



**Public Safety Partnership
Project**

MESA

Drafting Rules

Version 1.0 - 2002-09-20

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Foreword

The contents of the present document are subject to continuing work within Project MESA and may change following formal approval by the MESA Organizational Partners.

The purpose of the present document is to provide guidelines for the format and style of Project MESA deliverables, it is based on the ETSI drafting rules (ETSI SR 001 262) and the TIA style manual (1992).

Items concerning word-processor specific layout and formatting matters when using the Microsoft Word for Windows[®] based skeleton documents and templates are shown with **shaded** background. Boiler plate text (i.e. text which shall be directly used in Project MESA deliverables) is represented by *italic* characters.

Individual copies of the Project MESA drafting rules can be downloaded from the MESA web site,
<http://www.projectmesa.org>

Revision history

Version	Date	Remarks
1.0	20 September 2002	Approved by OPs

1 Scope

The present document specifies rules for the structure and drafting of documents intended to become a MESA Technical Specification or Technical Report. These rules are intended to ensure that such documents are drafted in as uniform a manner as is practicable, irrespective of the technical content.

These drafting rules complement the MESA Technical Working Procedures.

2 References

For the purposes of these Project MESA Drafting Rules, the following references apply:

- "Project MESA Technical Working Procedures".
- "Project MESA change request procedures".
Note: Currently being drafted.
- DTR/MESA-SA002: "Project MESA; Definitions, Symbols and Abbreviations".
Note: Currently being drafted.

3 Definitions and abbreviations

3.1 Definitions

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

clause: basic component in the subdivision of the text of a deliverable.

deliverable: document (*TS* or *TR*) produced as the result of a *MESA work item*.

informative elements: those elements that provide additional information intended to assist the understanding or use of the MESA deliverable

informative reference: references that are not essential to the use of the MESA deliverable but that assist the user with regard to a particular subject area

instruction: provision that conveys an action to be performed [ISO/IEC Guide 2:1996, definition 7.3]

normative element: an element setting out provisions to which it is necessary to conform in order to be able to claim compliance with a MESA TS

normative reference: references that are essential to the use of the MESA deliverable, i.e. without which the deliverable cannot be implemented

provision: expression in the content of a normative document, that takes the form of a statement, an instruction, a recommendation or a requirement [ISO/IEC Guide 2:1996, definition 7.1]

NOTE: These types of provision are distinguished by the form of wording they employ; e.g. instructions are expressed in the imperative mood, recommendations by the use of the auxiliary "should" and requirements by the use of the auxiliary "shall" (see annex D).

publicly available: in the context of referencing documents within MESA deliverables, a document that may be obtained from the source organization by any person (with or without payment), simply by quoting the reference given in the MESA deliverable to the source organization or other typical supplier (e.g. National Standards Organization, Library,...)

recommendation: provision that conveys advice or guidance [ISO/IEC Guide 2:1996, definition 7.4]

requirement: provision that conveys criteria to be fulfilled [ISO/IEC Guide 2:1996, definition 7.5]

statement: provision that conveys information [ISO/IEC Guide 2:1996, definition 7.2]

work item: description of a standardization task

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ASCII	American Standard Code for Information Interchange
ASN.1	Abstract Syntax Notation no. 1
CIF	Common Interchange Format
GDMO	Guidelines for the Definition of Managed Objects
GR	Graphical Rendition
ICS	Implementation Conformance Statement
IPR	Intellectual Property Rights
MP	Machine Processable
PDF	Portable Document Format
SDL	Specification and Description Language
SDT	SDL Development Tool
SG	Specification Group (generic)
SR	Special Report
SSG	Service Specification Group
TR	Technical Report
TS	Technical Specification
TSG	Technical Specification Group
TTCN	Testing and Test Control Notation
TTCN	Tree and Tabular Combined Notation

NOTE: The introduction of TTCN-3 led to a name change from Tree and Tabular Combined Notation to Testing and Test Control Notation. It shall be made clear in each MESA deliverable which version of TTCN applies.

4 General principles

4.1 Objective

The objective of a MESA deliverable is to define clear and unambiguous provisions in order to facilitate international trade and communication. To achieve this objective, the MESA deliverable shall:

- be as complete as necessary within the limits specified by its scope;
- be consistent, clear and accurate;
- provide a framework for future technological development; and
- be comprehensible to qualified persons who have not participated in its preparation.

4.2 Homogeneity

Uniformity of structure, of style and of terminology shall be maintained not only within each MESA deliverable, but also within a series of associated MESA deliverables. The structure of associated MESA deliverables and the numbering of their clauses shall, as far as possible, be identical. Analogous wording shall be used to express analogous provisions; identical wording shall be used to express identical provisions.

The same term shall be used throughout each MESA deliverable or series of MESA deliverables to designate a given concept. The use of an alternative term (synonym) for a concept already defined shall be avoided. As far as possible, only one meaning shall be attributed to each term chosen.

These requirements are particularly important not only to ensure comprehension of the MESA deliverable but also to derive the maximum benefit available through automated text processing techniques.

4.3 Consistency of MESA deliverables

In order to achieve the aim of consistency within the complete body of MESA deliverables, the text of every MESA deliverable shall be in accordance with the relevant provisions of existing basic MESA deliverables. This relates particularly to:

- standardized terminology;
- principles and methods of terminology;
- quantities, units and their symbols;
- abbreviations;
- bibliographic references; and
- graphical symbols.

In addition, for specific technical aspects, the relevant provisions of general MESA deliverables dealing with the following subjects shall be respected:

- limits;
- tolerancing of dimensions and uncertainty of measurement;
- preferred numbers;
- statistical methods;
- environmental conditions and associated tests.

4.4 Official language

MESA deliverables shall be in the English language only.

4.5 Fitness for implementation as a national, regional or international standard

The content of a MESA deliverable shall be drawn up in such a way as to facilitate its direct application and its adoption without change as a national, regional or international standard.

4.6 Planning

In order to ensure the timely publication of a MESA deliverable or of a series of associated MESA deliverables, the intended structure and any interrelationships shall be established before detailed drafting begins. In particular, consideration shall be given to the subdivision of the subject matter (see clause 5.1). In the case of a multi-part MESA deliverable, a list of the intended parts together with their titles shall be drawn up. The rules given in the present document shall be applied from the very beginning of the work and throughout all subsequent stages to avoid delay at any stage.

5 Structure

5.1 Subdivision of the subject matter

5.1.1 General

MESA deliverables are so diverse that no universally acceptable rules can be established for the subdivision of the subject matter.

However, as a general rule, an individual MESA deliverable shall be prepared for each subject to be standardized, and published as a complete entity. In specific cases and for practical reasons, for example:

- the MESA deliverable is likely to become too voluminous;
- subsequent portions of the content are interlinked;
- portions of the MESA deliverable could be referred to in regulations; or
- portions of the MESA deliverable are intended to serve for certification purposes,

the MESA deliverable may be split into separate parts under the same number. This has the advantage that each part can be changed separately when the need arises.

In particular, the aspects of a product which will be of separate interest to different parties (e.g. manufacturers, operators, certification bodies, legislative bodies) shall be clearly distinguished, preferably as parts of a MESA deliverable or as separate MESA deliverables.

Such individual aspects are, for example:

- performance requirements;
- maintenance and service requirements; and
- quality assessment.

The terms that shall be used to designate the divisions and subdivisions that a MESA deliverable may have are shown in table 1.

Table 1: Names of divisions and subdivisions

Term	Example of numbering
part	MESA TS 70.123-1
sub-part	MESA TS 70.123-1-1
clause	1
clause	1.1
clause	1.1.1
paragraph	no number
annex	A
clause	A.1
clause	A.1.1

5.1.2 Subdivision of the subject matter within a series of parts

There are two systems in use for subdividing into parts:

- a) Each part deals with a specific aspect of the subject and can stand alone.
- b) There are both common and specific aspects to the subject. The common aspects shall be given in part 1. Specific aspects (which may modify or supplement the common aspects and therefore cannot stand alone) shall be given in individual parts.

