oneM2M-Drafting-Rules-V1.2.2
Drafting Rules

10 August 2016

Copyright Notification

Contents

Change History

V 1.0.1 –2013-10-30 a) added descriptive text for Editor's note, b) added the approved legal text

V 1.1.1 -2015-05-31 a) alignement to the capitalization of Definitions, b) clarification on normative references

V1.2.1 – 2015-06-18 a) editorial updates – adding TSDSI, change copyright date, removed the mathematical formulae print screens as this option is no longer available in MS Word, b) updated paragraphs to remove hanging paragraphs c) added information on Test Methods.

V1.2.2 - 2016-07-05 a) corrected clause numbering in clause 5.3. Approved in SC 33 on 2016-08-10

Introduction

The present document was formulated under the cognizance of the Methods and Process Subcommittee of Steering Committee of oneM2M.

The contents of the present document are subject to continuing work. The structure, format and content may change following formal approval by the Steering Committee. Should modification be approved, the present document will be re-released with an identifying change of release date and version.

1 Scope

The present document is applicable to Technical Specifications and Technical Reports that are delivered to the Partners Type 1 for potential transposition.

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

NOTE: While any hyperlinks included in this clause were valid at the time of publication oneM2M cannot guarantee their long term validity.

2.1 Normative References

Not applicable.

2.2 Informative References

Not applicable.

3 Definitions, symbols, abbreviations and acronyms

3.1 Definitions

For the purposes of the present document the following apply:

Bibliography: list of Standards, books, articles, or other sources on a particular subject which are not mentioned in the document itself

Deliverable: oneM2M document, established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context

Informative Element: provides additional information intended to assist the understanding or use of the oneM2M Deliverable, but which can be removed without changing its technical substance

Informative Reference: not essential to the use of the oneM2M Deliverable but that assist the user with regard to a particular subject area

NOTE: Informative References mentioned in the document itself are numbered and listed in clause 2.2 (References) otherwise they are listed in an annex entitled "Bibliography".

Instruction: Provision that conveys an action to be performed (ISO/IEC Guide 2: 1996, definition 7.3)

Normative Element: sets out the provisions to which it is necessary to conform in order to be able to claim compliance with the oneM2M Deliverable

Normative Reference: essential to the use of the oneM2M Deliverable, i.e. without which the Deliverable cannot be implemented

Provision: expression in the content of a oneM2M Deliverable, that takes the form of a Statement, an Instruction, a Recommendation or a Requirement

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 clause 7).

Publicly Available: in the context of referencing documents within oneM2M Deliverables, a document that may be obtained from the source organization or its distribution channels by any person (with or without payment), simply by quoting the reference given in the oneM2M Deliverable to the source organization or other typical supplier (e.g. National Standards Organization, Library, etc.)

NOTE: The specific status of a Publicly Available oneM2M Deliverable may be determined by examining its History clause.

This may also be true of other standardization bodies whose documents are referenced by oneM2M and this is taken into account during the preparation of oneM2M Deliverables.

Recommendation: expression in the content of a document conveying 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

NOTE: Table "4" specifies the verbal forms for the expression of Recommendations.

Requirement: expression in the content of a document conveying criteria to be fulfilled if compliance with the document is to be claimed and from which no deviation is permitted

NOTE: Table "3" specifies the verbal forms for the expression of Requirements.

Standard: document, established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context

Statement: Provision that conveys information (ISO/IEC Guide 2: 1996, definition 7.2)

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
HMSC	High level Message Sequence Charts
INF	oneM2M output containing non technical information e.g. presentations
IPR	Intellectual Property Rights
MP	Machine Processable
MSC	Message Sequence Charts
NSO	National Standards Organisation
PDF	Portable Document Format
R&TTE	Radio equipment & Telecommunications Terminal Equipment
SDL	Specification and Description Language
SDT	Specification and Description Language Development Tool
TP	Technical Plenary
TR	Technical Report
TS	Technical Specification
WP	Working Procedures

4 General principles

4.1 Objective

The objective of a oneM2M Deliverable is to define clear and unambiguous Provisions in order to facilitate international trade and communication. To achieve this objective, the oneM2M 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 oneM2M Deliverable, but also within a series of associated oneM2M Deliverables. The structure of associated oneM2M 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 oneM2M Deliverable or series of oneM2M 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 oneM2M Deliverable but also to derive the maximum benefit available through automated text-processing techniques.

