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Contents

Foreword

This ETSI Technical Report (ETR) was produced by the Methods for Testing and Specification (MTS) Technical Committee of the European Telecommunications Standards Institute (ETSI) in order to provide rules and guidance on how to monitor and follow up scoping projects within ETSI.

ETSI TC-MTS wishes to explore innovative solutions for the long term, but also to be, for the present, a "proposer" in harmonized approaches to the pressing requirement of managing testing and protocol specification project teams in various TC's.

ETSI TC-MTS recommends that the TC and STC chairmen in their role of co-ordinator of standard development ensure that the groups of experts working in conformance testing or in standard specification in their bodies are fully aware of the status of affairs in this area, so that initiatives are co-ordinated properly. Special care should be devoted to the monitor of the Project Team (PT).

Introduction

This ETR covers the management, and the monitoring of scoping projects. It is made of a generic part concerning the scoping project in general and of a specific one dedicated to the testing scoping project. Other specific parts are already considered.

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1 Scope

This ETSI Technical Report (ETR) provides rules and guidance on how to monitor and follow up scoping projects within ETSI.

The scoping report summarizes the findings of the scoping activity.

The objectives of the scoping activity are to provide a clear definition of its objectives and tasks. It is a preliminary study of the requirements applying to the standard(s) that will be produced by the Project Team (PT).

The objective of holding a scoping activity separately from the development project is to lead to:

a)   a more accurate evaluation of the resource needed;

b)   a technical pre-design leading to unambiguous Terms of Reference (ToR) for the coming project;

c)   a formal acceptance of the Terms of Reference (and scoping report) before the project starts, protecting it against any change of direction during its lifetime;

d)   an acceptance of the ToR (and scoping report) by the project, which eases the task of its steering group or parent STC.

In addition, it is an explicit purpose of the scoping activity to perform some education of the parent Technical Committee (TC) on the choices that will be proposed in the scoping report, and on the stakes lying behind them.

2 References

This ETR incorporates by dated and undated reference, provisions from other publications. These 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 ETR only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

[1]   ISO/IEC 9646-1 (1991): "Information technology - OSI conformance testing methodology and framework - Part 1: General concepts".

[2]   ISO/IEC 9646-2 (1991): "Information technology - OSI conformance testing methodology and framework - Part 2: Abstract test suite specification".

[3]   ISO/IEC 9646-3: "Information technology - OSI conformance testing methodology and framework - Part 3: Tree and tabular combined notation".

[4]   ISO/IEC 9646-4 (1991): "Information technology - OSI conformance testing methodology and framework - Part 4: Test realization".

[5]   ISO/IEC 9646-5 (1991): "Information technology - OSI conformance testing methodology and framework - Part 5: Requirements on test laboratories and clients for the conformance assessment process".

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

[7]   ETR 141: "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; The Tree and Tabular Combined Notation (TTCN) style guide".

3 Definitions and Abbreviations

3.1 Definitions

For the purpose of this ETR, all the definitions given in ETS 300 406 [6] and ISO/IEC 9646 [1] to [5] (and their amendments) apply.

3.2 Abbreviations

For the purpose of this ETR, the following abbreviations apply.

ATC	Abstract Test Case
ATM	Abstract Test Method
ATS	Abstract Test Suite
CEC	Commission of the European Community
CTS	Conformance Testing Services
ETR	ETSI Technical Report
ETS	European Telecommunication Standard
ICS	Implementation Conformance Statement
ISDN	Integrated Services Digital Network
PDU	Protocol Data Unit
PICS	Protocol Implementation Conformance Statement
PT	Project Team
TA	Technical Assembly
TC	Technical Committee
ToR	Terms of Reference
TP	Test Purposes
TSS	Test Suite Structure
TSS & TP	Test Suite Structure & Test Purposes
TTCN	Tree and Tabular Combined Notation

4 Content of a scoping report

4.1 Generic content of a scoping report

A scoping report should contain the chapters mentioned in annex B. Annex B discusses the applicability of the different paragraphs. The use of generic scoping report proforma may require intermediate steps such as the definition of specific proforma dedicated to well defined technical domain. Today, such a proforma is defined for conformance testing scoping report (see annex A).

Although, MTS plan to define proforma for other technical domains as well.

