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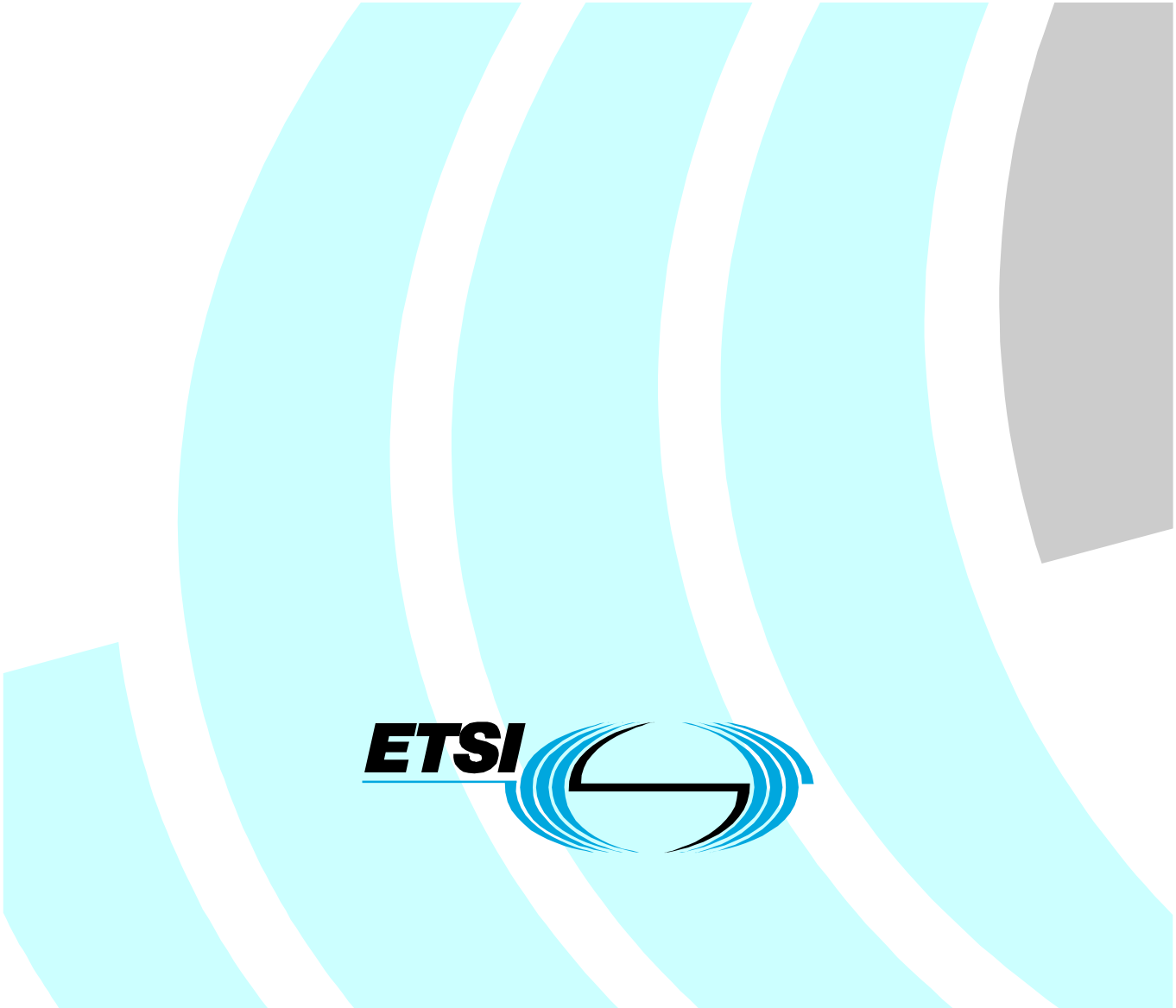
Technical Specification

Telecommunications and Internet Protocol Harmonization Over Networks (TIPHON) Technology Compliance Specification; Draft IETF SIP RFC 3261; Part 2: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification



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RTS/TIPHON-06021-2[2]

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ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
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Foreword

This Technical Specification (TS) has been produced by ETSI Project Telecommunications and Internet Protocol Harmonization Over Networks (TIPHON).

The present document is part 2 of a multi-part deliverable covering Telecommunications and Internet Protocol Harmonization Over Networks (TIPHON); Conformance Testing for TIPHON Release 3; TIPHON profile for Session Initiation Protocol (SIP), as described below:

Part 1: "Test Suite Structure and Test Purposes (TSS&TP) specification";

Part 2: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification".

1 Scope

The present document specifies the Abstract Test Suite (ATS) for the Session Initiation Protocol SIP as defined in RFC 3261 [1].

The objective of the present document is to provide a basis for conformance tests for SIP equipment giving a high probability of inter-operability between different manufacturer's SIP equipments.

Annex A provides the Testing and Test Control Notation (TTCN-3) part of the ATS.

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

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

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 and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

[1] IETF RFC 3261: "SIP: Session Initiation Protocol".

[2] ETSI ES 201 873-1 (V2.2.0): "Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 1: TTCN-3 Core Language".

[3] ETSI ES 201 873-5 (V1.1.1): "Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 5: TTCN-3 Runtime Interface (TRI)".

[4] ISO/IEC 9646-1 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".

[5] ISO/IEC 9646-2 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract test suite specification".

[6] ISO/IEC 9646-4 (1991): "Information Technology - Open Systems Interconnection - Conformance Testing Methodology and Framework, Part 4: Test realisation".

[7] ISO/IEC 9646-5 (1991): "Information Technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 5: Requirements on test laboratories".

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

[9] ISO/IEC 9646-7 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation conformance statement".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

- Terms defined in RFC 3261 [1];
- Terms defined in ES 201 873-1 [2];
- Terms defined in ES 201 873-5 [3].

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in ES 201 873-1 [2], ES 201 873-5 [3], and RFC 3261 [1] apply. In particular, the following abbreviations apply:

ABNF	Augmented Backus Naur Form
ATM	Abstract Test Method
ATS	Abstract Test Suite
EDS	Encoding/Decoding System
ETS	Executable Test Suite
IUT	Implementation Under Test
PA	Platform Adapter
PDU	Protocol Data Unit
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
PTC	Parallel Test Component
SA	SUT Adapter
SUT	System Under Test
TC	Test Cases
TCI	TTCN-3 Control Interface
TE	TTCN-3 Executable
TM	Test Management
TP	Test Purpose
TRI	TTCN-3 Runtime Interface
TS	Test System
TSS	Test Suite Structure
TTCN	Testing and Test Control Notation version 3

4 Abstract Test Method (ATM)

This clause describes the ATM used to test IETF SIP RFC as defined in [1].

4.1 Network architecture

The basic SIP network architecture is defined in figure 1. The ATS defines test cases for the IUT being in the role of each displayed entity.