4.3 Consistency of oneM2M Deliverables

In order to achieve the aim of consistency within the complete body of oneM2M Deliverables, the text of every oneM2M Deliverable shall be prepared in accordance with the relevant Provisions of existing basic oneM2M Deliverables. This relates particularly to:

standardized terminology;

principles and methods of terminology;

quantities, units and their symbols;

abbreviations;

tables and figures numbering;

bibliographic references; and

graphical symbols.

In addition, for specific technical aspects, the relevant Provisions of general oneM2M Deliverables dealing with the following subjects shall be respected:

limits;

tolerance of dimensions and uncertainty of measurement;

preferred numbers;

statistical methods; and

environmental conditions and associated tests.

4.4 Equivalence of official language versions

Per article 44 of the Working Procedures Document, oneM2M Deliverables shall be prepared in the English (UK) language.

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

The content of a oneM2M 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

Rules for the planning of new work items are given in the oneM2M Working Procedures. When creating a new work item, it is useful to consider whether the end result will be one or more oneM2M Deliverables.

In the case where multiple Deliverables are expected, some thought should be given to the intended structure and any interrelationships between the various components as this facilitates work planning in the Technical Plenary and Working Groups.

In the case of a multi-part oneM2M Deliverable, a list of the intended parts together with their titles should be drawn up. The drafting 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.

4.7 Legal master of a oneM2M Deliverable

oneM2M Deliverables are made Publicly Available by oneM2M in PDF format. Other formats may also be available.

From a legal point of view, the official version of a document is the one which is recognized by the author as being the definitive and mature version of his/her work at a certain date. The official version of a document constitutes a reference from which it is possible to identify that amendments have been made.

In oneM2M, the definitive version of a oneM2M Deliverable (until further amendments are made) is the one that has been checked by the Secretariat and incorporates the amendments resulting from the approval process prescribed for the oneM2M Deliverable in the oneM2M Working Procedures (WPs). The official version of the oneM2M Deliverable is the electronic PDF file kept by oneM2M.

5 Structure

5.1 Subdivision of the subject matter

5.1.1 General

An individual oneM2M 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 oneM2M Deliverable is likely to become too voluminous;
- subsequent portions of the content are interlinked;

the oneM2M 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 oneM2M Deliverable or as separate oneM2M 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 oneM2M Deliverable may have are shown in table 1.

Table 1: Names of divisions and subdivisions

Term	Example of numbering
clause	1.1
clause	1.1.1
clause	A
annex	A.1
clause	A.1.1
clause	
paragraph	
subclause	

NOTE: The use of terms " paragraph" and "subclause" is authorized in "exceptional cases" (e.g where the oneM2M Drafting Rules, if applied, would change the meaning of the sentence or make it difficult to understand).

EXAMPLE: "... is described in the remaining subclauses of this clause".

