second string indicates the meaning of the step.

EXAMPLES: PRE_Name
PST_Name
LTS_Name
STP_Name

5.1.3.3 Default identifier

Two default identifiers are used, namely OtherwiseFail and OtherwiseFail_MLE.

5.2 Implementation conventions

Fully functional underlying LLC protocol is assumed from the test system.

The NWK layer PDUs are assumed to be mapped to LLC layer service primitives in the test system implementation and therefore are not part of the ATS.

5.3 TC and TP mapping

There is a one-to-one mapping between the TC identifiers and the TP identifiers. The correspondence rule is given by the following examples:

TP identifier	TC identifier
TP/NWK/MM/CA-01	NWK_MM_CA_01
TP/NWK/CMCE/IC/CA/SU-04	NWK_CMCE_IC_CA_SU_04
TP/NWK/MLE/BV/CR-03	NWK_MLE_BV_CR_03

Annex A (normative): ATS for TETRA NWK layer

The ATS is written in TTCN according to ISO/IEC 9646-3 [5].

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

A.1 The TTCN Graphical form (TTCN.GR)

The TTCN.GR representation of this ATS is contained in a Postscript file (NWK.PS included in archive 39422e1.LZH) which accompanies this ETS.

A.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to this ATS is contained in an ASCII text file (NWK.MP included in archive 39422e1.LZH) which accompanies this ETS.

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 TETRA NWK layer

The PIXIT proforma is based on ISO/IEC 9646-6 [7]. 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:	ETS 300 392-2
Protocol to be tested:	
ATS specification:	ETS 300 394-2-2
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:	TETRA - Network (NWK) layer - ETS 300 392-2
Version:	
PICS references:	

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	IMP_MLE_GroupCallSetup	Initiate a CMCE group call setup.	
2	IMP_U_CONNECT_Hook	Cause IUT to send U-CONNECT PDU using Hook signalling.	
3	IMP_U_SETUP_IC_Hook_any_address	Cause IUT to send U-SETUP PDU for individual call using Hook signalling.	
4	IMP_U_SETUP_IC_Direct_any_address	Cause IUT to send U-SETUP PDU for individual call using Direct signalling.	
5	IMP_U_DISCONNECT_normal	Cause IUT to send U-DISCONNECT PDU.	
6	IMP_U_TX_CEASED_std	Cause IUT to send U-TX CEASED PDU.	
7	IMP_U_TX_DEMAND_std	Cause IUT to send U-TX DEMAND PDU.	
8	IMP_U_SETUP_GC_Direct_any_address	Cause IUT to send U-SETUP PDU for group call using Direct signalling.	
9	IMP_U_SDS_DATA_Any	Cause IUT to send U-SDS DATA PDU.	
10	IMP_U_SDS_STATUS_Any	Cause IUT to send U-SDS SATUS PDU.	
11	IMP_U_LOCATION_UPDATE_DEMAND_Type	Cause IUT to send U-LOCATION UPDATE DEMAND PDU having given location update type and ITSI.	
12	IMP_U_LOCATION_UPDATE_DEMAND_ClassOfMS	Cause IUT to send U-LOCATION UPDATE DEMAND PDU having given location update type, ITSI. ClassOfMS element is mandatory to be present.	
13	IMP_U_ITSI_DETACH_Normal	Cause IUT to send U-ITSI DEATCH PDU.	
14	IMP_U_STATUS_Energy Saving	Cause IUT to send U-STATUS PDU to change energy saving mode.	
15	IMP_U_ATTACH_DETACH_GROUP_ID_Any	Initiate MM group ID attachment or detachment.	
16	IMP_S1_DT_Any	Cause IUT to send SCLNP S1-DT PDU.	
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 Parameter values