Where the system described in b) is used, care shall be taken that the references from one part to another are always to the latest version. There are two ways to achieve this:

- If reference is made to a particular element, the reference shall be specific (see clause 6.6.6.5.2).
- Since the complete series of parts is normally under the control of the same SG, the use of non-specific references (see clause 6.6.6.5.3) is permitted, provided that corresponding changes are implemented simultaneously in all parts.

The use of non-specific references requires a high degree of discipline by the SG responsible for the MESA deliverable.

Their use is not permitted between MESA deliverables of different SGs except where the reference is intentionally non-specific, i.e. it is accepted that it will be possible to use all future changes of the text referred to for the purposes of the referring MESA deliverable.

Each part of a multi-part MESA deliverable shall be drafted in accordance with the rules for an individual MESA deliverable as specified in the present document.

5.1.3 Subdivision of the subject matter within an individual MESA deliverable

Table 2: Example of a typical arrangement of elements in a MESA deliverable

Type of element	Arrangement of elements in MESA deliverables (note 1)	Permitted content of element(s) in MESA deliverables (note 1)
Informative preliminary	Title page	Title
	Table of contents	<i>(generated content, see clause 6.1.2)</i>
	Intellectual Property Rights (note 3) Foreword (note 4)	Text <i>Note(s)</i>
	<i>Introduction</i>	<i>Text</i> <i>Figure(s)</i> <i>Table(s)</i> <i>Note(s)</i>
Normative general	Scope	Text (no requirements) <i>Figure(s)</i> <i>Table(s)</i> <i>Note(s)</i>
	Reference(s)	Reference(s)
Normative technical	Definition(s) Symbols and abbreviations Requirements : Normative annex	Text <i>Figure(s)</i> <i>Table(s)</i> <i>Note(s)</i>
Informative supplementary	<i>Informative annex, (note 2)</i>	<i>Text</i> <i>Figure(s)</i> <i>Table(s)</i> <i>Note(s)</i>
Informative supplementary	<i>Bibliography</i>	<i>Informative reference(s)</i>
	<i>Index</i>	<i>(generated content)</i>
	Change history (note 3)	Table
NOTE 1: Bold type = required element; upright type = normative element; <i>italic type</i> = informative element.		
NOTE 2: Informative annexes may not contain normative elements.		
NOTE 3: Provided by the MESA Secretariat.		
NOTE 4: Partly provided by the MESA Secretariat.		

A MESA deliverable need not contain all the normative technical elements shown in table 2 and it may contain normative technical elements other than those shown. Both the nature of the normative technical elements and their sequence are determined by the nature of the MESA deliverable in question.

A MESA deliverable may also contain notes to figures and tables (see clauses 6.6.4.6 and 6.6.5.6).

5.2 Description and numbering of divisions and subdivisions

5.2.1 Parts and sub-parts

The number of a part shall be indicated by arabic numerals, beginning with 1, following the MESA deliverable number and preceded by a hyphen, for example:

- MESA TR 70.123-1, MESA TR 70.123-2.

5.2.1A General numbering issues

Every attempt shall be made to use continuous numbering as described in the remainder of clause 5.2. However, if continuous numbering cannot be maintained, a new element may be inserted in existing text using an appropriate alphanumeric designation that does not disturb the existing numbering scheme. This applies to all elements (e.g. clause, annex, figure, table, note, list).

EXAMPLE 1: It is necessary to update a MESA TS. A new clause needs to be inserted between the existing clauses 8 and 9. A new clause 8A may be inserted in preference to re-numbering the existing clauses.

EXAMPLE 2: A new figure needs to be inserted between existing figures 4 and 5. A new figure 4A may be inserted to avoid re-numbering of all subsequent figures.

Similarly, an existing element may be deleted and replaced with the term "Void." to minimize disruption to the numbering scheme. However, the title of the deleted element shall be retained.

EXAMPLE 3: During the updating of a MESA TS, it is decided that annex C is no longer required. The title of annex C remains while the content simply becomes "Void.". Later annexes may therefore remain unchanged.

EXAMPLE 4: It is decided to delete a note 3, so the text of note 3 becomes "Void." and there is no need to re-number note 4.

5.2.2 Clause

Each clause shall have a title which shall be placed after its number (except "IPR", "Foreword" and "Introduction" clauses, which are unnumbered), separated by a tab.

A clause can have numbered subdivisions, e.g. 5.1, 5.2, 5.1.1, 5.1.2, etc. This process of subdivisions may be continued as far as the sixth heading level (e.g. 6.5.4.3.2.1).

For numbering see clause 5.2.1A.

- Use the **Heading** style appropriate to its level (see table A.1).
- Separate the number of the heading and the text of the heading with a tab.
- Treat clause titles as normal text (i.e. **no additional capitalization**), **but** no full stop.

5.2.3 Paragraph

"Hanging paragraphs" such as those shown in the following example should be avoided when reference to them is ambiguous.

EXAMPLE 1: In the following example the hanging paragraphs indicated cannot be uniquely identified as being in "clause 5" since strictly speaking the paragraphs in clauses 5.1 and 5.2 are also in clause 5. To avoid this problem it would be necessary either to identify the unnumbered paragraphs as clause "5.1 XXXXXXXXXXXXX" and to renumber the existing 5.1 and 5.2 accordingly (as shown), or to move the hanging paragraphs elsewhere.

Recommended	Not recommended
<p>5 Title</p> <p>5.1 Title</p> <p>This text can be referred to without any ambiguity.</p> <p>5.2 Title</p> <p>This text can also be referred to without any ambiguity.</p> <p>5.3 Title</p> <p>This text can also be referred to without any ambiguity.</p> <p>6 Test report</p>	<p>5 Title</p> <p>This text can not be referred to in a precise manner as clause 5 also has subdivisions</p> <p style="text-align: right;">} hanging paragraphs</p> <p>5.1 XXXXXXXXXXXXX</p> <p>This text can be referred to without any ambiguity.</p> <p>5.2 XXXXXXXXXXXXX</p> <p>This text can also be referred to without any ambiguity.</p> <p>6 Test report</p>

EXAMPLE 2: In the following example an acceptable hanging paragraph is shown.

Acceptable
<p>5 Title</p> <p>The following clauses define aaa, bbb and ccc (see note).</p> <p>5.1 aaa</p> <p>This text about "aaa" can be referred to without any ambiguity.</p> <p>5.2 bbb</p> <p>This text about "bbb" can be referred to without any ambiguity.</p> <p>6 Test report</p> <p>NOTE: There is no need for reference to this text.</p>

5.2.4 Lists

Lists may be introduced by a sentence, a complete grammatical proposition or by the first part of a proposition, completed by the items in the list.

Each item in a list shall be preceded by a bullet, a dash, an Arabic numeral followed by a parenthesis, or a lower case letter followed by a parenthesis.

EXAMPLE 1:

- list item 1
- list item 2
- list item 3

EXAMPLE 2:

- list item 1;
- list item 2;
- list item 3.

EXAMPLE 3:

- list item 1,
- list item 2,
- list item 3.

EXAMPLE 4:

- 1) List item 1
- 2) List item 2
- 3) List item 3

EXAMPLE 5:

- a) List item a.
- b) List item b.
- c) List item c.

NOTE: See table A.1 for different list styles.

If you use punctuation, respect the following rules:

- If the elements of a list are cast as phrases of a sentence which introduces the list, start each element with a lower case letter and end it with a semicolon. End the last item in the list with a full stop, unless the introductory sentence continues after the end of the list, in which case use the most appropriate punctuation (semicolon, comma, or none).
- If, however, each element of a list is a self-contained sentence, begin each with a capital letter and end each with a full stop.

Use "and" or "or" at the end of the penultimate element of a list to indicate unambiguously whether all the elements apply ("and") or whether they are mutually exclusive ("or").

- Use the appropriate bullet styles, i.e. styles **B1** to **B5** or **B1+**, **B2+**, **B3+**, **BN**, **BL** (see table A.1).
- Separate the list item identifier (e.g. bullet) and the text with a tab (if using styles **B1** to **B5**, the others are automatic bullet styles containing the space).
- Ensure that the formatting of the lists is consistent throughout the deliverable.