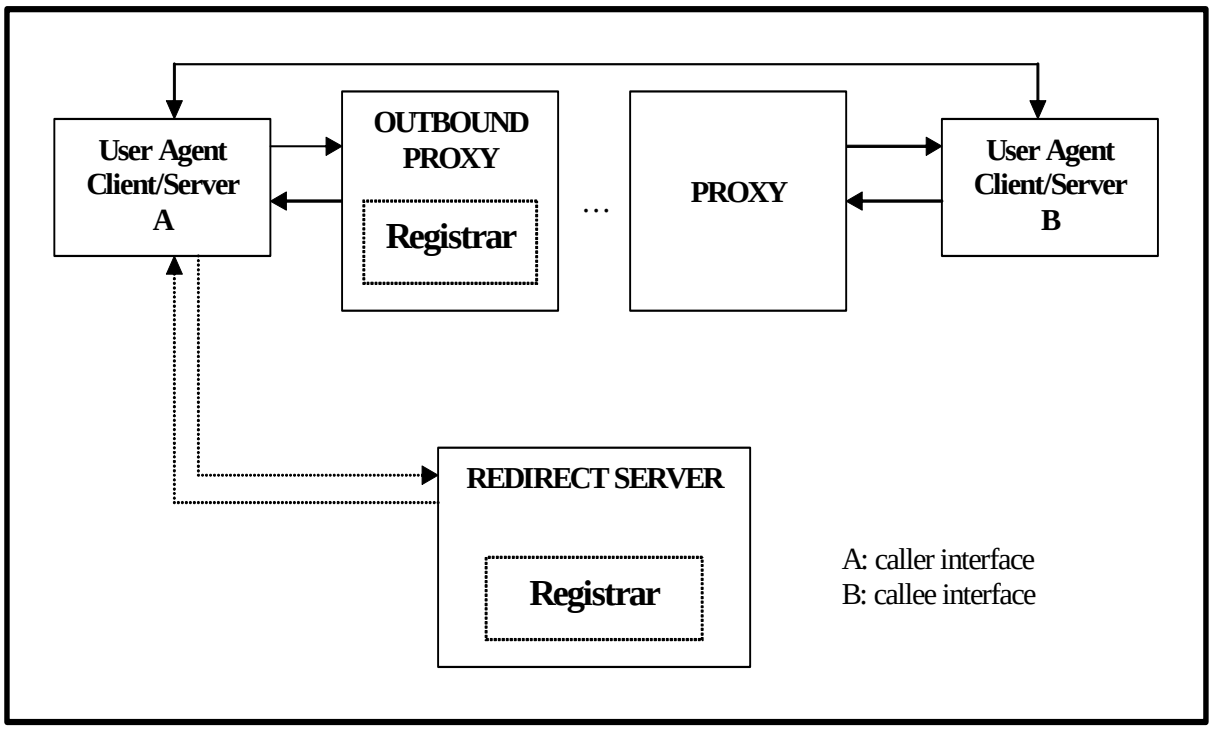

Figure 1: SIP network architecture

4.2 Protocol architecture

The Implementation Under Test (IUT) for which this test case specification applies consists of the SIP protocol (see figure 2).

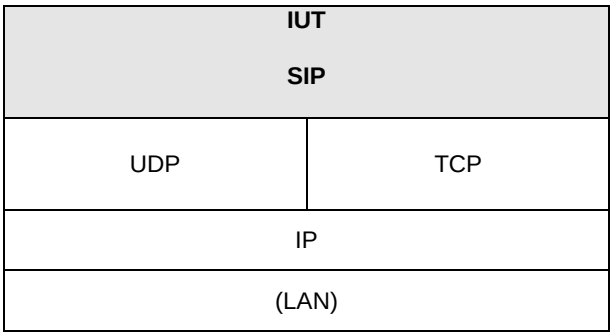

Figure 2: SIP protocol architecture

SIP messages are considered in TTCN-3 description as PDU and analysed independently of the transport layer that has been used. The ATS does not care if the several SIP messages have been received in a same frame or in several frames and expect SIP messages one by one. It is up to the TRI to manage those considerations. The choice of the transport protocol used is taken into account by the ATS while the port are initialized at the beginning of each test component by calling a dedicated init function (initUDPport(), initUDPMTCport, etc.).

4.3 Test system architecture

Test systems that implement this ATS shall conform to the requirements as defined in this clause.

4.3.1 Structure

An abstract architecture for a test system (TS) implementing a TTCN-3 ATS is displayed in figure 3 and also stated in ES 201 873-5 [3].

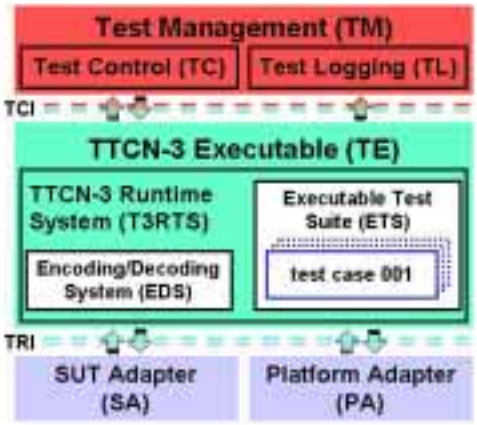

Figure 3: Abstract Test System Architecture

A TS has two interfaces, the TTCN-3 Control Interface (TCI) and the TTCN-3 Runtime Interface (TRI), which specify the interface between Test Management (TM) and TTCN-3 Executable (TE) entities, and TE, SUT Adapter (SA) and Platform Adapter (PA) entities, respectively. Out of these two interfaces the TRI has been standardized in ES 201 873-5 [3], whereas the specification and implementation of the TCI is currently considered to be proprietary.

The part of TS that deals with interpretation and execution of TTCN-3 modules, i.e. the Executable Test Suite (ETS), is shown as part of the TTCN-3 Executable (TE). This ETS corresponds either to the executable code produced by a TTCN-3 compiler or a TTCN-3 interpreter from the TTCN-3 ATS in a TS implementation. The remaining part of the TS, which deals with any aspects that cannot be concluded from information being present in the TTCN-3 ATS alone, can be decomposed into Test Management (TM), SUT Adapter (SA), and Platform Adapter (PA) entities. In general, these entities cover a TS user interface, test execution control, test event logging, communication of test data with the SUT, and timer implementation.

The SA for a SIP TS shall implement the TRI adaptation as well as the SIP transport protocol architecture described in clause 4.2. The Encoding/Decoding System (EDS) entity with the TE and Test Logging (TL) entity within the TM shall comply with the conventions defined in following clauses.

4.3.2 Encoding/Decoding System requirements

SIP is a text-based protocol that allows different syntactical presentations of the same information. In general, an implementation of this ATS should use a EDS to parse received encoded messages into TTCN-3 type structures and values, and encode structured TTCN-3 type structures and values into encoded messages. This EDS is not part of the ATS. Still all encoded messages, i.e. the messages as they are transmitted by the SA to or received by the SA from the SUT, shall be logged.

The following terms shall be used for the conventions defined below:

Syntactic delimiter	Syntactic delimiters are characters like "=" or ";" that are used to separate encoded values
LWS	linear white spaces as defined SIP [1]
Parameter name	name of header parameters as defined in SIP [1].
Parameter value	the value of a parameter as defined in SIP
Undefined method	an undefined method is a method other than: "INVITE", "ACK", "OPTIONS", "BYE", "CANCEL" and "REGISTER".
Undefined header	an undefined header is a header other than general-header, entity-header, request-header and response header as defined in SIP [1].
Unexpected header	an unexpected header is a header, which shall not be present in a specific request message. This definition complies to the definition of NOT APPLICABLE in SIP [1]/10 for request messages.

4.3.2.1 Decoding requirements

TTCN-3 fields should not contain syntactic delimiters like white space, semicolon, equal characters etc. in fully decoded fields. Instead the information provided by a parser shall be used to build the decoded message in TTCN-3. Decoded messages shall use the TTCN-3 enumeration types where ever appropriate, e.g. for the method and the header field name.

For **charstring** fields the following decoding rules shall be applied by the EDS:

- Subsequent LWS shall compress to a single space character " ".
- Decoded parameter names shall use only lower case letters.
- Parameter values containing an integer value shall be decoded to a TTCN-3 integer value where a TTCN-3 **integer** type is used for a SIP parameter value.

The following decoding rules shall be applied by the EDS to each received message in the following order:

1) In case a request message indicating an undefined method is received by the test system, the message shall not be passed in the TE to the ETS. However the message is subject to logging as defined in clause 4.3.3.

2) In case an undefined header has been received the header field shall be decoded as **UndefinedHeader** field.

3) The SIP standard [1] allows for multiple header field values of the same kind to either arrive in one or multiple occurrences of the corresponding header field. The SIP ATS has been written assuming only the first format. Therefore, should the EDS receive multiple header fields of the same kind in a SIP message, e.g., of a Via header field, it shall convert them into the equivalent single header field with multiple values. This can be achieved by adding the value of , e.g. the second received Via header field as the last value to the value(s) of the first Via header field.