4.2 Typical Content of a Scoping Report

The scoping report contents should respect the following checklist:

a) the technical specification of the work to be undertaken by the development PT, with a list of tasks. This technical specification comprises at least:

- identification of all the reference standards, and consideration on their use (risks related to their stability, to their formulation, etc.);

- identification of all the inputs, with the report of a thorough assessment of their quality, and recommendation to use them, not to use them, or to use them to a given extent;

- statements of main technical decisions;

- identification of pre-requisites (for instance, some development phases will depend on the availability of some documents;

- identification of the synchronization points with other activities (deliverables that should be produced in time for some committee meetings, dependencies with planned industrial projects implementing a technology or realizing pilot trials, etc.);

- identification of the tasks to be performed (including the tasks not directly related to the production of deliverables, like the contribution to international standardization);

- identification of the final and intermediate deliverables;

b) an evaluation of resources needed for the development, and the budget plan following the expected duration of the project;

c) the skill required for the experts in charge of the work;

d) the outline of a quality plan;

e) a summary of the findings of the scoping activity usable as a management summary.

4.3 Relationships between a scoping report and an initial report

This clause highlight the relationships among an initial report and a scoping report. The table below indicates, for each part of the initial report, the corresponding part of the scoping report.

INITIAL REPORT	SCOPING REPORT
Description of the successive technical tasks	Management summary (part 1) Full information in clause A.5.
Description of the projected content of the committed deliverables and confirmation of their type	management summary (part 2) Full information in clause A.6.
Detailed work plan (PERT or GANTT diagram)	Management summary (part 3) Full information in clause A.6.

Therefore, it appears that the initial report may be considered as a subset of the scoping report corresponding to its management summary.

Although, in the majority of the cases, the scoping report cannot be directly used to produce the initial report, since the information it contains have been elaborated before the actual start up of the project. So, the information of the scoping report management summary shall be updated before to be used to produce the initial report.

However, in some cases, the scoping report activity is carried out by the team in charge of the project itself. In that case, it constitutes the first task of the project team. In such a context, the scoping report management summary can be directly used as an initial report.

Annex A: Generic scoping report proforma

A.1   Management summary

A.1.1   Brief description of the successive tasks to be performed

This clause will contain a summary of clause A.5, describing the tasks to be performed. It aims to provide a short description of the tasks and not an exhaustive one. Typically, this clause should not exceed 1½ pages.

A.1.2   Deliverable to be produced

This clause will contain a summary of clause A.6, describing the deliverable to be produced. For each deliverable, a short summary should be provided as well as the indication of the proposed status for the deliverable (i.e. ETR, ETS, etc.).

A.1.3   Work plan

The purpose of this subclause is not to repeat the information contained in clause B.7 which deals with a detailed time scale, but to summarize it, providing the following pieces of information through a GANTT or PERT diagram:

- the starting and finishing dates of each task identified in subclause A.1.1;

- the date of availability of the deliverable identified in subclause A.1.2. This information shall cover the availability of the final version as well as the availability of the interim ones.

A.2   Definition of what to be done

This clause concerns the identification of the reference standard(s) to be tested as well as the identification of the difficulties (if any) related to the test realization.

A.2.1   Identification of the reference standards

This subclause concerns the identification of the reference standard(s) to be used. It deals with the following kind of information:

- identification of the reference standard(s) to be considered;

- profile(s) to be considered (when applicable);

- interfaces to be considered;

- etc.

For each reference standard to be covered, this clause should provide an abstract allowing the reader to understand the objective of the standard. The coverage of the reference standard shall be detailed.

The role of this subclause is to define the technical domain to be covered by the scoping project.

A.2.2 Quality of the reference standards

This subclause shall provide an indication on the level of quality of the reference standard(s) concerned.

A subclause shall be dedicated to each reference standard concerned.

The subclauses shall indicate for each reference standard, the quality of the standard itself and of its annexes. At least the following topics shall be addressed:

- the stability of the reference standard;

- the date of publication (when applicable);

- the method used for the specification of the reference standard (when a formal description method is used it shall be indicated here).

The questions concerning the availability and the use of methodology such as this defined in three stages for ISDN are essential in this subclause.

When the standard is defined only in prose, it shall be checked that the vocabulary used is explicitly and unambiguously defined.

When there is cross-reference among different standards (i.e. when the standard is not self-contained) the interdependency shall be analysed and detailed.

When the scope of the standard is only partially covered by the scoping project, the restriction shall be indicated here.

A.2.3 Summary of the quality assessment related to reference standard and technical risks

The role of this subclause is to provide synthetic information concerning the technical problems to be faced by the team in charge of the main project.