5.2.5 Annex

For the description of normative and informative annexes, see clauses 6.3.6 and 6.4.1.

Each annex shall be designated by a heading comprising the word "Annex" followed by a capital letter designating its serial order, beginning with "A", e.g. "Annex A" (see also clause 5.2.1A). The annex heading shall be followed by the indication "(normative):" or "(informative):", and by the title on the next line.

EXAMPLE: Annex A (normative):
 Title of annex A

Numbers given to the clauses, tables, figures and mathematical formulae of an annex shall be preceded by the letter designating that annex followed by a full-stop (e.g. figure B.1, table C.4). The numbering shall start afresh with each annex. A single annex shall be designated "Annex A".

Clauses in annex A shall be designated "A.1", "A.2", "A.3", etc. (see also clause 5.2.1A).

- Use the **Heading 8** style (for MESA TSs) or **Heading 9** style (for MESA TRs) for the annex heading. Insert a line break (↵ "shift" + "enter") between the colon and the title.
- For all (sub)clause headings use the appropriate Heading styles, starting from **Heading 1**, e.g. for clause A.1 use **Heading 1**, for A.1.1 use **Heading 2**.

5.2.6 Bibliography

A "Bibliography", if present, shall be an annex entitled "Bibliography".

The "Bibliography" identifies informative references and other reading material. Those publications might or might not be publicly available (no check is made).

- For the "Bibliography" annex use **Heading 8** style (for TR use the **Heading 9** style).
- For the listed material use the **Normal** style or bulleted lists (e.g. **B1+**).

5.2.7 Index

An index, if present, shall appear as the last element, but before the "History" clause. The title shall be "Index".

- Format the index in a section having two columns separated by 0,5 cm using the field `{INDEX |e "→" |c "2"}`.
- Use the **Heading 1** style for the title.

5.2.8 History

A history box shall be provided by the MESA Secretariat as the final unnumbered element in a MESA deliverable and shows the major milestones in the life of a document.

If it is desired to keep a detailed record of the document history (other than the major milestones) it is recommended that this is done by inserting a separate, informative annex.

- Use **Heading 1** style for the title.

6 Drafting

6.1 Preliminary informative elements

6.1.1 Title page

The title page shall contain the title of the MESA deliverable.

The wording of the title shall be established by the SG with the greatest care. While being as concise as possible, it shall indicate, without ambiguity, the subject matter of the MESA deliverable in such a way as to distinguish it from that of other MESA deliverables, without going into unnecessary detail. Any necessary additional particulars shall be given in the scope.

The title shall be composed of separate elements, each as short as possible, proceeding from the general to the particular. In general, not more than the following three elements shall be used:

- 1) an introductory element "Project MESA; Technical (or Service) Specification Group nn;" (where nn indicates the particular SG concerned);

- 2) a main element (obligatory) indicating the principal subject treated within that general field;
- 3) a complementary element (optional) indicating the particular aspect of the principal subject or giving details that distinguish the MESA deliverable from other MESA deliverables, or other parts of the same MESA deliverable.

The complementary element is necessary if the MESA deliverable covers only one or a few aspects of the subject indicated in the main element.

Experience has shown that the titles of most deliverables benefit from the precision supplied in the complementary element.

In the case of a MESA deliverable published as a series of parts, the complementary element shall serve to distinguish and identify the parts (the introductory element and the main element remaining the same for each part).

The complementary element shall be omitted if the MESA deliverable both:

- covers all essential aspects of the subject indicated in the main element; and
- is (and is intended to remain) the only MESA deliverable relating to this subject.

- 4) in parentheses, "Phase xx" where xx indicates the Phase identifier (if appropriate).

NOTE: The MESA Secretariat is responsible for the final preparation of the title page.

For multi-part deliverables, all the individual titles in a series of parts shall contain the same introductory element (if present) and main element, while the complementary element shall be different in each case in order to distinguish the parts from one another. The complementary element shall be preceded in each case by the designation "Part ...":

6.1.1A Avoidance of unintentional limitation of the scope

The title shall not contain details that might imply a limitation of the scope of the MESA deliverable.

However, if the MESA deliverable pertains to a specific type of product, this fact shall be reflected in the title.

6.1.2 Table of contents

The table of contents shall be generated automatically and shall not be set manually. The title shall be "Contents".

- Use the **TT** style for the title.
- Use the field `{TOC \o}` for the table itself.

NOTE: The MESA Secretariat is responsible for the final layout of the table of contents.

6.1.3 Foreword

The "Foreword" clause is always the second unnumbered clause.

The "Foreword" shall appear in each MESA deliverable. It shall not contain requirements, figures or tables.

It consists of a general part giving information on:

- the designation and name of the SG that prepared the MESA deliverable;
- information regarding the approval of the MESA deliverable;

and a specific part that shall give as many of the following as are appropriate:

- an indication of any other organization that has contributed to the preparation of the MESA deliverable;
- a statement that the MESA deliverable cancels and replaces other documents in whole or in part;
- a statement of significant technical changes from the previous version of the MESA deliverable;
- the relationship of the MESA deliverable to other MESA deliverables or other documents.

For multi-part deliverables, the first part shall include in its "Foreword" an explanation of the intended structure of the series. In the "Foreword" of each part belonging to the series, a reference shall be made to the titles of all other parts, if they are known.

6.1.4 Introduction

The "Introduction" is an optional preliminary element used, if required, to give specific information or commentary about the technical content of the MESA deliverable, and about the reasons prompting its preparation. It shall not contain requirements.

The "Introduction" shall not be numbered unless there is a need to create numbered subdivisions. In this case, it shall be numbered 0 with clauses being numbered 0.1, 0.2, etc. Any numbered figure, table or displayed formula shall be numbered normally beginning with 1 (see also clause 5.2.1A).

6.2 General normative elements

6.2.1 Scope

This element shall be clause 1 of each MESA deliverable and define without ambiguity the subject of the MESA deliverable and the aspect(s) covered, thereby indicating the limits of applicability of the MESA deliverable or particular parts of it. It shall not contain requirements.

The scope shall be succinct so that it can be used as a summary for bibliographic purposes.

This element shall be worded as a series of statements of fact. Forms of expression such as the following shall be used:

"The present document

- *specifies* { *the functional requirements for ... "*
 { *a method of ... "*
 { *the characteristics of ... "*
- *establishes* { *a system for ... "*
 { *general principles for ... "*
- *gives guidelines for ... "*
- *gives terms and definitions ... "*

Statements of applicability of the MESA deliverable shall be introduced by the following wording:

"The present document is applicable to ... "

6.2.2 References

This is an optional element which shall be provided if references are made to other documents. References shall normally be given to Standards and Recommendations issued by recognized standardization bodies. Referencing of documents other than Standards and Recommendations are allowed under the following conditions:

- all referenced text shall be publicly available in the English language during the approval phases and for the expected lifetime of the MESA deliverable, via the originating body or via the MESA Secretariat;
- if public availability cannot be guaranteed over a period of time as stated above, the originating body of the referenced text shall give the Project MESA Organizational Partners the right to reproduce the text;
- if the referenced text will not be made publicly available otherwise, agreement permitting the Project MESA Organizational Partners to take over the copying and distribution rights will be required, in which case it shall be made available to the Project MESA Organizational Partners in an agreed electronic format;
- all copyright and other IPR issues shall have been settled;

- the MESA Secretariat shall establish and maintain a list of the referenced documents and the relevant external bodies, for document tracking and cross-referencing purposes, and keep the necessary liaison with the originating body.

The list of references shall be introduced by the wording given in the approved MESA deliverable template.

The list shall not include the following:

- documents that are not publicly available;
- documents which are not explicitly cited in the provisions of the deliverable (such documents may be listed in a bibliography (see clause 6.4.2)).
- Use the **EX** style, if using numbered references; enclose the numbers in square brackets and separate the numbering from the title with a tab (you may use sequence fields for automatically numbering references, see clause A.4: "Sequence numbering").
- Use the **Normal** style, if not using numbered references.

EXAMPLE 1:

[1] MESA TS 70.123 (V1.1): "Title".

EXAMPLE 2:

MESA TS 70.123 (V1.1): "Title".