Table B.8: Parameter values

Item	Parameter	Parameter type	Explanation	Value or reference
1	PIX_CHANNEL_1	MainCarrierNoType	A channel that the IUT initially tries to camp on to.	
2	PIX_CHANNEL_2	MainCarrierNoType	Another channel that the IUT is capable of selecting.	
3	PIX_COUNTRY_CODE	MCC_Type	Home country code of the IUT.	
4	PIX_NETWORK_CODE	MNC_Type	Home network code of the IUT.	
5	PIX_LOCATION_AREA	LocationAreaType	Home location area of the IUT.	
6	PIX_NEW_LOCATION_AREA	LocationAreaType	A location area outside the IUT home location area.	
7	PIX_NEW_COUNTRY_CODE	MCC_Type	A country code outside the MS home country.	
8	PIX_NEW_NETWORK_CODE	MNC_Type	A network code outside the MS home network	
9	PIX_MS_TEI	TEI_type	TEI of the IUT, 60 bits	
10	PIX_MS_ITSI	ITSI_type	ITSI of the IUT	
11	PIX_T303	INTEGER	Duration of the T303 in the IUT in seconds.	
12	PIX_T308	INTEGER	Duration of the T308 in the IUT in seconds.	
13	PIX_T311	INTEGER	Duration of the T311 in the IUT in seconds.	

Table B.9: SDS parameter values

Item	Parameter	Parameter type	Explanation	Value or reference
1	PIX_INCOMING_PREDEFINED_SDS_OBSERVABLE	BOOLEAN	Are the incoming predefined SDS messages observable to the user of the IUT?	
2	PIX_HOW_INCOMING_PREDEFINED_SDS_IS_OBSERVED	VisibleString	IF Item 1 TRUE: How the incoming predefined SDS messages are observed?	
3	PIX_SDS_STATUS	PrecodedStatusType	IF Item 1 TRUE: SDS message suitable for predefined SDS message sent to the IUT.	
4	PIX_INCOMING_USER_DEFINED_SDS_OBSERVABLE	BOOLEAN	Are the incoming user defined SDS messages observable to the user of the IUT?	
5	PIX_HOW_INCOMING_USER_DEFINED_SDS_IS_OBSERVED	VisibleString	IF Item 4 TRUE: How the incoming user defined SDS messages are observed?	
6	PIX_SDS_USER_TYPE	ShortDataTypeIDType	IF Item 4 TRUE: Which kind of user defined SDS is supported?	
7	PIX_SDS_USER_MSG_1	UserDefinedData1Type	IF Item 4 TRUE: SDS message suitable for type 1, if PIX_SDS_USER_TYPE indicates '1'.	
8	PIX_SDS_USER_MSG_2	UserDefinedData2Type	IF Item 4 TRUE: SDS message suitable for type 2, if PIX_SDS_USER_TYPE indicates '2'.	
9	PIX_SDS_USER_MSG_3	UserDefinedData3Type	IF Item 4 TRUE: SDS message suitable for type 3, if PIX_SDS_USER_TYPE indicates '3'.	
10	PIX_SDS_USER_MSG_4	UserDefinedData4Type	IF Item 4 TRUE: SDS message suitable for type 4, if PIX_SDS_USER_TYPE indicates '4'.	

Annex C (normative): Protocol Conformance Test Report (PCTR) proforma for TETRA NWK layer

The PCTR Proforma is based on ISO/IEC 9646-6 [7]. Any additional information needed can be found in this ETS.