Table A.1

Reference standard summary			
Criteria	**Availability**	**Quality Assessment**	**Enhancement Required**
Reference Standard 1			
Element 1	Y	Poor	Y
Element 2		Good	
	Y		
	10/10/93		
Element i	N		
	N		
Element n	N		

A.2.4 Method and general constraints on the environment

This subclause shall provide an indication of the method(s) and constraint(s) applicable on the reference standard(s) concerned. When several reference standards are being considered, separate subclauses shall be used.

A.3 Input assessment

For each input, the input assessment clause concerns the analysis and the evaluation of the different elements available. When several inputs have to be considered, the clause shall be duplicated.

A.3.1 Input description and assessment

When an input concerns several reference standards, it shall be considered as several inputs (one per reference standard). If elements of information are common to different reference standards covered by the same input, the information shall be detailed for the first reference standard, and the clauses concerning the subsequent ones shall reference the first.

A.3.1.1 Input description

This subclause shall provide general information about the input. It shall concern a brief presentation of the input as well as the organization involved in its definition. When the input has been developed in the framework of a specific project such as European ones, it shall be indicated here.

The nature of the input shall be defined.

This part shall also identify the relationships among different inputs.

The information related to the status of the input (private or publicly available) shall be provided as well as information concerning the stability.

In conclusion, this part shall cover at least the following topics:

- the nature of the input;
- the description language used;
- the relationships among this input and other inputs;
- the origin of the input;
- the organizations involved;
- the status of the input;
- the stability.

A.3.1.2 Input assessment

This part shall be focused on the evaluation of the input. It shall be based on the quality evaluation criteria.

The validation process which has been used for the input shall be detailed here. When applicable, it shall indicate if the input has been implemented and, if so, the conditions of the implementation shall be described.

When the input assessment leads to the rejection of the input, this rejection shall be technically justified and documented.

Additionally, this subclause shall provide information regarding the current use of the input (when applicable).

The level of "reusability" of the input shall be indicated. When several inputs are being combined, the information shall be provided here for the first input. The clauses concerning the subsequent inputs will have to refer the first input.

A.3.2 Synthesis of input(s) assessment

This subclause shall provide, for each reference standard, synthetic information concerning the inputs which are applicable. The required information shall be provided in tabular form. Description in prose should not be used here.

When the scoping activity is limited to only one input, this clause may be omitted.

Table A.2

Input assessment summary		
Identification of criterion	**Qualification**	**Comment**
Reference standard 1		
Number of input available	3	Yes but not formally defined
Input shall be merged?	Y	
Input to be merged	1 & 3	
Input 1		
Identification		
Quality evaluation	Acceptable	
Validation	Implementable	
Reusability	Good	
Input 2		
Identification		Input provided by company X
Quality evaluation	Poor	
Validation	Implementable	Implementation done
Reusability	Poor	Lack of quality of specifications

A.4 Related activities

The aim of this clause is to identify the related activities handled by external bodies (e.g. ITU, ISO or relevant European organization) or by other ETSI TCs or STCs. It shall also identify synchronization points or dependencies between these related activities and the planned PT.

The structure of this clause will depend on the specific requirements of the technical domain. Therefore, it is meaningless to indicate any guideline concerning the structure of this clause.

A.5 Tasks to be performed and related resources

This clause consists of two parts; the first one deals with the task description related to each reference standard to be considered; the second one concerns the tasks which are not dedicated to a given reference standard.

For each reference standard, the task description clause concerns the analysis and the evaluation of the work to be done for this reference standard. When several reference standards have to be considered, the clause shall be duplicated.

A.5.1 Tasks concerning technical job to be done

The structure of this part of the report will depend on the technical domain to be covered.

A.5.2 Management and quality tasks

A.5.2.1 Liaisons and relationships

This subclause shall describe the liaisons required to perform the tasks and shall identifiy the external organization or the internal TCs or STCs with which these liaisons or relationships are to be established.

In case of external project currently active in the same technical domain, special care shall be taken to avoid duplication of effort and divergent approaches.

The liaisons with the TC or STC may be evaluated to 4 days per semester. When relationships with other entities (e.g. other PTs) are required, the relevant resources shall be evaluated on a case-by-case basis.

A.5.2.2 Tasks concerning the training

Experts are supposed to be familiar with the technical domain considered as well as with the methodological tools used by ETSI. However, experience shows that its very difficult to find experts with both skills. Practically, it is often necessary to plan complementary training.