6.3 Technical normative elements

6.3.1 Terms and definitions in an MESA deliverable

This is an optional element giving definitions necessary for the understanding of certain terms used in the MESA deliverable. The following introductory wording, modified as appropriate, shall be used:

For the purposes of the present document, the [following] terms and definitions [given in ... and the following] apply:

- A definition shall not take the form of, or contain, a requirement.
- **The form of a definition shall be such that it can replace the term in context.** Additional information shall be given only in the form of examples or notes (see below).
- The terms and definitions shall be presented in alphabetical order.

Examples of term usage, and notes concerning entries, shall be presented as shown below.

EXAMPLE 1:

radix; base (deprecated): [radix numeration system] positive integer by which the weight of any digital place is multiplied to obtain the weight of the digit place with the next higher weight

NOTE 1: In the decimal numeration system the radix of each digit place is 10.

NOTE 2: The term "base" is deprecated in this sense because of its mathematical use.

END of EXAMPLE 1.

- The term shall be in **bold**, and shall start with a lower case letter (unless it is always rendered with a leading capital) followed by a colon, one space, and the definition starting with a lower case letter and no ending full-stop.
- Use the **Normal** style.
- If there is several notes for the same definition, the notes shall be numbered. Otherwise it is not necessary.

EXAMPLE 2:

fast channel: channel with low latency but higher BER in comparison to the slow channel

EXAMPLE: In contrast to the slow channel, the fast channel is not interleaved.

requirement: a provision that conveys criteria to be fulfilled

6.3.2 Symbols and abbreviations

This is an optional element giving a list of the symbols and abbreviations necessary for the understanding of the MESA deliverable.

Unless there is a need to list symbols in a specific order to reflect technical criteria, all symbols should be listed in alphabetical order in the following sequence:

- upper case Latin letter followed by lower case Latin letter (*A, a, B, b*, etc.);
- letters without indices preceding letters with indices, and with letter indices preceding numerical ones (*B, b, C, C_m, C₂, c, d, d_{ext}, d_{int}, d₁*, etc.);
- Greek letters following Latin letters (*Z, z, A, α, B, β, ... Λ, λ*, etc.);
- any other special symbols.

This list shall contain all technical abbreviations/acronyms and their corresponding full terms which are used within the MESA deliverable.

For convenience, this element may be combined with the definitions in order to bring together terms and their definitions, symbols and abbreviations under an appropriate composite title, for example "Definitions, symbols and abbreviations".

Do not number the entries in the symbols and/or abbreviations clause.

- Use the **EW** style.
- Separate the abbreviation/acronym from the full term with a tab.

EXAMPLE:

dB	decibel
MDT	Mobile Data Terminal

6.3.3 Requirements

This element is optional. If present, it shall contain the following:

- a) all characteristics relevant to the aspect(s) of the product(s), process(es) or service(s) covered by the MESA deliverable, either explicitly or by reference;
- b) the required limiting values of quantifiable characteristics.

For test methods see clause 6.3.5.

A clear distinction shall be made between requirements, statements and recommendations.

Contractual requirements concerning claims, guarantees, covering of expenses, etc. shall not be included.

In some product MESA deliverables, it may be necessary to specify that the product shall be accompanied by warning notices or by instructions to the user or installer, and to specify their nature. On the other hand, requirements concerning use or installation as such shall be included in a separate part or a separate MESA deliverable since they are not requirements applicable to the product itself.

MESA deliverables listing characteristics for which suppliers are required to state values that are not specified by the MESA deliverable itself shall specify how such values are to be measured and stated.

6.3.4 Sampling

This optional element specifies the conditions and methods of sampling, as well as the method for the preservation of the sample(s). This element may appear at the beginning of test methods.

6.3.5 Test methods

This optional element gives all the instructions concerning the procedure for determining the values of characteristics, or for checking conformity to stated requirements, and for ensuring the reproducibility of the results. If appropriate, tests shall be identified to indicate whether they are type tests, routine tests, sampling tests and so on.

Instructions relating to test methods may be subdivided in the following order (where appropriate):

- a) principle;
- b) apparatus;
- c) preparation and preservation of test samples and test pieces;
- d) procedure;
- e) test report.

Test methods may be presented as separate clauses, or be incorporated in requirements, or be presented as annexes (see clause 5.2.5) or as separate parts (see clause 5.1.2). A test method shall be prepared as a separate MESA TS if it is likely to be referred to in a number of other MESA TSs.

The need for specification of test methods shall be evaluated on a case-by-case basis.

A test specification enables verification that products designed to a standard conform to its requirements. When writing a MESA TS you should consider the need for an accompanying test specification.

Every requirement of a MESA TS specifying a product (equipment, system or service) needs to be testable, and such requirements need to be clearly distinguishable from statements of fact or of supposition.

EXAMPLE: Comparing the two sentences below:

"On receiving a START CALL message, the terminal shall respond by sending an ACKNOWLEDGE message within a delay of t_1 ."

"On receiving a START CALL primitive, the layer 3 protocol of the terminal shall move to state CALL ACTIVATED and shall start timer t_2 ."

It is clear that conformance to the first requirement can be verified by external stimulus and observation, whereas the second puts demands on a conceptual model which cannot be explicitly tested. Whilst requirements of the latter sort are useful - even essential - for describing operational details, the essential behavioural characteristics (normative provisions) are given by requirements of the type of the former, and only these are verifiable.

6.3.6 Normative annexes

For reasons of convenience it may be decided to place some part of the normative text in an annex.

Normative annexes contain provisions to which it is necessary to conform in order to be able to claim compliance with the MESA TS. Their status shall be indicated in the heading of the annex (see clause 5.2.5).

Normative annexes shall not appear in MESA TRs.

6.4 Supplementary informative elements

6.4.1 Informative annexes

For reasons of convenience it may be decided to place some part of the informative text in an annex.

Informative annexes give additional information intended to assist the understanding or use of the MESA TS (or MESA TR) and shall not contain provisions to which it is necessary to conform in order to be able to claim compliance with the MESA TS. Their presence is optional and their status shall be indicated in the heading of the annex (see clause 5.2.5).

All annexes in MESA TRs are "informative" since MESA TRs cannot contain normative provisions. Therefore, the word "informative" shall not appear in the title line of annexes in MESA TRs.

6.4.2 Presentation of informative references and other reading material

A bibliography, if present, shall be entitled "Bibliography". It shall be introduced by the following clause heading:

Annex <X> (informative):
Bibliography

The "Bibliography" identifies informative references and other reading material. Those publications might or might not be publicly available (no check is made).

- For the "Bibliography" annex use **Heading 8** style (for TR use the **Heading 9** style).
- For the listed material use the **Normal** style or bulleted lists (e.g. **B1+**).

EXAMPLE:

ITU-T Recommendation X.200: "Title".

ISO/IEC 17875: "Title".

Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity ("the R&TTE Directive").

<Primary responsibility>. <Title>. <Edition>. <Year>, <Issue designation>, <Page location>. (e.g. WEAVER, William. "Command performances". December 1985, vol. 42, n° 12, p. 126-133).

6.4.3 Index

An index, if present, shall appear as the last element, but before the "History" clause. The title shall be "Index".

- Format the index in a section having two columns separated by 0,5 cm using the field `{INDEX |e "→" |c "2"}`.
- Use the **Heading 1** style for the title.

6.4.4 Change history

A history box is provided by the MESA Secretariat as the final element in a MESA deliverable and shows the major milestones in the life of a document.

NOTE: The MESA Secretariat is responsible for the final preparation of the history box.

6.5 Other informative elements

6.5.1 Notes and examples integrated in the text

Notes and examples integrated in the text of a MESA deliverable shall only be used for giving additional information intended to assist the understanding or use of the MESA deliverable. They shall not contain provisions to which it is necessary to conform in order to be able to claim compliance with a MESA deliverable.

Notes and examples should preferably be placed at the end of the clause, or after the paragraph, to which they refer.

A single note in a (sub)clause shall be preceded by "NOTE:", placed at the beginning of the first line of the text of the note. When several notes occur within the same clause, they shall be designated "NOTE 1:", "NOTE 2:", "NOTE 3:", etc. (see also clause 5.2.1A).