4.3.2.2 Encoding requirements

Encoders shall follow all encoding rules that are defined in SIP ABNF [2] when encoding structured values received from templates. This applies in particular to but it is not restricted to clause [1]/3 "SIP Message Overview" and [1]/10.5 "Header Field Format".

Values of type **RawMessage** shall be send to the SUT without any modification.

4.3.3 Logging conventions

As the ATS defines on an abstract level the message exchange between TS and SUT the messages encoded messages send and received shall be logged. The TM entity in the TS shall provide access to this log.

5 Untestable Test Purposes (TP)

This clause gives a list of TP, which are not implemented in the ATS due to the chosen ATM or other restrictions :
None

6 ATS conventions

The ATS conventions are intended to give a better understanding of the ATS, but they also describe the conventions made for the development of the ATS. These conventions shall be considered during any later maintenance or further development of the ATS.

The ATS conventions contain two clauses, the naming conventions and the implementation conventions. The naming conventions describe the structure of the naming of all ATS elements. The implementation conventions describe the functional structure of the ATS.

6.1 Naming conventions

6.1.1 Type definitions

This clause describes the naming conventions used for structured and unstructured types as well as for the field names of structured types.

6.1.1.1 General

Type identifiers use mixed cased with the first letter of each internal word capitalized.

EXAMPLE: `RequestLine`

Field identifiers use mixed cased with a lowercase first letter. Internal words start with a capital letter.

EXAMPLE: `requestLine`

Names of type as well as field identifiers attempt to follow the naming chosen of ABNF elements (if a counterpart exists) as closely as possible.

EXAMPLES:
```
NameAddr
hostName
```

In case type and identifier names should give a hint on their structure the term describing the structure should be separated with an underscore ("_") at the end of the name.

EXAMPLES:
```
CommaParam_List
ContactBody_Union
```

6.1.1.2 PDU Type Definition

Names of types used as PDUs follow the general conventions as defined in clause 6.1.1.1.

EXAMPLE: `Request`

6.1.2 Template definition

Template identifiers consist of the type name, an identifier denoting whether the template is for sending or receiving and a sequential number.

EXAMPLE: `Request_r_1` denotes a template from type `Request` that is intended for reception.
`CommaParam_List_s_25` denotes a template from type `CommaParam_List` that is intended for sending.

The sequential number is used only to distinguish between templates for the same type and direction and includes no other information.

6.1.3 Constant declarations

Identifiers for either internal or external constants, use only uppercase letters. Internal words are separated by an underscore ("_").

EXAMPLE: `SIP_VERSION`

6.1.4 Enumeration declarations

While identifiers for the enumeration type follow the conventions as defined in clause 6.1.1.1, enumerations elements use only uppercase letters, which are suffixed by "_E" to distinguish them from constants. Internal words are separated by an underscore character ("_").

EXAMPLE: Enumeration type
`FieldName`

Enumeration value
`FROM_E`

6.1.5 Module parameter declarations

Identifiers for module parameters follow the general rules as defined in clause 6.1.3. Numbers are separated from words using the underscore character "_".

EXAMPLE: CAP_1

6.1.6 Variable declarations

Identifiers for variables follow the general rules for field names as defined in clause 6.1.1.1.

6.1.7 Function declarations

Identifiers for either internal or external functions use mixed case with a lowercase first letter. Internal words start with a capital letter, and "To " is abbreviated with "2".

EXAMPLE: char2str ()

6.1.8 Test Case declarations

6.1.8.1 General

All test cases are listed in the order in which they appear in the Test Suite Structure (TSS) and TP document. Grouping is used to reflect the TSS.

6.1.8.2 Test Case (TC) identifier

The identifier of the test case is constructed in the same way as the test purpose described in TS 102 027-1, clause 5.1.1. The identifier of a TC is built according to table 1.

Table 1: TP identifier naming convention scheme

Identifier: **<protocol>_<main functionality>_<role>_<functionality>_<type>_<nn>**	
<protocol>	SIP
<main functionality>	Registration (RG), Call Control (CC), Messaging (MG).
<role> Registrant (RT), Registrar (RR)	Originating Endpoint (OE), Terminating Endpoint (TE), Proxy (PR), Redirect (RD).
<functionality> (optional) (MP),	Call Establishment (CE), Call Release(CR), Session modification (SM), Message processing Transaction (TR).
<sub-functionality> (optional)	Request (RQ), Response(RS), Client(CL), Server(SE)
<type>	Valid Behaviour (V), Invalid Behaviour (I), Inopportune Behaviour (O) , Timers (TI).
<nnn>	sequential number (001-999).

6.1.9 Timer declarations

Two types of timers can be identified:

1) Standardized:

   - Those defined in SIP [1], e.g. `T1`. They use exactly the same name as in the standard.

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

   - The maximum value allowed, which will use the suffix "`_max`";
   - The minimum value allowed, which will use the suffix "`_min`";
   - The value actually implemented, with no suffix;

EXAMPLE: `T1 _max`, `T1_min`, and `T1`.

2) Not standardized:

   - Those not defined in the protocol 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.

EXAMPLE: `T_resp` represents a timer for controlling the response time of the IUT.

6.1.10 Group names

Group names follow the same general conventions as defined in clause 6.1.1.1.

EXAMPLE: SubtypesTemplateDeclarations

Where appropriate group names reflect the hierarchic group structure.

6.2 Implementation conventions

6.2.1 Type definitions

The following clause gives an overview on the mapping of SIP messages and structures as defined in SIP [1] and their corresponding TTCN-3 types.

6.2.1.1 Messages

Distinct types have been defined for SIP request and response messages, as they have a different internal structure. Messages are defined as a record structure containing three fields, a request/status line field, a header field and a message body field, and a payload field [ETSIStyleGuide] which contains the whole message as it has been received in its text format..For syntactic delimiters, like Carriage Return Line Feed (CRLF), colon ":", etc. no extra fields are defined as they are already removed by the EDS.

The definition of invalid messages for sending and receiving is discussed in clause 6.2.1.1.3.

6.2.1.1.1 Request messages

For all possible valid requests one generic type has been defined.

EXAMPLE: The generic request message

```
type record SipRequest {
    RequestLine     requestLine,
    RequestHeader   reqHeader,
    charstring      messageBody optional,
    Payload         payload optional
}
```

6.2.1.1.2 Response messages

For all possible valid responses one generic type has been defined.

EXAMPLE: The generic response message

```
type record Response {
    StatusLine      statusLine,
    ResponseHeader  resHeader,
    charstring      messageBody optional,
    Payload         payload optional
}
```

6.2.1.1.3 Raw messages

For defining syntactic torture or syntactic invalid messages a distinct type **`RawMessage`** has been defined. This type is defined as a **`charstring`**. Messages using this type define exactly how the message shall be transmitted, thus giving the possibility to define the message on a character level.

EXAMPLE: A torture message

```
template RawMessage rawMessage_s_1 =
    'INVITE sip:joe@foo.com SIP/2.0' & CRLF &
    'TO     :   ' & CRLF
    ' sip:joe@foo.com   ;' & TAB & '    tag   = 1918181833n' & CRLF &
    'Via   : SIP   /   2.0' ;
```

The **`RawMessage`** type has not been used to describe valid receiving templates. Therefore, valid receiving templates will always use structured messages.

6.2.1.2 Headers

The following clause defines the mapping of the header field clause of a SIP message as defined in [1].

For all message one message header type has been defined. These message header type include all possible header fields that are allowed to be present in the header clause of SIP messages acoording to RFC 3261 [1]. As individual header fields may appear in any order in a SIP message these header types are defined as **set**s. Header fields which are optional in all SIP messages use the **optional** keyword.