A.5.2.3 Tasks concerning the management

This subclause shall define the tasks to be assigned to the PT leader concerning management aspects. When the nature of the project requires a specific effort in the management domain (e.g. specific effort concerning the monitoring of parallel liaisons), the specific management tasks shall be clearly defined.

This subclause shall be structured in two parts:

- the first part identifies the standard management aspects required for the project. Among these tasks, the following may be mentioned:

  - assigning tasks and defining co-ordination procedures among the PT's experts: 1 week;

  - technical reporting to TC or STC: 2 days per TC/ STC meeting;

  - administrative tasks: 1 day per month;

- the second part describes in detail the management tasks which are specific to the project. Regarding this topic, there is no possibility to provide any guidance or information concerning resource evaluation.

  NOTE: The resources indicated above are for information only. They are based on statistical information obtained from former project teams.

A.5.2.4 Tasks concerning the quality

This subclause shall define the tasks to be assigned to the PT in the quality area. In addition, when it has been identified that the standard quality plan is not directly applicable to the PT, the identified divergence or modifications shall be noted here.

This subclause shall be structured in two parts:

- the first part identifies the items of the standard quality plan which apply to the project as well as those which are not relevant or not applicable;

- the second part identifies and describes in detail the items which are required for the project team but which are not part of the standard quality plan.

The information provided here shall cover all the items required to define the quality plan of the project as well as those concerning the quality review.

For both of these topics, it is difficult to provide any information concerning the required resources. For the definition of the quality plan, the resources required will depend on the requirements of the PT. The resource requirements for the quality review will directly depend on the number and complexity of the ATCs.

A.6   Synthesis

The synthesis consists of a table which summarizes the content of the report. An example of the table is given in table A.3.

Table A.3

Reference standards		
Identification of reference standard	**Type of job to be done**	**Technical risk**
Reference standard 1 Reference standard 2		

Input assessment		
Identification of Input	**Reusability**	**Comment**
Input of company x Input of company y	Partial Indirect	 For information only

List of tasks	
Task identification	**Resources**
Reference standard 1	xx m/weeks
Task 1.1	l m/week
Task 1.2	m m/week
Task 1.3	n m/week
Reference standard 2	yy m/weeks
Task 2.1	o m/week
Task 2.2	p m/week
Task 2.3	q m/week
Liaisons	aa m/weeks
Training	bb m/weeks

Resource summary	
Manpower: aa m/week	**Duration:** b month

Prerequisites

Synchronization points
Get approval from STC before starting task t1.1 STC shall deliver document x before starting task t2.1 STC shall approve deliverable 1 before starting task t2.2

Identification of deliverable	**Expected availability**	**Status**
Deliverable 1 Deliverable 2	mm / yy mn / yy	T F

Annex B: Scoping report proforma for conformance testing project

B.1   Management summary

B.1.1   Brief description of the successive tasks to be performed

This subclause will contain a summary of clause B.5, describing the tasks to be performed. It aims to provide a short description of the tasks and not an exhaustive one. Typically, this clause should not exceed 1½ pages.

B.1.2   Deliverable to be produced

This clause will contain a summary of clause B.6, describing the deliverable to be produced. For each deliverable, a short summary should be provided as well as the indication of the proposed status for the deliverable (i.e. ETR, ETS, etc.).

B.1.3   Work plan

The purpose of this clause is not to repeat the information contained in clause B.7 which deals with a detailed time scale, but to summarize it, providing the following pieces of information through a GANTT or PERT diagram:

-    the starting and finishing dates of each task identified in subclause B.1.1;

-    the date of availability of the deliverable identified in subclause B.1.2. This information shall cover the availability of the final version as well as the availability of the interim ones.

B.2   Definition of what to be tested

This clause concerns the identification of the reference standard(s) to be tested as well as the identification of the difficulties (if any) related to the test realization.

B.2.1   Identification of the reference standards

This subclause concerns the identification of the reference standard(s) to be used. It deals with the following kind of information:

-    identification of the reference standard(s) to be considered;

-    role(s) concerned into this(these) reference standard(s);

-    profile(s) to be considered (when applicable);

-    interfaces to be considered;

-    etc.

For each reference standard to be covered, this clause should provide an abstract allowing the reader to understand the objective of the standard. The coverage of the reference standard shall be detailed.

The role of this subclause is to define the technical domain to be covered by the scoping project.

B.2.2 Quality of the reference standards

This subclause shall provide an indication on the level of quality of the reference standard(s) concerned.

A subclause shall be dedicated to each reference standard concerned.