The word NOTE shall appear in upper case.

- Use the **NW** or **NO** style.
- Separate NOTE: from the text of the note with a tab.

A single example in a (sub)clause shall be preceded by "EXAMPLE:", placed at the beginning of the first line of the text of the example. When several examples occur within the same clause, they shall be designated "EXAMPLE 1:", "EXAMPLE 2:", "EXAMPLE 3:", etc. (see also clause 5.2.1A).

When there is a danger that it may not be clear where the example ends and the normal text continues, then the end of the example may be designated by "END of EXAMPLE".

The word EXAMPLE shall appear in upper case.

- Use the **EX** style.
- Separate EXAMPLE: from the text of the example with a tab.

EXAMPLE 1:

NOTE 1: Note text formatted with the **NW** style will be formatted **without** a space after the paragraph.

NOTE 2: Note text formatted with the **NO** style will be formatted **with** a space after the paragraph.

END of EXAMPLE 1

6.5.2 Footnotes to the text

Footnotes give additional information, but their use shall be kept to a minimum. Footnotes shall not contain requirements.

6.6 Common rules and elements

6.6.1 Verbal forms for the expression of provisions

A MESA TS does not in itself impose any obligation upon anyone to follow it. However, such an obligation may be imposed, for example, by legislation or by a contract. In order to be able to claim compliance with a MESA TS, the user needs to be able to identify the requirements that are obligatory. The user also needs to be able to distinguish these requirements from other provisions where there is a certain freedom of choice.

Clear rules for the use of verbal forms (including modal auxiliaries) are therefore essential. Annex D gives, in the first column of each table, the verbal form that shall be used to express each kind of provision. The equivalent expressions given in the second column shall be used only in exceptional cases when the form given in the first column cannot be used for linguistic reasons.

6.6.2 Spelling and abbreviation of names of organizations

The spelling of the names of organizations, and their abbreviations, shall be as used by those organizations.

6.6.2A Style

To facilitate understanding by all readers, the style shall be as simple and concise as possible. This is particularly important for those readers whose first language is not English.

The "Shorter Oxford English Dictionary" and the "Concise Oxford Dictionary" are suggested.

Abbreviations shall be used with care, and their use shall be limited to those cases where it is not likely to cause confusion.

An abbreviation shall be defined only if used subsequently in the MESA deliverable.

The general rule is that abbreviations consisting of the initial letters of words be printed in lower-case letters (for example, "a.c." for "alternating current") and a full stop be placed after each letter. Where, however, an abbreviation comprises capital letters, no full stops are required.

6.6.2B Use of capital letters

Unnecessary use of capital letters should be avoided.

EXAMPLE: "user" is preferred to "User".

6.6.2C Pagination

Unnecessary pagination, (i.e. use of hard page breaks) should be avoided.

- Use Format | Paragraph | Text Flow | Keep Lines Together and Keep with Next attributes instead of "hard" page breaks.

6.6.3 Use of trade names

A correct designation or description of a product shall be given rather than a trade name (brand name).

Proprietary trade names (i.e. trade marks) for a particular product should as far as possible be avoided, even if they are in common use.

If, exceptionally, trade names cannot be avoided, their nature shall be indicated, e.g. by the symbol ® for a registered trade mark (see example 1).

EXAMPLE 1: Instead of "Teflon®", write "polytetrafluoroethylene (PTFE)".

If it is known that only one product is currently available that is suitable for the successful application of the standard, the trade name of the product may be given in the text of the standard but shall be associated with a note as shown in example 2.

EXAMPLE 2:

NOTE: "... [trade name of product] ... is the trade name of a product supplied by ... [supplier] This information is given for the convenience of users of the present document and does not constitute an endorsement by Project MESA of the product named. Equivalent products may be used if they can be shown to lead to the same results."

If it is considered to be essential to give an example (or examples) of commercially available products suitable for successful application of the standard because the product characteristics are difficult to describe in detail, trade names may be given in a note as shown in example 3.

EXAMPLE 3:

NOTE: "... [trade name(s) of product(s)] ... is (are) an example(s) of a suitable product(s) available commercially. This information is given for the convenience of users of the present document and does not constitute an endorsement by Project MESA of this (these) product(s)."

6.6.4 Figures

6.6.4.1 Usage

Figures should be used wherever appropriate to present information in an easily comprehensible form. It shall be possible to refer to each figure explicitly within the text.

6.6.4.2 Format

- Use the **TH** style on the paragraph which contains the figure itself.
- Maximum size for figures is 17 cm by 22 cm.

6.6.4.3 Numbering

Figures may be numbered sequentially throughout the document without regard to the clause numbering, e.g. first figure is figure 1 and the twentieth figure (in, say clause 7) is figure 20.

Figures may also be numbered taking account of clause numbering.

EXAMPLE 1: First figure in clause 7 is figure 7.1, fifth figure in clause 7 is figure 7.5.

EXAMPLE 2: First figure in clause 7.3.2 is figure 7.3.2.1, fifth figure in clause 7.3.2 is figure 7.3.2.5.

One level of subdivision only is permitted (e.g. figure 1 may be subdivided as 1 a), 1 b), 1 c), etc.). See also clause 5.2.1A. For the numbering of figures in annexes, see clause 5.2.5.

- You may use sequence fields for automatically numbering figures. See clause A.4: "Sequence numbering".

6.6.4.4 Layout of title

The figure title shall be below the figure. An explicit figure name is optional. See the following examples:

EXAMPLE 1:

Figure 1: Details of apparatus

EXAMPLE 2:

Figure 1

- Use the **TF** style.
- If applicable, the figure number is followed by a colon, a space and the figure name

6.6.4.5 Choice of letter symbols, style of lettering, and labelling

- Use Arial font.
- Use a font size of at least 8 points (final size), to ensure legibility.

6.6.4.6 Notes to figures

Notes to figures shall be treated independently from notes integrated in the text (see clause 6.5.1). They shall be located above the title of the relevant figure. A single note in a figure shall be preceded by "NOTE:". When several notes occur in the same figure, they shall be designated "NOTE 1:", "NOTE 2:", "NOTE 3:", etc. (see also clause 5.2.1A). A separate numbering sequence shall be used for each figure.

Notes to figures may contain requirements.

- Write notes to a figure using the word processor rather than embedding them in the figure itself.
- Use the **NF** style.
- Separate NOTE: from the text of the note with a tab.

6.6.4.7 Footnotes to figures

Footnotes give additional information, but their use shall be kept to a minimum. Footnotes shall not contain requirements.

6.6.5 Tables

6.6.5.1 Usage

Tables should be used wherever appropriate to present information in an easily comprehensible form. It shall be possible to refer to each table explicitly within the text.

A table within a table is not permitted. Subdivision of a table into subsidiary tables is not permitted.

- Centre tables horizontally.
- The "space between columns" is 0,1 cm.
- Maximum width for tables in portrait orientation: 17 cm and for landscape orientation: 22 cm.
- Set table columns widths in centimetres (not inches).
- Use borders to separate the rows and columns of tables, as appropriate; the precise format will depend on the structure of each table, but be consistent throughout a deliverable (or series of related deliverables). Borders should be ¾ pt single line.
- Each table shall be followed by an empty "Normal" style paragraph ("Enter" key).

6.6.5.2 Numbering

Tables may be numbered sequentially throughout the document without regard to the clause numbering, e.g. first table is table 1 and the twentieth table (in, say clause 7) is table 20.

Tables may also be numbered taking account of clause numbering.

EXAMPLE 1: First table in clause 7 is table 7.1, fifth table in clause 7 is table 7.5.

EXAMPLE 2: First table in clause 7.3.2 is table 7.3.2.1, fifth table in clause 7.3.2 is table 7.3.2.5.

See also clause 5.2.1A. For the numbering of tables in annexes, see clause 5.2.5.

- You may use sequence fields for automatically numbering tables. See clause A.4: "Sequence numbering".