EXAMPLE 1: A header structure for an SIP request.

```
        type set MessageHeader
{
    Accept              accept optional,
    AcceptEncoding      acceptEncoding optional,
    AcceptLanguage      acceptLanguage optional,
    AlertInfo           alertInfo optional,
    Allow               allow optional,
    AuthenticationInfo  authenticationInfo optional,
    Authorization       authorization optional,
    CallId              callId,
    CallInfo            callInfo optional,
    Contact             contact optional,
    ContentDisposition  contentDisposition optional,
    ContentEncoding     contentEncoding optional,
    ContentLanguage     contentLanguage optional,
    ContentLength       contentLength optional,
    ContentType         contentType optional,
    CSeq                cSeq,
    Date                date optional,
    ErrorInfo           errorInfo optional,
    Expires             expires optional,
    From                fromField,
    InReplyTo           inReplyTo optional,
    MaxForwards         maxForwards optional,
    MimeVersion         mimeVersion optional,
    MinExpires          minExpires optional,
    Organization        organization optional,
    Priority            priority optional,
    ProxyAuthenticate   proxyAuthenticate optional,
    ProxyAuthorization  proxyAuthorization optional,
    ProxyRequire        proxyRequire optional,
    RecordRoute         recordRoute optional,
    ReplyTo             replyTo optional,
    Require             require optional,
    RetryAfter          retryAfter optional,
    Route               route optional,
    Server              server optional,
    Subject             subject optional,
    Supported           supported optional,
    Timestamp           timestamp optional,
    To                  toField,
    Unsupported         unsupported optional,
    UserAgent           userAgent optional,
    Via                 via,
    Warning             warning optional,
    WwwAuthenticate     wwwAuthenticate optional,
    UndefinedHeader_List    undefinedHeader_List optional
    }
```

Each header fieldis sub structured into record and consists of at least two fields, its fieldName and the fieldValue.

EXAMPLE 2: General structure of a header field type

```
type record HeaderField {
    FieldName   fieldName,
    FieldValue  fieldValue
}
```

The field name type is an enumeration type that contains an entry for each header field type. All enumerations are capitalized and suffixed with "_E" to distinguish enumeration values from constants.

EXAMPLE 3:

```
type enumerated FieldName {
    TO_E, FROM_E, …
}
```

Depending on the definition of every particular header field in the ABNF [1] and its relevance to the SIP TIPHON TP, types for header field values have been defined and substructured differently. In general, every header field value is at least structured according to its header field definition in the SIP ABNF.

EXAMPLE 4: A header field type with a simple header field value type like **charstring**

```
type record Priority {
    FieldName   fieldName(PRIORITY_E),
    charstring  priorityValue
}
```

EXAMPLE 5: A header field type with a header field value consisting of multiple fields

```
type record MimeVersion {
    FieldName   fieldName,
    integer     majorNumber,
    integer     minorNumber
}
```

Types for header field values may, however, be further sub structured if the SIP ABNF allows and the SIP TIPHON TP requires so.

EXAMPLE 6: A header field type with a sub structured header field value

```
type record Accept {
    charstring          mediaRanage,
    SemicolonParam_List acceptParam optional
}
```

The level of sub structure is again header field depended. Should a header field value have a potential for further sub structuring (in the SIP ABNF) which is not required from the perspective of the SIP TIPHON TP (but maybe in the future by some other SIP TP) it is declared has a type equivalent to **charstring**. Note that values of the latter types still contain syntactic delimiters.

EXAMPLE 7: The value of the below type still contains the "@" delimitier

```
type charstring CallidString:
```

In case a SIP header field might contain a choice of types of information **union** have been used.

EXAMPLE 8: sub structured union field value type

```
type union ContactBody_Union
{
char        wildcard,
ContactAddress_List contactAddress_List
}
```

The contact body can contain either a wildcard or a contact address list.

A list, i.e. the **set of** construct has been used for collecting information of the same type. In case the order is important the **record of** construct has been used. List types have been created for header fields that may have multiple occurrences of header field values as well as for parameters in header fields. To avoid multiple encodings for the same type, the naming of list types derived from generic parameters has been based on its encoding.

EXAMPLE 9: Collection of multiple header field values of the same type

```
type record Via {
    FieldName       fieldName,
    ViaBody_List    viaBody
}

type record of ViaBody ViaBody_List;
```

`ViaBody_List` contains all values of the `Via` header field.

EXAMPLE 10: Collection of multiple generic parameters

```
type set of GenericParam SemicolonParam_List;
```

6.2.2 Constant definitions

6.2.2.1 Constants

Syntactic delimiters for raw messages, e.g., "<", or "@" have been defined as constants.

EXAMPLE: `const charstring AT := "@";`

6.2.3 Module Parameters

PICS/PIXIT parameters are defined as TTCN-3 module parameters.

6.2.4 Template definitions

Modifications of templates have been used to allow focusing on the essential parts of a test message. However these mechanisms have to bechecked very carefully as they can be counter intuitive.

6.2.5 Dynamic part

No conventions for the dynamic part have been defined yet.

7 PCTR conformance

A test laboratory, when requested by a client to produce a PCTR, is required, as specified in ISO/IEC 9646-5 [7], to produce a PCTR conformant with the PCTR template given in annex B of ISO/IEC 9646-5 [7].

Furthermore, a test laboratory, offering testing for the ATS specification contained in annex C, when requested by a client to produce a PCTR, is required to produce a PCTR conformant with the PCTR proforma contained in annex A.

A PCTR which conforms to this PCTR proforma specification shall preserve the content and ordering of the clauses contained in annex A. Clause A.6 of the PCTR may contain additional columns. If included, these shall be placed to the right of the existing columns. Text in italics may be retained by the test laboratory.

8 PIXIT conformance

A test realizer, producing an executable test suite for the Abstract Test Suite (ATS) specification contained in annex C, is required, as specified in ISO/IEC 9646-4 [6], to produce an augmented partial PIXIT proforma conformant with this partial PIXIT proforma specification.

An augmented partial PIXIT proforma which conforms to this partial PIXIT proforma specification shall, as a minimum, have contents which are technically equivalent to annex B. The augmented partial PIXIT proforma may contain additional questions that need to be answered in order to prepare the Means Of Testing (MOT) for a particular Implementation Under Test (IUT).

A test laboratory, offering testing for the ATS specification contained in annex C, is required, as specified in ISO/IEC 9646-5 [7], to further augment the augmented partial PIXIT proforma to produce a PIXIT proforma conformant with this partial PIXIT proforma specification.

A PIXIT proforma which conforms to this partial PIXIT proforma specification shall, as a minimum, have contents which are technically equivalent to annex B. The PIXIT proforma may contain additional questions that need to be answered in order to prepare the test laboratory for a particular IUT.

9 ATS Conformance

The test realizer, producing a Means Of Testing (MOT) and Executable Test Suite (ExTS) for this Abstract Test Suite (ATS) specification, shall comply with the requirements of ISO/IEC 9646-4 [6]. In particular, these concern the realization of an Executable Test Suite (ExTS) based on each ATS. The test realizer shall provide a statement of conformance of the MOT to this ATS specification.

An ExTS which conforms to this ATS specification shall contain test groups and test cases which are technically equivalent to those contained in the ATS in annex C. All sequences of test events comprising an abstract test case shall be capable of being realized in the executable test case. Any further checking which the test system might be capable of performing is outside the scope of this ATS specification and shall not contribute to the verdict assignment for each test case.

Test laboratories running conformance test services using this ATS shall comply with ISO/IEC 9646-5 [7].

A test laboratory which claims to conform to this ATS specification shall use an MOT which conforms to this ATS.

Annex A (normative): Abstract Test Suite (ATS)

This ATS has been produced using the Testing and Test Control Notation (TTCN-3) according to ES 201 873-1 [2].

The TTCN representation corresponding to this ATS is contained in ASCII files (SIP_Steps.ttcn, SIP_Templates.ttcn, SIP_TypesAndConf.ttcn, MySIPModule.ttcn contained in archive ts_10202702v020101p0.zip) which accompanies the present document.