The subclauses shall indicate for each reference standard, the quality of the standard itself and of its annexes (i.e. ICS). At least the following topics shall be addressed:

- the stability of the reference standard;

- the date of publication (when applicable);

- the method used for the specification of the reference standard. (When a formal description method is used it shall be indicated here).

When the ICS is not available, a special warning shall be inserted here.

The issues concerning the alignment of the ICS with the reference standard shall be the object of particular care in each subclause.

The questions concerning the availability and the use of methodology such as this defined in three stages for ISDN are essential in this subclause.

The conformance requirements shall be carefully checked, particularly with respect to their "usability".

"Cleanness" of the protocol: some protocol are not defined in a clean way, particularly concerning the non-ambiguity of the definition of PDU parameters. When the reference standard(s) considered are in such a situation, the relevant indications shall be mentioned here. In addition, undefined options shall be considered with special care, since they lead to untestable parts of the PDUs.

When the protocol is defined only in prose, it shall be checked that the vocabulary used is explicitly and unambiguously defined.

When there is cross-reference among different standards (i.e. when the standard is not self-contained) the interdependency shall be analysed and detailed.

When the scope of the standard is only partially covered by the test suite, the restriction shall be indicated here.

When there are difficulties, limitations, etc. to apply TTCN to the reference standard, these elements shall be documented here.

When the test purposes are already available as a standard, the relevant information such as:

- stability;
- date of publication;
- quality;
- coverage;
- etc.

shall be indicated here.

B.2.3 **Summary of the quality assessment related to reference standard and technical risks**

The role of this subclause is to provide synthetic information concerning the technical problems to be faced by the team in charge of the definition of the conformance tests. At least the following aspects shall be considered in this subclause:

the state of the art of the test methodology concerning the technical domain. When the methodology is not totally mature, the relevant reservations concerning the feasibility of the planned test suite shall be made here;

the protocol versus service. Very often, the service and protocol aspects are not clearly split. For example, the semantics of protocol elements may depend on the use made by the service of these protocol elements. When such elements are identified they shall be noted here.

The information provided in prose in this subclause shall be summarized in a table structured as shown in table B.1. The goal of this table is to provide the reader with a global view of the reference standards to be used and not to duplicate the detailed and exhaustive information about the different standards provided in subclause 4.2.

Table B.1 provides an example of reference standard summary. The entries used in the examples are only indicative. Other entries may be used according to specific requirements.

When the scoping activity is limited to only one reference standard, this subclause may be omitted.

Table B.1

Reference standard summary			
Criteria	**Availability**	**Quality assessment**	**Enhancement required**
Reference standard 1 PICS	Y	Poor	Y
Stability		Good	
Reference standard published	Y 10/10/93		
Protocol specification according methodology	N		
Formal description method used	N		
Protocol specification according methodology	N		
Clarity of conformance requirements		Acceptable	N
Test purposes	Y	Acceptable	Y
Reference standard 2			
PICS	Y	Acceptable	N
Protocol specification according methodology	Y		
Clarity of conformance requirements		Good	N
Test purposes	N		Y

B.2.4 Applicable test method and general constraints on the test environment

This subclause shall provide indication on the test methods and constraints applicable on the reference standard(s) concerned. When several reference standard shall be considered, separate subclauses shall be used.

When an exposed interface is required for the test, its characteristics shall be indicated here.

If multi-party testing is required, the relevant justification shall be provided here. In addition, technical information regarding the way in which multi-party testing will be used shall be provided.

The nature of tests to be run is an essential parameter of the evaluation of the work to be done. It shall be indicated here.

The test which have to be run in the ETSI environment are sometimes out of the scope of ISO/IEC 9646 [1] to [5] which is limited to protocol conformance testing. In the ETSI environment, it is sometimes required to deal with service or interface testing. For this kind of test ISO/IEC 9646 [1] to [5] rules should be adapted.

When the methods defined in ISO/IEC 9646 [1] to [5] are not applicable. This leads to the use of a specific test method. If such a situation occurs, the relevant justification shall be provided and the specific test method planned shall be detailed.

The tests which have to be run in the ETSI environment are sometimes out of the scope of ISO/IEC 9646 [1] to [5] which is limited to protocol conformance testing. In the ETSI environment, it is sometimes required to deal with service or interface testing. For this kind of test ISO/IEC 9646 [1] to [5] rules should be adapted. Therefore, the knowledge of the nature of tests to be run is an essential parameter of the evaluation of the work to be done.