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:	Remote test method, embedded variant
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 clause itemizes 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)
NWK_CMCE_IC_CA_SU_01	Yes/No	Yes/No		
NWK_CMCE_IC_CA_SU_02	Yes/No	Yes/No		
NWK_CMCE_IC_CA_SU_03	Yes/No	Yes/No		
NWK_CMCE_IC_CA_SU_04	Yes/No	Yes/No		
NWK_CMCE_IC_CA_SU_05	Yes/No	Yes/No		
NWK_CMCE_IC_CA_CD_01	Yes/No	Yes/No		
NWK_CMCE_IC_CA_CD_02	Yes/No	Yes/No		
NWK_CMCE_IC_CA_CD_03	Yes/No	Yes/No		
NWK_CMCE_IC_BV_OC_01	Yes/No	Yes/No		
NWK_CMCE_IC_BV_OC_02	Yes/No	Yes/No		
NWK_CMCE_IC_BV_OC_03	Yes/No	Yes/No		
NWK_CMCE_IC_BV_CC_01	Yes/No	Yes/No		
NWK_CMCE_IC_BV_CC_02	Yes/No	Yes/No		
NWK_CMCE_IC_BV_MA_TC_01	Yes/No	Yes/No		
NWK_CMCE_IC_BV_MA_TC_02	Yes/No	Yes/No		
NWK_CMCE_IC_BV_MA_TC_03	Yes/No	Yes/No		
NWK_CMCE_IC_BV_MA_TC_04	Yes/No	Yes/No		
NWK_CMCE_IC_BV_MA_TC_05	Yes/No	Yes/No		
NWK_CMCE_IC_BV_MA_TC_06	Yes/No	Yes/No		
NWK_CMCE_IC_BV_MA_CM_01	Yes/No	Yes/No		
NWK_CMCE_IC_BI_SU_01	Yes/No	Yes/No		
NWK_CMCE_IC_BI_SU_02	Yes/No	Yes/No		
NWK_CMCE_IC_BI_SU_03	Yes/No	Yes/No		
NWK_CMCE_IC_BI_MA_01	Yes/No	Yes/No		
NWK_CMCE_IC_BI_CD_01	Yes/No	Yes/No		
NWK_CMCE_IC_BI_CD_02	Yes/No	Yes/No		
NWK_CMCE_IC_TI_01	Yes/No	Yes/No		
NWK_CMCE_IC_TI_02	Yes/No	Yes/No		
NWK_CMCE_IC_TI_03	Yes/No	Yes/No		
NWK_CMCE_IC_TI_04	Yes/No	Yes/No		
NWK_CMCE_IC_TI_05	Yes/No	Yes/No		
NWK_CMCE_IC_TI_06	Yes/No	Yes/No		
NWK_CMCE_IC_TI_07	Yes/No	Yes/No		
NWK_CMCE_IC_TI_08	Yes/No	Yes/No		
NWK_CMCE_IC_TI_09	Yes/No	Yes/No		
NWK_CMCE_IC_TI_10	Yes/No	Yes/No		
NWK_CMCE_IC_TI_11	Yes/No	Yes/No		
NWK_CMCE_IC_TI_12	Yes/No	Yes/No		
NWK_CMCE_IC_TI_13	Yes/No	Yes/No		
NWK_CMCE_GC_CA_SU_01	Yes/No	Yes/No		
NWK_CMCE_GC_CA_CD_01	Yes/No	Yes/No		
NWK_CMCE_GC_BV_OC_01	Yes/No	Yes/No		
NWK_CMCE_GC_BV_CC_01	Yes/No	Yes/No		

(continued)

Table C.4 (continued)