Annex B (normative): Partial PIXIT proforma

The PIXIT Proforma is based on ISO/IEC 9646-6 [8]. Any needed additional information 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:	
Protocol to be tested:	
ATS Specification:	
Abstract Test Method:	

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:	
Limitations of the SUT:	
Environmental Conditions:	

B.6 Protocol layer information

B.6.1 Protocol identification

Table B.6

Name:	
Version:	

B.6.2 IUT information

Table B.7: Capabilities

Name	Type	Comments	Value (True/False)
PC_UA	boolean	Does the IUT behave as a UA?	
PC_PROXY	boolean	Does the IUT behave as a Proxy?	
PC_STATELESS	boolean	Is the IUT a stateless PROXY (otherwise stateful)?	
PC_REDIRECTS	boolean	Does the IUT behave as a Redirect Server?	
PC_REGISTRATION	boolean	Does the IUT support Registration procedure?	
PC_PRECONFIGURED_REGISTRAR	boolean	Does the IUT use its own configuration to determine its registrar address?	
PC_ADDR_RECORD_REGISTRAR	boolean	Does the IUT use address-of-record to determine its registrar address?	
PC_MULTICAST_REGISTRAR	boolean	Does the IUT use multicast address to determine its registrar address?	
PC_THIRD_PARTY	boolean	Does the IUT support third party registration?	
PC_SHOULD	boolean	Does the IUT support SHOULD requirements of RFC3261 [1]?	
PC_REDIRECTION	boolean	Is the IUT able to manage redirection message for INVITE transaction?	
PC_FORK	boolean	Is the IUT able to fork when target set contains more than one contact with a same q parameter value?	

Table B.8: IP parameters

Name	Type	Comments	Value
PX_UDP	boolean	Set to True if UDP is used to run the campaign	
PX_IUT_PORT	integer	Port number used by the IUT to exchange SIP messages	
PX_IUT_IPADDR	charstring	IP address used by the ETS to exchange SIP messages	
PX_IUT_PORT2	integer	Port number used by the IUT to exchange SIP messages on PTC side	
PX_IUT_IPADDR2	charstring	IP address used by the IUT to exchange SIP messages on PTC side	
PX_IUT_PORT3	integer	Port number used by the IUT to exchange SIP messages on PTC2 side	
PX_IUT_IPADDR3	charstring	IP address used by the IUT to exchange SIP messages on PTC2 side	
PX_ETS_PORT	integer	Port number used by the ETS to exchange SIP messages on MTC side	
PX_ETS_IPADDR	charstring	IP address used by the IUT to exchange SIP messages on MTC side	
PX_ETS_PORT2	integer	Port number used by the ETS to exchange SIP messages on PTC side	
PX_ETS_IPADDR2	charstring	IP address used by the IUT to exchange SIP messages on PTC side	
PX_ETS_PORT3	integer	Port number used by the ETS to exchange SIP messages on PTC2 side	
PX_ETS_IPADDR3	charstring	IP address used by the IUT to exchange SIP messages on PTC2 side	
PX_PROXY_PORT	integer	Port number used by the ETS used in Routes or in 305 Response	
PX_ PROXY_IPADDR	charstring	IP address used by the the ETS used in Routes or in 305 Response	

Table B.9: Location parameters

Name	Type	Comments	Value
PX_IUT_HOME_DOMAIN	charstring	identity of the IUT domain	
PX_ETS_LOCAL_DOMAIN	charstring	identity of the tester local domain on MTC side	
PX_ETS_LOCAL_USER	charstring	identity of the tester local user on MTC side	
PX_ETS_LOCAL_DOMAIN2	charstring	identity of the tester local domain on MTC or PTC side	
PX_ETS_LOCAL_USER2	charstring	identity of the tester local user on PTC side	

Table B.10: Registration parameters

Name	Type	Comments	Value
PX_DELTA_REGISTRATION	charstring	delta-seconds used in expires header field in 200 OK message to answer REGISTRATION request	
PX_HOME_REGISTRATION	boolean	IUT needs to register itself to its home registar first	
PX_PR_MTC_REGISTRATION	boolean	ETS needs to register itself before running proxy test cases on MTC side	
PX_PR_PTC_REGISTRATION	boolean	ETS needs to register itself before running proxy test cases on PTC side	
PX_ETS_UNAUTHORIZED_USER	charstring	identity of the tester local user on MTC side which is not authorized to update registration	
PX_ETS_LOCAL_THIRD_USER	charstring	identity of another tester local user (third party tester)	
PX_CREDENTIALS	Credentials	Value used in authorisation header in REGISTER sent to the IUT	
PX_STR_CREDENTIALS	charstring	String Value used in authorisation header in REGISTER sent to the IUT	

Table B.11: Session parameters

Name	Type	Comments	Value
PX_TE_CALLEE_DOMAIN	charstring	hostname of the callee when IUT is the callee	
PX_TE_CALLEE_USERINFO	charstring	userinfo of the callee when IUT is the callee	
PX_UNKNOWN_DOMAIN	charstring	unknown hostname	
PX_UNKNOWN_USERINFO	charstring	unknown userinfo	
PX_UNKNOWN_IPADDR	charstring	unknown IPaddress	

Table B.12: Header parameters

Name	Type	Comments	Value
PX_REALM	charstring	realm value understood by the IUTused in challenge Header as Digest value	
PX_CONTENCOD_UNSUPPORTED	charstring	Content encoding mechanism that is not supported by the IUT	
PX_OPTION_UNSUPPORTED	charstring	Option set in Request header field that is not supported	
PX_LANGUAGE_UNSUPPORTED	charstring	Language content field that is not supported	

Table B.13: Body parameters

Name	Type	Comments	Value
PX_SDPBODY	charstring	SDP parameter proposed by the ETS	
PX_SDPBODY2	charstring	additional SDP parameter proposed by the ETS	
PX_SDPBODY_UNSUPPORTED	charstring	SDP parameter proposed by the ETS that is not supported by the IUT	
PX_SDPBODY_65535	charstring	SDP parameter proposed by the ETS that makes the 200 OK or INVITE request of 63.535 bytes long	
PX_SDPBODY_TOO_LARGE	charstring	SDP parameter proposed by the that makes the 200 OK or INVITE request too large	

Table B.14: Timers

Name	Type	Comments	Value
PX_T1	float	T1 RTT estimate (500 ms)	
PX_T2	float	Maximum retransmit interval for non-INVITE requests and INVITE response (4 000 ms)	
PX_T4	float	Maximum duration a message will remain in the network	
PX_TWAIT	float	TWait default value for waiting an operator action	
PX_TACK	float	default value for waiting an acknowledgement	
PX_TRESP	float	TResp default value for waiting for a response from the IUT	
PX_TINIT	float	default value to init lower stack protocol	
PX_TNOACT	float	value for waiting no message from the IUT	
PX_TSYNC	float	default value to synchronize ptc	
PX_TGUARD	float	default value for an extra long timer to limit test execution	
PX_TRespRetention	float	Minimum time that a Proxy will wait before sending a final reponse	

Annex C (normative): PCTR Proforma

The PCTR proforma is based on ISO/IEC 9646-6 [8]. Any needed additional information can be found in this international standard 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:	
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 D.3 in the present document) and there are no "FAIL" verdicts to be recorded (in clause D.6 in the present document) 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 D.6 of the present document) 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 D.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.6