The testing domain considered (voluntary or regulatory, or both) shall be indicated here.

B.2.5 Test method summary

The role of this clause is to provide synthetic information concerning the issues related to test method, type of testing or constraints. Since the aim of this clause is only to summarize the information provided by the previous one, no prose is required here.

The table hereafter provides an example of test method summary. The entries used in the examples are only indicative. other entries may be used according to specific requirements.

When the scoping activity is limited to only one reference standard, this clause may be omitted.

Table B.2

Test method summary		
Criteria	Availability	Comment
Reference standard 1		
Exposed interface	Y	Yes but not formally defined
Recommended test method	Coordination	
Type of reference standard	Protocol	
Multi-party testing required	N	
Testing domain	Voluntary	
Reference standard 2		
Exposed interface	N	
Recommended test method	Specification	
Type of reference standard	Interface	
Multi-party testing required	Y	
Testing domain	Voluntary	

B.3   Input assessment

For each input, the input assessment clause concerns the analysis and the evaluation of the different conformance test suites or elements of conformance test suites available. When several inputs have to be considered, the relevant clause shall be duplicated.

B.3.1   Input description and assessment

When an input concerns several reference standards, it shall be considered as several inputs (one per reference standard). If elements of information are common to different reference standards covered by the same input, the information shall be detailed for the first reference standard, and the clauses concerning the subsequent ones shall reference the first.

B.3.1.1   Input description

This subclause shall provide general information about the input. It shall concern a brief presentation of the input as well as the organization involved in its definition. When the input has been developed in the framework of a specific project such as the CTS ones, it shall be indicated here.

The nature of the input shall be detailed especially when the input has not be designed as a conformance test suite.

This part shall also identify the relationships among different inputs. For instance, it may concern the fact that ATS-2 is derived from ATS-1 and that 90% of these two ATSs are identical.

The information related to the status of the input (private or publicly available) shall be provided as well as information concerning the stability.

In conclusion, this part shall cover at least the following topics:

- the nature of the input;
- the description language used;
- the number of test cases;

- the coverage of the ATS;
- the relationships among this input and other inputs;
- the origin of the input;
- the organizations involved;
- the status of the input;
- the stability.

B.3.1.2 Input assessment

This part shall be focused on the evaluation of the input. It shall be based on the quality evaluation criteria.

The validation process which has been used for the input shall be detailed here. More specifically, it shall indicate if the input has been implemented and, if so, the conditions of the implementation shall be described.

When the input assessment leads to the rejection of the input, this refusal shall be technically justified and documented.

Additionally, this subclause shall provide information regarding the current use of the test suite (when applicable).

The level of "reusability" of the input shall be indicated. when several inputs are being be combined, the information shall be provided here for the first input. The clauses concerning the subsequent inputs will have to refer the first input.

B.3.2 Synthesis of input(s) assessment

This subclause shall provide, for each reference standard, synthetic information concerning the inputs which are applicable. The required information shall be provided in tabular form. Description in prose should not be used here.

When the scoping activity is limited to only one input, this clause may be omitted.

Table B.3

Input assessment summary		
Identification of criterion	**Qualification**	**Comment**
Reference standard 1		
Number of input available	3	Yes but not formally defined
Input shall be merged?	Y	
Input to be merged	1 & 3	
Input 1		
Identification		CTS test suite
Quality evaluation	Acceptable	
Validation	Implementable	Implementation done during CTS project
Reusability	Good	
Input 2		
Identification		Test suite provided by company X
Quality evaluation	Poor	TTCN dialect used and serious enhancement to be made on TSS & TP
Validation	Implementable	Implementation done
Reusability	Poor	Lack of quality of specifications
Input 3		
Identification		Test suite provided by company Y
Quality evaluation	Good	
Validation	Implementable	Implementation done and NOT currently used
Reusability	Good	

B.4   Related activities

The aim of this clause is to identify the related activities handled by external bodies (e.g. CTS) or by other ETSI TCs or STCs. It shall also identify synchronization points or dependencies between these related activities and the planned PT.

The structure of this clause will depend on the specific requirements of the technical domain. Therefore, it is meaningless to indicate any guideline concerning the structure of this clause.

B.5   Tasks to be performed and related resources

This clause consists of two parts; the first one deal with the task description related to each reference standard to be considered; the second one concerns the tasks which are not dedicated to a given reference standard.

For each reference standard, the task description clause concerns the analysis and the evaluation of the work to be done for this reference standard. When several reference standards have to be considered, the clause shall be duplicated.