6.6.5.3 Layout of title

The title shall be above the table. An explicit table name is optional. See the following examples:

EXAMPLE 1:

Table 1: Electrical properties

EXAMPLE 2:

Table 1

- Use the **TH** style.
- If applicable, the table number is followed by a colon, a space and the table name

6.6.5.4 Headings

The first word in the heading of each column shall begin with a capital letter. The units used in a given column shall generally be indicated under the column heading.

EXAMPLE:

Type	Linear density (kg/m)	Inside diameter (mm)	Outside diameter (mm)

- Use of the table headings tool (**Table, Heading row repeat**) is encouraged for tables that require more than one page.

- Use the following styles:

- Table Headings **TAH**
- Text Left justified **TAL**
- Text Centred **TAC**
- Text Right justified **TAR**

6.6.5.5 Continuation of tables

The column headings shall be repeated on all pages after the first (see clause 6.6.5.4).

6.6.5.6 Notes to tables

Notes to tables shall be treated independently from notes integrated in the text (see clause 6.5.1). They shall be located within the frame of the relevant table. A single note in a table shall be preceded by "NOTE:". When several notes occur in the same table, they shall be designated "NOTE 1:", "NOTE 2:", "NOTE 3:", etc. (see also clause 5.2.1A). A separate numbering sequence shall be used for each table.

Notes to tables may contain requirements.

- Use the **TAN** style.
- Include notes to a table within its borders in *one* cell, at the bottom.
- Merge all cells to one, as in the following example:

EXAMPLE:

Column 1 cell	Column 2 cell	Column 3 cell	Column 4 cell
NOTE: This cell is a merged cell.			

6.6.6 References

6.6.6.1 General

As a general rule, references to particular pieces of text shall be used instead of repetition of the original source material, since such repetition involves the risk of error or inconsistency and increases the length of the document. However, if it is considered necessary to repeat such material, its source shall be identified precisely.

References shall be made in the forms indicated in clauses 6.6.6.2 to 6.6.6.5 and shall not be made to page numbers.

6.6.6.2 References to the MESA deliverable as a whole in its own text

The form "the present document ..." shall be used.

6.6.6.3 References to elements of text

Use, for example, the following forms:

- "in accordance with clause 3";
- "according to clause 3.1";
- "as specified in clause 3.1 b)";

- "details as given in clause 3.1.1";
- "see annex B";
- "the requirements given in clause B.2";
- "see the note in table 2";
- "see example 2 in clause 6.6.3";
- "see note 3 in clause 6.6.1".

It is required to use the terms *clause* and *annex* where applicable.

If there is a need to refer to an unnumbered list item in another standard, the following formulation shall be used:

"as specified in 3.1, second list item".

Lower case letters are recommended (e.g. clause 1, annex A), however capital letters are also acceptable (e.g. Clause 1, Annex A). Usage should be consistent throughout the document.

6.6.6.4 References to tables and figures

Every table and figure included in the MESA deliverable shall be referred to in the text.

Use, for example, the following forms:

- "given in table 2";
- "(see table B.2)";
- "shown in figure A.6";
- "(see figure 3)".

Lower case letters are recommended (e.g. table 1, figure 2), however capital letters are also acceptable (e.g. Table 1, Figure 2). Usage should be consistent throughout the document.

6.6.6.5 References to other documents

6.6.6.5.1 General

References to other documents may be specific or non-specific. All references, specific and non-specific, shall be given in the "References" clause (see clause 6.2.2).

6.6.6.5.2 Specific references

Except as provided for in 6.6.6.5.3, references shall be specific (identified by date of publication, edition number, version number, etc.).

Use the following forms:

- " ... in accordance with MESA TS 70.123, clause 3, ... ";
- " ... in accordance with [n], clause 3, ... ";
- " ... in accordance with MESA TS 70.123 [n], clause 3, ... ".

6.6.6.5.3 Non-specific references

Non-specific references may be made only in the following cases:

- if it is accepted that it will be possible to use future changes of the document referred to for the purposes of the referring MESA deliverable;

- if it is granted that the structure of the document referred to will not change for the specific locations which are used by the referring MESA deliverable (e.g. the referred to document is controlled by the same SG as the referring one).

Use the forms as in 6.6.6.5.2.

6.6.6.6 Numbering

References in clause 2 shall be numbered sequentially. If a reference is removed when a specification is under change control, the entry in clause 2 shall be replaced by a [void] entry, using the same principle as for deletion of clauses.

- You may use sequence fields for automatically numbering references. See clause A.4: "Sequence numbering".

6.6.7 Representation of numbers and numerical values

The decimal sign shall be a comma. The thousand separator shall be a space.

NOTE: In the text below, ° represents the non-breaking space character.

If a value less than 1 is written in decimal form, the decimal sign shall be preceded by a zero.

EXAMPLE 1: 0,001 (not ,001)

Each group of three digits reading to the left or to the right of a decimal sign shall be separated by a space from preceding digits or following digits respectively, except for four-digit numbers designating years.

EXAMPLE 2: 23°456 / 2°345 / 2,345 / 2,345°6 / 2,345°67 but the year 1997

For clarity, the symbol × or a lower case x (rather than a point or any other symbol) shall be used to indicate multiplication of numbers and numerical values.

EXAMPLE 3: write 1,8°×°10⁻³ (not 1,8 * 10⁻³ or 1,8 • 10⁻³ or 1,8 . 10⁻³)

To express numbers of items (as opposed to numerical values of physical quantities), the numerals one to nine shall be spelt out in full.

EXAMPLE 4: "Carry out the test on five tubes, each 5 m long."

EXAMPLE 5: "Select a further 15 tubes for the pressure test."

Preserve document identities as in the original titles.

EXAMPLE 6: ISO/IEC°10531-1 (not ISO/IEC 10°531-1).

EXAMPLE 7: MESA°TR°70.123.

Put a non-breaking space between a number and its unit - including the percent sign (%) - even if the unit is not abbreviated:

EXAMPLE 8: 2°pages 4°seconds 15°%

Write a number preceded by an unary operator (sign) without an intervening space:

EXAMPLE 9: ... a level of -3°dB ...

Put a non-breaking space both before and after binary operators (+, -, ×, etc.):

EXAMPLE 10: a°+°b°=°c

- Use non-breaking spaces (Ctrl + Shift + space) for the thousand separator, before and after binary operators and preceding units.
- Use a non-breaking hyphen (Ctrl + Shift + -) for the minus sign.

6.6.8 Quantities, units, symbols and signs

The units in which any values are expressed shall be indicated.

6.6.9 Mathematical formulae

6.6.9.1 Types of equations

Equations between quantities are preferred to equations between numerical values. Equations shall be expressed in mathematically correct form, the variables being represented by letter symbols the meanings of which are explained in connection with the equations, unless they appear in a "Symbols and abbreviations" clause (see clause 6.3.2). Descriptive terms, acronyms or names of quantities shall not be arranged in the form of an equation.

EXAMPLE:

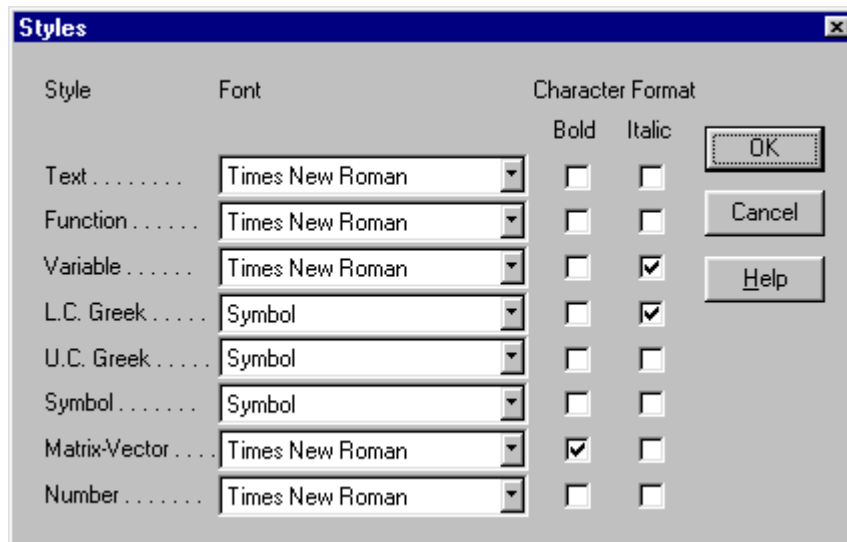
$$\tau = \sqrt{\frac{1}{(6n^2(N-3n+1))} \sum_{j=1}^{N-3n+1} \left(\sum_{i=j}^{n+j-1} (x_{i+2n} - 2x_{i+n} + x_i) \right)^2}$$