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_RG_RT_V_001				
SIP_RG_RT_V_002				
SIP_RG_RT_V_003				
SIP_RG_RT_V_004				
SIP_RG_RT_V_005				
SIP_RG_RT_V_006				
SIP_RG_RT_V_007				
SIP_RG_RT_V_008				
SIP_RG_RT_V_009				
SIP_RG_RT_V_010				
SIP_RG_RT_V_011				
SIP_RG_RT_V_012				
SIP_RG_RT_V_013				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_RG_RR_V_001				
SIP_RG_RR_V_002				
SIP_RG_RR_V_003				
SIP_RG_RR_V_004				
SIP_RG_RR_V_005				
SIP_RG_RR_V_006				
SIP_RG_RR_V_007				
SIP_RG_RR_V_008				
SIP_RG_RR_V_009				
SIP_RG_RR_V_010				
SIP_RG_RR_V_011				
SIP_RG_RR_V_012				
SIP_RG_RR_V_013				
SIP_RG_RR_V_014				
SIP_RG_RR_V_015				
SIP_RG_RR_V_016				
SIP_RG_RR_V_017				
SIP_RG_RR_V_018				
SIP_RG_RR_V_019				
SIP_RG_RR_I_001				
SIP_RG_RR_I_002				
SIP_RG_RR_I_003				
SIP_RG_RR_I_004				
SIP_RG_RR_O_001				
SIP_RG_RR_O_002				
SIP_RG_RR_O_003				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_CC_OE_CE_V_001				
SIP_CC_OE_CE_V_002				
SIP_CC_OE_CE_V_003				
SIP_CC_OE_CE_V_004				
SIP_CC_OE_CE_V_005				
SIP_CC_OE_CE_V_006				
SIP_CC_OE_CE_V_007				
SIP_CC_OE_CE_V_008				
SIP_CC_OE_CE_V_009				
SIP_CC_OE_CE_V_010				
SIP_CC_OE_CE_V_011				
SIP_CC_OE_CE_V_012				
SIP_CC_OE_CE_V_013				
SIP_CC_OE_CE_V_014				
SIP_CC_OE_CE_V_015				
SIP_CC_OE_CE_V_016				
SIP_CC_OE_CE_V_017				
SIP_CC_OE_CE_V_018				
SIP_CC_OE_CE_V_019				
SIP_CC_OE_CE_V_020				
SIP_CC_OE_CE_V_021				
SIP_CC_OE_CE_V_022				
SIP_CC_OE_CE_V_023				
SIP_CC_OE_CE_V_024				
SIP_CC_OE_CE_V_025				
SIP_CC_OE_CE_V_026				
SIP_CC_OE_CE_V_027				
SIP_CC_OE_CE_V_028				
SIP_CC_OE_CE_V_029				
SIP_CC_OE_CE_V_030				
SIP_CC_OE_CE_V_031				
SIP_CC_OE_CE_V_032				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_CC_OE_CE_V_033				
SIP_CC_OE_CE_V_034				
SIP_CC_OE_CE_V_035				
SIP_CC_OE_CE_V_036				
SIP_CC_OE_CE_V_037				
SIP_CC_OE_CE_V_038				
SIP_CC_OE_CE_V_039				
SIP_CC_OE_CE_V_040				
SIP_CC_OE_CE_V_041				
SIP_CC_OE_CE_V_042				
SIP_CC_OE_CE_V_043				
SIP_CC_OE_CE_V_044				
SIP_CC_OE_CE_V_045				
SIP_CC_OE_CE_V_046				
SIP_CC_OE_CE_V_047				
SIP_CC_OE_CE_V_048				
SIP_CC_OE_CE_TI_001				
SIP_CC_OE_CE_TI_002				
SIP_CC_OE_CE_TI_003				
SIP_CC_OE_CE_TI_004				
SIP_CC_OE_CE_TI_005				
SIP_CC_OE_CE_TI_006				
SIP_CC_OE_CE_TI_007				
SIP_CC_OE_CE_TI_008				
SIP_CC_OE_CE_TI_009				
SIP_CC_OE_CE_TI_010				
SIP_CC_OE_CE_TI_011				
SIP_CC_OE_CE_TI_012				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_CC_OE_CR_V_001				
SIP_CC_OE_CR_V_002				
SIP_CC_OE_CR_V_003				
SIP_CC_OE_CR_V_004				
SIP_CC_OE_CR_V_005				
SIP_CC_OE_CR_V_006				
SIP_CC_OE_CR_V_007				
SIP_CC_OE_CR_V_008				
SIP_CC_OE_CR_V_009				
SIP_CC_OE_CR_V_010				
SIP_CC_OE_CR_V_011				
SIP_CC_OE_CR_V_012				
SIP_CC_OE_CR_V_013				
SIP_CC_OE_CR_V_014				
SIP_CC_OE_CR_V_015				
SIP_CC_OE_CR_I_001				
SIP_CC_OE_CR_TI_001				
SIP_CC_OE_CR_TI_002				
SIP_CC_OE_CR_TI_003				
SIP_CC_OE_CR_TI_004				
SIP_CC_OE_CR_TI_005				
SIP_CC_OE_CR_TI_006				
SIP_CC_OE_CR_TI_007				
SIP_CC_OE_CR_TI_008				
SIP_CC_OE_SM_V_001				
SIP_CC_OE_SM_V_002				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_CC_TE_CE_V_001				
SIP_CC_TE_CE_V_002				
SIP_CC_TE_CE_V_003				
SIP_CC_TE_CE_V_004				
SIP_CC_TE_CE_V_005				
SIP_CC_TE_CE_V_006				
SIP_CC_TE_CE_V_007				
SIP_CC_TE_CE_V_008				
SIP_CC_TE_CE_V_009				
SIP_CC_TE_CE_V_010				
SIP_CC_TE_CE_V_011				
SIP_CC_TE_CE_V_012				
SIP_CC_TE_CE_V_013				
SIP_CC_TE_CE_V_014				
SIP_CC_TE_CE_V_015				
SIP_CC_TE_CE_V_016				
SIP_CC_TE_CE_V_017				
SIP_CC_TE_CE_V_018				
SIP_CC_TE_CE_V_019				
SIP_CC_TE_CE_V_020				
SIP_CC_TE_CE_V_021				
SIP_CC_TE_CE_V_022				
SIP_CC_TE_CE_V_023				
SIP_CC_TE_CE_V_024				
SIP_CC_TE_CE_V_025				
SIP_CC_TE_CE_V_026				
SIP_CC_TE_CE_V_027				
SIP_CC_TE_CE_V_028				
SIP_CC_TE_CE_V_029				
SIP_CC_TE_CE_V_030				
SIP_CC_TE_CE_V_031				
SIP_CC_TE_CE_V_032				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_CC_TE_CE_V_033				
SIP_CC_TE_CE_I_001				
SIP_CC_TE_CE_I_002				
SIP_CC_TE_CE_TI_001				
SIP_CC_TE_CE_TI_002				
SIP_CC_TE_CE_TI_003				
SIP_CC_TE_CE_TI_004				
SIP_CC_TE_CE_TI_005				
SIP_CC_TE_CE_TI_006				
SIP_CC_TE_CE_TI_007				
SIP_CC_TE_CE_TI_008				
SIP_CC_TE_CE_TI_009				
SIP_CC_TE_CE_TI_010				
SIP_CC_TE_CE_TI_011				
SIP_CC_TE_CE_TI_012				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_CC_TE_CR_V_001				
SIP_CC_TE_CR_V_002				
SIP_CC_TE_CR_V_003				
SIP_CC_TE_CR_V_004				
SIP_CC_TE_CR_V_005				
SIP_CC_TE_CR_V_006				
SIP_CC_TE_CR_V_007				
SIP_CC_TE_CR_V_008				
SIP_CC_TE_CR_V_009				
SIP_CC_TE_CR_V_010				
SIP_CC_TE_CR_V_011				
SIP_CC_TE_CR_V_012				
SIP_CC_TE_CR_V_013				
SIP_CC_TE_CR_V_014				
SIP_CC_TE_CR_V_015				
SIP_CC_TE_CR_V_016				
SIP_CC_TE_CR_V_017				
SIP_CC_TE_CR_V_018				
SIP_CC_TE_CR_V_019				