B.5.1 Tasks concerning ATS for reference standard 1

B.5.1.1 Tasks concerning the reference standard itself

This subclause is optional It shall be present only when lacks or inconsistencies have been identified for the reference standard and when it has been decided that the project team will have to fill these gaps. If the correction of the defects of the reference standard is assigned to an other entity (i.e. the relevant TC or STC) this clause shall be omitted.

If this subclause is present, it shall cover the following topics:

- list of tasks to be performed;

- technical description of each task;

- relationships among the different tasks (if any);

- external dependencies (if any).

When internal or external inter-dependencies are identified among the different tasks, this shall be illustrated using a GANTT diagram or a equivalent representation.

B.5.1.2 Tasks concerning the TSS & TP

This subclause shall be provided when no standardized TSS & TP are available. It should cover the following:

- list of the input(s) to be reused (if any);

- when different inputs shall be merged, the information regarding the elements to be merged shall be provided (i.e. at least a description of the main nodes of the new TSS shall be provided as well as the identification of the purpose of these nodes);

- when inputs are only partially reused, the parts of them which are concerned shall be clearly defined;

- even when TSS & TP are already available and reusable without modification, a few days should be planned for familiarization.

In case of the differences between the TSS & TP of the input(s) and the planned rational and technical justification shall be provided.

When standardized TSS & TP are only partially available the technical work required for the finalization shall be described as well as the identification of the gaps.

B.5.1.3 Identification of pre-requisites

When there is actions concerning the TSS & TP, or when the definition of the whole TSS & TP shall be done before the start of the actual PT. These elements shall be defined here. Typically, it may concern extensions or enhancement of the reference standard or of one of its annexes (i.e. PICS) which are done by the TC or STC.

B.5.1.4 Tasks concerning the ATS

This subclause shall, on the basis of the contents of the analysis of the relevant inputs (if any), describe the tasks to be performed regarding the ATS. It shall concern at least the following:

- list and nature of defects identified in the ATS provided as input (if any);

- definition of naming conventions;

- nature of the work to be performed on the input(s) (if any);

- number of existing ATCs to modify and nature of the modifications;

- number of ATCs to specify from scratch;

- evaluation of the complexity of the work to be performed to modify or write the ATCs;

- level of complexity of the preamble and postamble;

- level of detail and complexity of constraints.

In order to base the evaluation on objective criteria, it is recommended to write a limited number of representative test cases and to specify the relevant constraints. The time required to write these tests will be used as a basis for the evaluation of the resource required for the whole test suite.

When evaluating the resource the following elements shall be taken into account:

- the first test written takes more time than the following ones;

- the number of different preamble and postamble shall be defined;

- the evaluation shall concern the time required for writing the test body and for writing each preamble or postamble;

- the number of tests per test group is an essential factor;

- when a set of purposes concerns parameter variations the evaluation shall be made for the whole set of corresponding test cases.

B.5.1.5 Tasks concerning the modifications after public enquiry

The estimated resources required for the review of the ATS after the public enquiry may be evaluated to 5% to 10% of the resources required for the initial specification of the ATS. However, this value is only indicative since this may be subject to significant variations according to the initial quality of the ATS or to the sensitivity of the technical domain.

B.5.2 Tasks independent of reference standards

B.5.2.1 Liaisons and relationships

This subclause shall describe the liaisons required to perform the tasks and shall identify the external organization or the internal TCs or STCs with which these liaisons or relationships are to be established.

In case of CTS project currently active in the same technical domain, special care shall be taken to avoid duplication of effort and divergent approaches.

The liaisons with TC or STC may be evaluated to 4 days per semester. When relationships with other entities (e.g. other PTs) are required, the relevant resources shall be evaluated on a case-by-case basis.

B.5.2.2 Tasks concerning the training

Experts are supposed to be familiar with IS TTCN as well as with the protocol to be tested. However, experience shows that its very difficult to find experts with both skills. Practically, it is often necessary to plan complementary training.

As an example, the following has been required in a previous project:

IS TTCN training for an expert having a good knowledge of DIS (less than 1 week);

familiarization with Concurrent TTCN for an expert with good knowledge of TTCN (around 1 week);

familiarization with ITEX for an expert with good knowledge of TTCN (less than 1 week).

Resources related to the familiarization with the protocol shall be evaluated on a case-by-case basis as well as resources required for initial TTCN training for an expert.