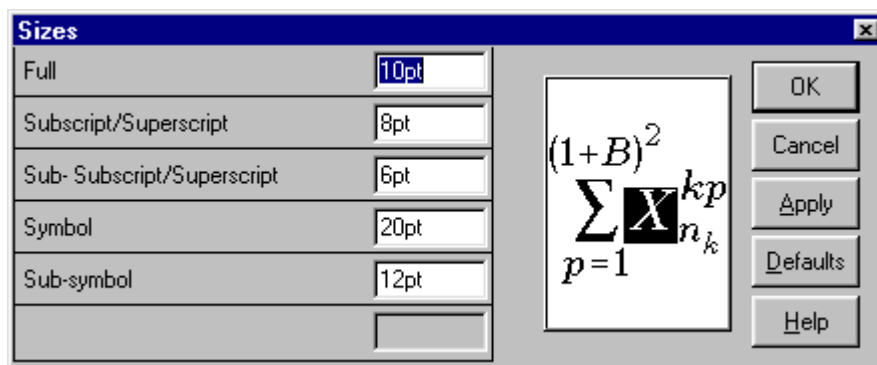
where: x_j are samples of time errors data;
 N is the total number of samples;
 τ is the time error sampling interval;
 n is the number of sampling intervals, with $n = 1, 2, \dots$, integer part (N/3).

6.6.9.2 Presentation

- Use the **EQ** style.
- Insert one tab before the equation to centre it.

The equation editor sizes and styles should be respected as shown in the following examples:





6.6.9.3 Numbering

If it is necessary to number some or all of the formulae in a MESA deliverable in order to facilitate cross-reference, arabic numbers in parentheses shall be used, beginning with 1:

$$x^2 + y^2 < z^2 \quad (1)$$

Equations may be numbered sequentially throughout the document without regard to the clause numbering, e.g. first equation is equation 1 and the twentieth equation (in, say clause 7) is equation 20.

Equations may also be numbered taking account of clause numbering.

EXAMPLE 1: First equation in clause 7 is equation 7.1, fifth equation in clause 7 is equation 7.5.

EXAMPLE 2: First equation in clause 7.3.2 is equation 7.3.2.1, fifth equation in clause 7.3.2 is equation 7.3.2.5.

See also clause 5.2.1A. For the numbering of equations in annexes see clause 5.2.5.

- You may use sequence fields for automatically numbering tables. See clause A.4: "Sequence numbering".
- Insert a tab between the equation and the number to right-align the number.

6.6.10 Indication of dimensions and tolerances

Dimensions and tolerances shall be indicated in an unambiguous manner.

EXAMPLE 1: 80 mm[°]×°25 mm[°]×°50 mm (not 80 × 25 × 50 mm)

EXAMPLE 2: 80 μF[°]±°2 μF or (80 ± 2) μF

EXAMPLE 3: 16 kbit/s to 64 kbit/s (not 16 to 64 kbit/s)

EXAMPLE 4: 0 °C to 10 °C (not 0 to 10 °C)

In order to avoid misunderstanding, tolerances on percentages shall be expressed in a mathematically correct form.

EXAMPLE 5: Write "from 63°% to 67°%" to express a range.

EXAMPLE 6: Write "(65°±°2)°%" to express a centre value with tolerance.

The form "65°±°2°%" shall not be used.

7 Presentation of computer language and other code

Portions of code (e.g. ASN.1, GDMO, C, C++, etc.) can be included in a MESA deliverable but should be clearly marked as such.

- Use the **PL** style.

Annex A (informative): MESA styles and various information

A.1 The MESA styles

Use table A.1 when determining which style to use for various elements of the deliverable.

Table A.1

Use this style	For this type of element
Heading styles	For different headings
Heading 1	Clause
Heading 2 to 5	Subdivision level 2 to 5
Heading 8	Annex title
Heading 9	Annex title for TRs only
H6	Subdivision level 6 (not reflected in the table of contents)
Example styles	For examples and abbreviations/symbols lists
EX	Reference, Example →
EW	Symbol, Abbreviation, Example continuation in text →
Note style	
NO	Note integrated in the text →
Figure styles	For formatting figures
TF	Figure title
FL	Figure layout
NF	Note in figure →
Table styles	For formatting tables
TH	Table title
TAH	Heading within table or column heading
TAC	Centred text within tables
TAL	Left aligned text within tables
TAR	Right aligned text within tables
TAJ	Justified text within tables
TAN	Note in table →
List styles (indents)	
B1 to B5	Indent 1 to 5
B1+	Bulleted indent 1 (round bullets)
B2+	Bulleted indent 2 (dashes)
B3+	Bulleted indent 3 (square bullets)
BN	Bulleted (numbers) indent 1
BL	Bulleted (letters) indent 2
General styles	For different items
Normal	Standard paragraph, Definition
TT	Contents list title
PL	Programming language
EQ	Equation
Header	Header (portrait and landscape pages)
FP	Free Paragraph style which can be user-defined
→ use "tab" between "item/number" and "text".	
EXAMPLE: The "tab" is preceding this example text.	
NOTE: Other styles exist in the template, but are for use by the MESA Secretariat only.	

The MESA Secretariat provides a Microsoft® Word for Windows™ style sheet which contains a set of pre-defined styles simplifying the formatting of documents according to the MESA drafting rules. Applying the MESA style sheet

from the very beginning of work avoids delay throughout the drafting stage, it can be applied to a new or existing MESA deliverable.

Download the MESA template from <http://www.projectmesa.org/rules.htm> to the directory used for holding Word's template (.dot) files.

A.2 Page numbering, page headers and footers

The skeleton document supplies fields for automatic page numbering and the identification of the deliverable in the page header. Do not add anything to or delete anything from the headers.

- Use the **HEADER** style on all page headers (sections) except for the title page (section)

A.3 Configuration of the Windows environment

Set your Windows environment to use the English (International) conventions (via Control Panel, International).

- Use centimetres as the preferred unit of measurement.
- Do **not** select "Change 'Straight Quotes' to 'Smart Quotes'" in the AutoCorrect options.
- Set Default Tab Stops to 0,5 cm.
- The remaining configurable elements of Windows and of Word are at your discretion.

A.4 Sequence numbering

You may use sequence numbering (**Insert Field Seq**) for tables, figures, equations, references, etc. Use the sequence identifiers shown in the following table.

Table A.2: Sequence numberings

Sequence	Bookmark name	Description
seq bib	bib_xx	for bibliography entries
seq equ	equ_xx	for equations (note 1)
seq fig	fig_xx	for figures (note 1)
seq ref	ref_xx	for references
seq tab	tab_xx	for tables (note 1)
NOTE 1: Reset the sequence numbering to one for the first item of each annex of a MESA deliverable by using the switch lr1 (e.g. { seq fig lr1 }).		
NOTE 2: "xx" represents the identifier for the particular object concerned, e.g. fig_ProcessControl. Do not use bookmarks of the form "fig_fig1". You can use underscores as separators in sequence identifiers if necessary.		

Thus the title of a table will read:

Table { seq tab }: Table title

where the *italic* part represents the sequence field code.

Bookmark each entry in a sequence (select it and use **Edit Bookmark Add**), using a bookmark name of the form shown in table 1. You can then refer to the table, figure, reference, etc.

from the text by inserting a sequence field citing the same sequence identifier and the particular bookmark required. For example, table 1 has been bookmarked "tab_Seq_Num". Thus a reference to this table from the text reads:

... see table { *seq tab tab_Seq_Num* } ...

where the *italic* part represents the sequence field code.

You can force Word to recalculate and refresh the display of sequence numbers and their references by selecting the text and pressing F9.