SIP_CC_TE_CR_V_020				
SIP_CC_TE_CR_V_021				
SIP_CC_TE_CR_V_022				
SIP_CC_TE_CR_I_001				
SIP_CC_TE_CR_I_002				
SIP_CC_TE_CR_I_003				
SIP_CC_TE_CR_I_004				
SIP_CC_TE_CR_I_005				
SIP_CC_TE_CR_TI_001				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_CC_TE_SM_V_001				
SIP_CC_TE_SM_V_002				
SIP_CC_TE_SM_V_003				
SIP_CC_TE_SM_I_001				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_CC_PR_MP_RQ_V_001				
SIP_CC_PR_MP_RQ_V_002				
SIP_CC_PR_MP_RQ_V_003				
SIP_CC_PR_MP_RQ_V_004				
SIP_CC_PR_MP_RQ_V_005				
SIP_CC_PR_MP_RQ_V_006				
SIP_CC_PR_MP_RQ_V_007				
SIP_CC_PR_MP_RQ_V_008				
SIP_CC_PR_MP_RQ_V_009				
SIP_CC_PR_MP_RQ_V_010				
SIP_CC_PR_MP_RQ_V_011				
SIP_CC_PR_MP_RQ_V_012				
SIP_CC_PR_MP_RQ_V_013				
SIP_CC_PR_MP_RQ_V_014				
SIP_CC_PR_MP_RQ_V_015				
SIP_CC_PR_MP_RQ_V_016				
SIP_CC_PR_MP_RQ_V_017				
SIP_CC_PR_MP_RQ_V_018				
SIP_CC_PR_MP_RQ_V_019				
SIP_CC_PR_MP_RQ_V_020				
SIP_CC_PR_MP_RQ_V_021				
SIP_CC_PR_MP_RQ_V_022				
SIP_CC_PR_MP_RQ_V_023				
SIP_CC_PR_MP_RQ_V_024				
SIP_CC_PR_MP_RQ_V_025				
SIP_CC_PR_MP_RQ_V_026				
SIP_CC_PR_MP_RQ_V_027				
SIP_CC_PR_MP_RQ_V_028				
SIP_CC_PR_MP_RQ_V_029				
SIP_CC_PR_MP_RQ_V_030				
SIP_CC_PR_MP_RQ_V_031				
SIP_CC_PR_MP_RQ_V_032				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_CC_PR_MP_RQ_V_033				
SIP_CC_PR_MP_RQ_V_034				
SIP_CC_PR_MP_RQ_V_035				
SIP_CC_PR_MP_RQ_V_036				
SIP_CC_PR_MP_RQ_V_037				
SIP_CC_PR_MP_RQ_V_038				
SIP_CC_PR_MP_RQ_V_039				
SIP_CC_PR_MP_RQ_V_040				
SIP_CC_PR_MP_RQ_V_041				
SIP_CC_PR_MP_RQ_V_042				
SIP_CC_PR_MP_RQ_V_043				
SIP_CC_PR_MP_RQ_V_044				
SIP_CC_PR_MP_RQ_V_045				
SIP_CC_PR_MP_RQ_V_046				
SIP_CC_PR_MP_RQ_V_047				
SIP_CC_PR_MP_RQ_V_048				
SIP_CC_PR_MP_RQ_V_049				
SIP_CC_PR_MP_RQ_V_050				
SIP_CC_PR_MP_RQ_V_051				
SIP_CC_PR_MP_RQ_V_052				
SIP_CC_PR_MP_RQ_V_053				
SIP_CC_PR_MP_RQ_V_054				
SIP_CC_PR_MP_RQ_V_055				
SIP_CC_PR_MP_RQ_V_056				
SIP_CC_PR_MP_RQ_V_057				
SIP_CC_PR_MP_RQ_V_058				
SIP_CC_PR_MP_RQ_V_059				
SIP_CC_PR_MP_RQ_V_060				
SIP_CC_PR_MP_RQ_V_061				
SIP_CC_PR_MP_RQ_V_062				
SIP_CC_PR_MP_RQ_V_063				
SIP_CC_PR_MP_RQ_V_064				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_CC_PR_MP_RQ_V_065				
SIP_CC_PR_MP_RQ_V_066				
SIP_CC_PR_MP_RQ_V_067				
SIP_CC_PR_MP_RQ_I_001				
SIP_CC_PR_MP_RQ_I_002				
SIP_CC_PR_MP_RQ_I_003				
SIP_CC_PR_MP_RQ_I_004				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_CC_PR_MP_RS_V_001				
SIP_CC_PR_MP_RS_V_002				
SIP_CC_PR_MP_RS_V_003				
SIP_CC_PR_MP_RS_V_004				
SIP_CC_PR_MP_RS_V_005				
SIP_CC_PR_MP_RS_V_006				
SIP_CC_PR_MP_RS_V_007				
SIP_CC_PR_MP_RS_V_008				
SIP_CC_PR_MP_RS_V_009				
SIP_CC_PR_MP_RS_V_010				
SIP_CC_PR_MP_RS_V_011				
SIP_CC_PR_MP_RS_V_012				
SIP_CC_PR_MP_RS_V_013				
SIP_CC_PR_MP_RS_V_014				
SIP_CC_PR_MP_RS_V_015				
SIP_CC_PR_MP_RS_V_016				
SIP_CC_PR_MP_RS_V_017				
SIP_CC_PR_MP_RS_V_018				
SIP_CC_PR_MP_RS_V_019				
SIP_CC_PR_MP_RS_V_020				
SIP_CC_PR_MP_RS_V_021				
SIP_CC_PR_MP_RS_V_022				
SIP_CC_PR_MP_RS_V_023				
SIP_CC_PR_MP_RS_V_024				
SIP_CC_PR_MP_RS_V_025				
SIP_CC_PR_MP_RS_V_026				
SIP_CC_PR_MP_RS_V_027				
SIP_CC_PR_MP_RS_V_028				
SIP_CC_PR_MP_RS_V_029				
SIP_CC_PR_MP_RS_V_030				
SIP_CC_PR_MP_RS_V_031				
SIP_CC_PR_MP_RS_V_032				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_CC_PR_MP_RS_V_033				
SIP_CC_PR_MP_RS_V_034				
SIP_CC_PR_MP_RS_V_035				
SIP_CC_PR_MP_RS_V_036				
SIP_CC_PR_MP_RS_V_037				
SIP_CC_PR_MP_RS_V_038				
SIP_CC_PR_MP_RS_V_039				
SIP_CC_PR_MP_RS_V_040				
SIP_CC_PR_MP_RS_V_041				
SIP_CC_PR_MP_RS_V_042				
SIP_CC_PR_MP_RS_V_043				
SIP_CC_PR_MP_RS_V_044				
SIP_CC_PR_MP_RS_V_045				
SIP_CC_PR_MP_RS_V_046				
SIP_CC_PR_MP_RS_V_047				
SIP_CC_PR_MP_RS_V_048				
SIP_CC_PR_MP_RS_V_049				
SIP_CC_PR_MP_RS_V_050				
SIP_CC_PR_MP_RS_V_051				
SIP_CC_PR_MP_RS_V_052				
SIP_CC_PR_MP_RS_V_053				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_CC_PR_TR_CL_V_001				
SIP_CC_PR_TR_CL_V_002				
SIP_CC_PR_TR_CL_V_003				
SIP_CC_PR_TR_CL_V_004				
SIP_CC_PR_TR_CL_V_005				
SIP_CC_PR_TR_CL_V_006				
SIP_CC_PR_TR_CL_V_007				
SIP_CC_PR_TR_CL_V_008				
SIP_CC_PR_TR_CL_V_009				
SIP_CC_PR_TR_CL_V_010				
SIP_CC_PR_TR_CL_V_011				
SIP_CC_PR_TR_CL_TI_001				
SIP_CC_PR_TR_CL_TI_002				
SIP_CC_PR_TR_CL_TI_003				
SIP_CC_PR_TR_CL_TI_004				
SIP_CC_PR_TR_CL_TI_005				
SIP_CC_PR_TR_CL_TI_006				
SIP_CC_PR_TR_CL_TI_007				
SIP_CC_PR_TR_CL_TI_008				
SIP_CC_PR_TR_CL_TI_009				
SIP_CC_PR_TR_CL_TI_010				
SIP_CC_PR_TR_CL_TI_011				
SIP_CC_PR_TR_CL_TI_012				
SIP_CC_PR_TR_CL_TI_013				
SIP_CC_PR_TR_CL_TI_014				
SIP_CC_PR_TR_CL_TI_015				
SIP_CC_PR_TR_CL_TI_016				
SIP_CC_PR_TR_CL_TI_017				
SIP_CC_PR_TR_CL_TI_018				