B.5.2.3 Tasks concerning the management

This subclause shall define the tasks to be assigned to the PT leader concerning management aspects. When the nature of the project requires a specific effort in the management domain (e.g. specific effort concerning the monitoring of parallel liaisons), the specific management tasks shall be clearly defined.

This subclause shall be structured in two parts.

- the first one identifies the standard management aspects required for the project. Among these tasks, the following may be mentioned:

  - assigning tasks and defining co-ordination procedures among the PT's experts: 1 week;

  - technical reporting to TC or STC: 2 days per TC/ STC meeting;

  - administrative tasks: 1 day per month;

- the second part describes in detail the management tasks which are specific to the project. Regarding this topic, there is no possibility to provide any guidance nor information concerning resource evaluation.

  NOTE: The resources indicated above are for information only. They are based on statistical information obtained from former project teams.

B.5.2.4 Tasks concerning the quality

This subclause shall define the tasks to be assigned to the PT in the quality area. In addition, when it has been identified that the standard quality plan is not directly applicable to the PT, the identified divergence or modifications shall be noted here.

This subclause shall be structured in two parts:

- the first part identifies the items of the standard quality plan which apply to the project as well as those which are not relevant or not applicable;

- the second part identifies and describes in detail the items which are required for the project team but which are not part of the standard quality plan.

The information provided here shall cover all the items required to define the quality plan of the project as well as those concerning the quality review.

For both of these topics, it is difficult to provide any information concerning the required resources. For the definition of the quality plan, the resources required will depend on the requirements of the PT. The resource requirements for the quality review will directly depend on the number and complexity of the ATCs.

B.6   Synthesis

The synthesis consists of a table which summarizes the content of the report. An example of the table is given in table B.4

Table B.4

Reference standards		
Identification of reference standard	**Type of testing**	**Technical risk**
Reference standard 1 Reference standard 2	Protocol conformance testing Interface testing	PICS not available Undefined options

Input assessment		
Identification of Input	**Reusability**	**Comment**
CTS input Input of company x	Partial Indirect	Translate DIS to IS For information only

List of tasks	
Task Identification	**Resources**

Reference standard 1
    Reference standard itself
    TSS & TP
    ATS
Reference standard 2
    Reference standard itself
    TSS & TP
    ATS
Liaisons
Training
	xx m/weeks
	l m/week
	m m/week
	n m/week
	yy m/weeks
	o m/week
	p m/week
	q m/week
	aa m/weeks
	bb m/weeks

Resource summary	
Manpower: aa m/week	**Duration:** b month

Prerequisites
PICS shall be available   etc.

Synchronization points
Get approval from STC before starting task t1   CTS shall deliver ATS for protocol x before starting task t2

Identification of deliverable	**Expected availability**	**Status**

Deliverable 1
    TSS & TP for reference standard 1
    TSS & TP for reference standard 2
    TSS & TP for reference standard i
Deliverable 2
    ATS for reference standard 1
    ATS for reference standard 2
    ATS for reference standard i
	mm / yy
	mm1 / yy
	mm2 / yy
	mm3 / yy
	mn / yy
	mn1 / yy
	mn2 / yy
	mn3 / yy
		T
		
		F

B.7 Information to be annexed to the scoping report

B.7.1 Annexed draft ATM description

The aim of this annex is to provide the ETSI Technical Assembly (TA) as well as the PT leader with basic information concerning the ATM to be used for each protocol to be tested. This information has two major goals: the fist one is to provide technical information which justifies the required resources, the second one is to provide the project team in charge of the ATS with the basic technical information required to accept their mandate (i.e. ToR).

This annex shall provide at least the following for each reference standard:

- identification of the ATM applicable for each layer;

- justification regarding the choice of this ATM.

B.7.2 Annexed draft TSS & TP

The aim of this annex is to provide the TA as well as the project team leader with a raw TSS & TP allowing the evaluation of the work to be done. The objective is to provide a macro description and not a detailed one i.e. the group of tests shall be identified through the relevant tree structure. In addition, the general purpose of each group as well as an evaluation of the number of tests belonging to this group shall be provided.

This annex shall provide at least the following for each reference standard:

- identification of the relevant test groups and sub-groups;

- description of the purpose of the groups or sub-groups identified above;

- evaluation of the number of test cases to be contained in each group or sub-group.

B.7.3 Annexed example of test cases and constraints

This annex shall contain the test cases and constraints used as the basis of the resource evaluation.

History

Document history	
February 1995	First Edition
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