Do not use Word's cross-referencing tool (Insert, Cross-reference), since it implies the use of automatic heading or caption numbering.

When drafting is complete and the deliverable is placed under change control, the MESA Secretariat shall hard code all automatic number sequences (Ctrl-Shift-F9). Thereafter, manual numbering shall be used. This will avoid invalidating references from external documents to particular clauses / tables / etc. in the document under consideration.

Do not use automatic clause numbering.

A.5 Supported file formats

The following document formats are currently accepted by the MESA Secretariat:

- Word for Windows® 2000
- Word for Windows® 97

NOTE 1: Versions prior to this are strongly discouraged.

The following file formats for embedding into a document are currently accepted by the ETSI Secretariat:

- Microsoft® Visio® 2000

NOTE 2: Regarding the use of "stencils" or "templates", it is recommended to use those supplied with the standard version.

If additional ones are used, they should be provided to the Secretariat, together with the electronic version of the deliverable.

NOTE 3: Microsoft® Visio® shall **not** be used for SDL production.

- Micrografx Designer® (from 3.1 onwards) and any compatible software that is able to import/export figures made with Designer
- Microsoft® Word Picture (embedded application)
- Microsoft® Drawing (embedded application)
- Microsoft® Office® products

A.6 Quick tips to working with your document

When working with your MESA deliverable remember ...

... **you may do this...**

- use **bold** to **emphasize** text;
- use *italic* for citations, linguistic expressions or when a word/text/expression is extracted from a specific context;

- use non-breaking spaces (°) or hyphens (—) in order to avoid unexpected wrap around between two words and/or numbers (e.g. 50°cm, 1°000, clause°6, annex°A, table°1, figure°1, TR°21°801—1, etc.). These characters appear as normal spaces () or hyphens (-) when printed out;
- use the default tab stops 0,5 cm;
- use "straight" quotation marks (" . . ") not "curly" or "smart" (" . . ") ones. If a second set of quotations is needed (e.g. GDMO, ASN.1, etc.), single quotes (' . . ') may be used.

... but please don't do this ...

- alter existing styles or formats pre-set in the MESA template;
- add new styles to the MESA template;
- delete MESA styles;
- use a font other than the one pre-set in the MESA styles;
- use the underline attribute, as this causes confusion when revision marks are used;
- put more than one space after a full stop;
- precede comma (,), semicolon (;), colon (:), full stop (.), question mark (?) or exclamation mark (!) by spaces;
- use spaces in place of tabs when indentation/alignment is required; this can cause text to be misaligned;
- unnecessarily use capital letters.

Annex B (informative): Text containing SDL, program code, ICS and TTCN

B.1 SDL diagrams

Provide SDL diagrams in SDT binary files or, exceptionally, as CIF files when not using SDT.

When using SDT use the .ini file supplied on the MESA server.

Take into account the following when inserting SDL diagrams in Word documents

- Do not include SDL headers or footers.

B.2 Program code

Large volumes of program code, source code or formal description language shall be placed in a separate file.

B.3 Implementation Conformance Statement (ICS) proforma tables

(For further study.)

B.4 Tree and Tabular Combined Notation (TTCN)

Provide TTCN as a separate file.

Provide both Graphical Rendition (GR) and Machine Processable (MP) files.

The following text should be used for ATSS using TTCN. The subdivision is recommended.

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

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

<x1> The TTCN Graphical form (TTCN.GR)

The TTCN.GR representation of this ATS is contained in a Portable Document Format file (<filename>.PDF contained in archive <filename>.ZIP) which accompanies the present document.

<x2> The TTCN Machine Processable form (TTCN.MP)

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

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

Annex C: (normative)

Numbering of MESA deliverables

MESA TS and MESA TR numbers consist of 5 digits. The first two digits are 70, they are followed by a 3 digit serial number (and any part or sub-part number). I.e.:

MESA DD 70.xxx-z-w Vm.a.b

where:

MESA	prefix for all deliverable types	To ensure that all MESA deliverables may be clearly identified when being referenced
DD	type	(<i>TS or TR</i>)
xx.xxx	serial number	(70 001 - 70 999)
z	part number (if it exists)	(1, 2, ...)
w	sub-part number (if it exists)	(1, 2, ...)
m	status version number	(1, 2 or 3) see NOTE
a	technical version number	(1, 2, ...)
b	editorial version number	(1, 2, ...)

NOTE: The contents of the MESA documents are subject to continuing work within the SGs and may change following formal SG approval. Should the SG modify the contents of a document, it is re-released by the SG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

x the first digit:

- 1 presented to SG for information;
- 2 presented to SG for approval;
- 3 or greater indicates SG approved document under change control.

y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z the third digit is incremented when editorial only changes have been incorporated in the document

Annex D (normative): Verbal forms for the expression of provisions

NOTE: Only singular forms are shown.

The verbal forms shown in table D.1 shall be used to indicate requirements strictly to be followed in order to conform to the standard and from which no deviation is permitted.

Table D.1: Requirement

Verbal form	Equivalent expressions for use in exceptional cases (see clause 6.6.1)
shall	is to is required to it is required that has to only ... is permitted it is necessary
shall not	is not allowed [permitted] [acceptable] [permissible] is required to be not is required that ... be not is not to be
Do not use "may not" instead "shall not" to express a prohibition. To express a direct instruction, for example referring to steps to be taken in a test method, use the imperative mood (e.g. "switch on the recorder").	

The verbal forms shown in table D.2 shall be used to indicate that among several possibilities one is recommended as particularly suitable, without mentioning or excluding others, or that a certain course of action is preferred but not necessarily required, or that (in the negative form) a certain possibility or course of action is deprecated but not prohibited.

Table D.2: Recommendation

Verbal form	Equivalent expressions for use in exceptional cases (see clause 6.6.1)
should	it is recommended that ought to
should not	it is not recommended that ought not to

The verbal forms shown in table D.3 are used to indicate a course of action permissible within the limits of the MESA deliverable.

Table D.3: Permission

Verbal form	Equivalent expressions for use in exceptional cases (see clause 6.6.1)
may	is permitted is allowed is permissible
need not	it is not required that no ... is required
Do not use "possible" or "impossible" in this context. Do not use "can" instead of "may" in this context.	
NOTE: "May" signifies permission expressed by the standard, whereas "can" refers to the ability of a user of the standard or to a possibility open to him.	

The verbal forms shown in table D.4 are used for statements of possibility and capability, whether material, physical or causal.

Table D.4: Possibility and capability

Verbal form	Equivalent expressions for use in exceptional cases (see clause 6.6.1)
can	be able to there is a possibility of it is possible to
cannot	be unable to there is no possibility of it is not possible to
Do not use "can" instead of "may" in this context.	
NOTE: "May" signifies permission expressed by the standard, whereas "can" refers to the ability of a user of the standard or to a possibility open to him.	

The verbal forms shown in table D.5 shall be used to indicate behaviour of equipment or sub-systems outside the scope of the document in which they appear. For example, in a standard specifying the requirements of terminal equipment, these forms shall be used to describe the expected behaviour of the network or network simulator to which the terminal is connected.

Table D.5: Inevitability

Verbal form	Equivalent expressions
will	
will not	
Distinguish from "shall" / "shall not". Use to express behaviour of equipment or systems <i>outside</i> the scope of the document being drafted, where description of such behaviour is essential to the correct understanding of the requirements pertaining to equipment <i>within</i> the scope of the current document.	

EXAMPLE: Extract from standard specifying behaviour of terminal equipment: "... On expiry of timer T3, the terminal shall send a TIMEOUT message to the network and start timer T4. The network will respond with a TIMEOUT-ACKNOWLEDGE message. On receipt of a TIMEOUT-ACKNOWLEDGE message, the terminal shall stop timer T4 ..."; thus is distinguished the strong future ("the terminal shall") used for requirements and the normal future ("the network will") used to indicate expected events.

The verbal forms shown in table D.6 shall be used to indicate statements of fact.

Table D.6: Fact

Verbal form	Equivalent expressions
is	Any verb in the indicative mood, present tense.
is not	
Distinguish from "shall" / "shall not". Do not use present indicative of verbs for expressing requirements.	