SIP_CC_PR_TR_CL_TI_019				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_CC_PR_TR_SE_V_001				
SIP_CC_PR_TR_SE_V_002				
SIP_CC_PR_TR_SE_V_003				
SIP_CC_PR_TR_SE_V_004				
SIP_CC_PR_TR_SE_V_005				
SIP_CC_PR_TR_SE_V_006				
SIP_CC_PR_TR_SE_V_007				
SIP_CC_PR_TR_SE_V_008				
SIP_CC_PR_TR_SE_V_009				
SIP_CC_PR_TR_SE_V_010				
SIP_CC_PR_TR_SE_V_011				
SIP_CC_PR_TR_SE_V_012				
SIP_CC_PR_TR_SE_V_013				
SIP_CC_PR_TR_SE_V_014				
SIP_CC_PR_TR_SE_V_015				
SIP_CC_PR_TR_SE_V_016				
SIP_CC_PR_TR_SE_V_017				
SIP_CC_PR_TR_SE_V_018				
SIP_CC_PR_TR_SE_V_019				
SIP_CC_PR_TR_SE_V_020				
SIP_CC_PR_TR_SE_V_021				
SIP_CC_PR_TR_SE_V_022				
SIP_CC_PR_TR_SE_V_023				
SIP_CC_PR_TR_SE_V_024				
SIP_CC_PR_TR_SE_V_025				
SIP_CC_PR_TR_SE_V_026				
SIP_CC_PR_TR_SE_V_027				
SIP_CC_PR_TR_SE_V_028				
SIP_CC_PR_TR_SE_V_029				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_CC_PR_TR_SE_TI_001				
SIP_CC_PR_TR_SE_TI_002				
SIP_CC_PR_TR_SE_TI_003				
SIP_CC_PR_TR_SE_TI_004				
SIP_CC_PR_TR_SE_TI_005				
SIP_CC_PR_TR_SE_TI_006				
SIP_CC_PR_TR_SE_TI_007				
SIP_CC_PR_TR_SE_TI_008				
SIP_CC_PR_TR_SE_TI_009				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_CC_RD_CE_V_001				
SIP_CC_RD_CE_V_002				
SIP_CC_RD_CE_V_003				
SIP_CC_RD_CE_V_004				
SIP_CC_RD_CE_V_005				
SIP_CC_RD_CE_V_006				
SIP_CC_RD_CE_V_007				
SIP_CC_RD_CE_V_008				
SIP_CC_RD_CR_V_001				
SIP_CC_RD_CR_V_002				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_MG_RT_V_001				
SIP_MG_RT_V_002				
SIP_MG_RT_V_003				
SIP_MG_RT_V_004				
SIP_MG_RT_V_005				
SIP_MG_RT_V_006				
SIP_MG_RT_V_007				
SIP_MG_RT_V_008				
SIP_MG_RT_I_001				
SIP_MG_RT_I_002				
SIP_MG_RT_I_003				
SIP_MG_RT_I_004				
SIP_MG_RT_I_005				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_MG_RR_V_001				
SIP_MG_RR_V_002				
SIP_MG_RR_V_003				
SIP_MG_RR_V_004				
SIP_MG_RR_V_005				
SIP_MG_RR_V_006				
SIP_MG_RR_V_007				
SIP_MG_RR_V_008				
SIP_MG_RR_V_009				
SIP_MG_RR_V_010				
SIP_MG_RR_V_011				
SIP_MG_RR_V_012				
SIP_MG_RR_V_013				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_MG_RR_I_001				
SIP_MG_RR_I_002				
SIP_MG_RR_I_003				
SIP_MG_RR_I_004				
SIP_MG_RR_I_005				
SIP_MG_RR_I_006				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_MG_OE_V_001				
SIP_MG_OE_V_002				
SIP_MG_OE_V_003				
SIP_MG_OE_V_004				
SIP_MG_OE_V_005				
SIP_MG_OE_V_006				
SIP_MG_OE_V_007				
SIP_MG_OE_V_008				
SIP_MG_OE_V_009				
SIP_MG_OE_V_010				
SIP_MG_OE_V_011				
SIP_MG_OE_V_012				
SIP_MG_OE_V_013				
SIP_MG_OE_V_014				
SIP_MG_OE_V_015				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_MG_OE_I_001				
SIP_MG_OE_I_002				
SIP_MG_OE_I_003				
SIP_MG_OE_I_004				
SIP_MG_OE_I_005				
SIP_MG_OE_I_006				
SIP_MG_OE_I_007				
SIP_MG_OE_I_008				
SIP_MG_OE_I_009				
SIP_MG_OE_I_010				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_MG_TE_V_001				
SIP_MG_TE_V_002				
SIP_MG_TE_V_003				
SIP_MG_TE_V_004				
SIP_MG_TE_V_005				
SIP_MG_TE_V_006				
SIP_MG_TE_V_007				
SIP_MG_TE_V_008				
SIP_MG_TE_V_009				
SIP_MG_TE_V_010				
SIP_MG_TE_V_011				
SIP_MG_TE_V_012				
SIP_MG_TE_V_013				
SIP_MG_TE_V_014				
SIP_MG_TE_V_015				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_MG_TE_I_001				
SIP_MG_TE_I_002				
SIP_MG_TE_I_003				
SIP_MG_TE_I_004				
SIP_MG_TE_I_005				
SIP_MG_TE_I_006				
SIP_MG_TE_I_007				
SIP_MG_TE_I_008				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_MG_PR_V_001				
SIP_MG_PR_V_002				
SIP_MG_PR_V_003				
SIP_MG_PR_V_004				
SIP_MG_PR_V_005				
SIP_MG_PR_V_006				
SIP_MG_PR_V_007				
SIP_MG_PR_V_008				
SIP_MG_PR_V_009				
SIP_MG_PR_V_010				
SIP_MG_PR_V_011				
SIP_MG_PR_V_012				
SIP_MG_PR_V_013				
SIP_MG_PR_V_014				
SIP_MG_PR_V_015				
SIP_MG_PR_V_016				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_MG_PR_I_001				
SIP_MG_PR_I_002				
SIP_MG_PR_I_003				
SIP_MG_PR_I_004				
SIP_MG_PR_I_005				
SIP_MG_PR_I_006				
SIP_MG_PR_I_007				
SIP_MG_PR_I_008				
SIP_MG_PR_I_009				
SIP_MG_PR_I_010				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_MG_RD_V_001				
SIP_MG_RD_V_002				
SIP_MG_RD_V_003				
SIP_MG_RD_V_004				
SIP_MG_RD_V_005				
SIP_MG_RD_V_006				
SIP_MG_RD_V_007				
SIP_MG_RD_V_008				
SIP_MG_RD_V_009				
SIP_MG_RD_V_010				
SIP_MG_RD_V_011				
SIP_MG_RD_V_012				
SIP_MG_RD_V_013				
SIP_MG_RD_V_014				

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause C.8)
SIP_MG_RD_I_001				
SIP_MG_RD_I_002				
SIP_MG_RD_I_003				
SIP_MG_RD_I_004				
SIP_MG_RD_I_005				
SIP_MG_RD_I_006				
SIP_MG_RD_I_007				
SIP_MG_RD_I_008				

C.8 Observations

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

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History

Document history		
V1.1.1	September 2002	Publication
V2.1.1	October 2003	Publication