ATS reference	Selected	Run	Verdict	Observations (see note)
NWK_CMCE_GC_BV_MA_TC_01	Yes/No	Yes/No		
NWK_CMCE_GC_BV_MA_TC_02	Yes/No	Yes/No		
NWK_CMCE_GC_BV_MA_TC_03	Yes/No	Yes/No		
NWK_CMCE_GC_BV_MA_TC_04	Yes/No	Yes/No		
NWK_CMCE_GC_BV_MA_TC_05	Yes/No	Yes/No		
NWK_CMCE_GC_BV_MA_TC_06	Yes/No	Yes/No		
NWK_CMCE_GC_BV_MA_TC_07	Yes/No	Yes/No		
NWK_CMCE_GC_BV_MA_CR_01	Yes/No	Yes/No		
NWK_CMCE_GC_BV_CD_01	Yes/No	Yes/No		
NWK_CMCE_GC_TI_01	Yes/No	Yes/No		
NWK_CMCE_GC_TI_02	Yes/No	Yes/No		
NWK_CMCE_GC_TI_03	Yes/No	Yes/No		
NWK_CMCE_GC_TI_04	Yes/No	Yes/No		
NWK_CMCE_GC_TI_05	Yes/No	Yes/No		
NWK_CMCE_GC_TI_06	Yes/No	Yes/No		
NWK_CMCE_GC_TI_07	Yes/No	Yes/No		
NWK_CMCE_SDS_IC_01	Yes/No	Yes/No		
NWK_CMCE_SDS_IC_02	Yes/No	Yes/No		
NWK_CMCE_SDS_OG_01	Yes/No	Yes/No		
NWK_CMCE_SDS_OG_02	Yes/No	Yes/No		
NWK_MM_CA_01	Yes/No	Yes/No		
NWK_MM_CA_02	Yes/No	Yes/No		
NWK_MM_CA_03	Yes/No	Yes/No		
NWK_MM_BV_RE_01	Yes/No	Yes/No		
NWK_MM_BV_RE_02	Yes/No	Yes/No		
NWK_MM_BV_RE_03	Yes/No	Yes/No		
NWK_MM_BV_RE_04	Yes/No	Yes/No		
NWK_MM_BV_RE_05	Yes/No	Yes/No		
NWK_MM_BV_RE_06	Yes/No	Yes/No		
NWK_MM_BV_RE_07	Yes/No	Yes/No		
NWK_MM_BV_RE_08	Yes/No	Yes/No		
NWK_MM_BV_EN_01	Yes/No	Yes/No		
NWK_MM_BV_EN_02	Yes/No	Yes/No		
NWK_MM_BV_EN_03	Yes/No	Yes/No		
NWK_MM_BV_EN_04	Yes/No	Yes/No		
NWK_MM_BV_EN_05	Yes/No	Yes/No		
NWK_MM_BV_EN_06	Yes/No	Yes/No		
NWK_MM_BV_EN_07	Yes/No	Yes/No		
NWK_MM_BV_EE_01	Yes/No	Yes/No		
NWK_MM_BV_AT_01	Yes/No	Yes/No		
NWK_MM_BV_AT_02	Yes/No	Yes/No		
NWK_MM_BV_AT_03	Yes/No	Yes/No		
NWK_MM_BV_AT_04	Yes/No	Yes/No		
NWK_MM_BI_01	Yes/No	Yes/No		
NWK_MM_BI_02	Yes/No	Yes/No		
NWK_MM_BI_03	Yes/No	Yes/No		
NWK_MM_BI_04	Yes/No	Yes/No		
NWK_MM_BI_05	Yes/No	Yes/No		
NWK_MM_TI_01	Yes/No	Yes/No		

(continued)

Table C.4 (concluded)

ATS reference	Selected	Run	Verdict	Observations (see note)
NWK_SCLNP_CA_01	Yes/No	Yes/No		
NWK_MLE_CA_CR_01	Yes/No	Yes/No		
NWK_MLE_CA_CR_02	Yes/No	Yes/No		
NWK_MLE_CA_CR_03	Yes/No	Yes/No		
NWK_MLE_CA_CR_04	Yes/No	Yes/No		
NWK_MLE_BV_CR_01	Yes/No	Yes/No		
NWK_MLE_BV_CR_02	Yes/No	Yes/No		
NWK_MLE_BV_CR_03	Yes/No	Yes/No		
NWK_MLE_BV_CR_04	Yes/No	Yes/No		
NWK_MLE_BV_CR_05	Yes/No	Yes/No		
NWK_MLE_BV_CR_06	Yes/No	Yes/No		
NWK_MLE_BV_CR_07	Yes/No	Yes/No		
NWK_MLE_BV_NB_01	Yes/No	Yes/No		
NWK_MLE_BV_NB_02	Yes/No	Yes/No		
NWK_MLE_BV_RE_01	Yes/No	Yes/No		
NWK_MLE_BV_RE_02	Yes/No	Yes/No		
NWK_MLE_BV_RE_03	Yes/No	Yes/No		
NWK_MLE_BV_TI_01	Yes/No	Yes/No		
NWK_MLE_BV_TI_02	Yes/No	Yes/No		
NWK_MLE_BV_TI_03	Yes/No	Yes/No		
NWK_MLE_BV_TI_04	Yes/No	Yes/No		
NOTE: Reference to any observations made in clause C.7 in this report.				

C.7 Observations

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

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Annex D (informative): Bibliography

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