5.1.2 Subdivision of the subject matter within an individual oneM2M Deliverable

Table 2: Example of a typical arrangement of elements in a oneM2M Deliverable

Type of element	Arrangement of elements in a oneM2M Deliverable (note)	Permitted content of element(s) in a oneM2M Deliverable (note)	Reference
Informative preliminary	***Title page***	**Title**	clause 5.3.1
	Table of contents	*(generated content)*	clause 5.3.2
	Intellectual Property Rights	***Text***	clause 5.3.3
	Introduction	*Text* *Figure(s)* *Table(s)* *Note(s)*	clause 5.3.4
Informative general	***Scope****Informative Reference(s)* *Definition(s)* *Symbol(s) and abbreviation(s)*	***Text*** *Figure(s)* *Table(s)* *Note(s)* *Reference(s)*	clause 5.3.5 clause 5.3.6
Normative general	**Normative References**	**Reference(s)**	clause 5.3.6
Normative technical	Requirements Normative annex	**Text** Figure(s) Table(s) *Note(s)*	clause 7 clause 5.3.9 clause 5.3.11.2
Informative supplementary	*Informative guidance* *Informative annex*	*Text* *Figure(s)* *Table(s* *Note(s)*	clause 5.3.11.3
	Bibliography	*Informative reference(s) and reading material*	clause 5.3.12
	Index	*(generated content)*	clause 5.3.13
	History	***Table***	clause 5.3.15
NOTE: **Bold type** = required element; upright type = Normative Element; *italic type* = Informative Element.			

A oneM2M 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 oneM2M Deliverable in question.

A oneM2M Deliverable may also contain notes to figures and tables (see clauses 6.1.3.1 and 6.1.3.2).

5.2 Description and numbering of divisions and subdivisions

5.2.1 General numbering issues

The "IPR" clause shall be unnumbered.

The clauses in each oneM2M Deliverable shall be numbered with Arabic numerals, beginning with 1 for the "Scope".

Every attempt shall be made to use continuous numbering. However, if continuous numbering cannot be maintained, a new element shall 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 oneM2M Deliverable. A new clause needs to be inserted between the existing clauses 8 and 9. A new clause 8a shall be inserted in preference to avoid re-numbering the existing clauses.

EXAMPLE 2: A new figure needs to be inserted between existing figures 4 and 5. A new figure 4a shall 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.

EXAMPLE 3: During the updating of a oneM2M Deliverable, it is decided that annex C is no longer required. The title of annex C becomes "Void". Later annexes, 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", 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 5.2.1.

- Use the **Heading** style appropriate to its level (see table 3).
- 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 Automatic numbering

Automatic numbering **may be used** in oneM2M Deliverables.

It is highly recommended to use sequence numbering (see clause 6.16) to avoid problems when the Deliverable will be converted to PDF format.

5.2.4 Paragraph

A paragraph is an unnumbered subdivision of a clause.

To be able to precisely reference every paragraph, clauses shall have either numbered or unnumbered subdivisions

Example 1 shows the two alternatives that shall be used for subdividing a clause.

EXAMPLE 1:

5 Title
5.1 Title
Paragraphs
5.2 Title
Paragraphs.
5.3 Title
Paragraphs
6 Test report

5 Title
Paragraph 1
Paragraph 2
...
Paragraph n**6 Test report**

Mixed numbered and unnumbered subdivisions shall not be used as they make precise paragraph referencing not possible.

Example 2 shows clause subdivision that **shall not be used**.

EXAMPLE 2:

5.2.5 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.

EXAMPLE 6:

- list item 1
  - list item 2

    list item 3

NOTE: See table 3 for different list styles.

"And" or "or" shall be used 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+ to B3+, BN, BL (see table 3).**
- 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.

5.3 Contents of the Deliverables

5.3.1 Contents of the title page

The title page shall contain the title of the oneM2M Deliverable.

The wording of the title shall be established by the Technical Plenary with the greatest care. While being as concise as possible, it shall indicate, without ambiguity, the subject matter of the oneM2M Deliverable in such a way as to distinguish it from that of other oneM2M 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 should be used:

a) an introductory element (optional) indicating the general field to which the oneM2M Deliverable belongs; it should not be based on the name of the Working Group which drafted the Deliverable, especially if this is too broad to add much value;

- a main element (obligatory) indicating the principal subject treated within that general field;

- a complementary element (optional) indicating the particular aspect of the principal subject or giving details that distinguish the oneM2M Deliverable from other oneM2M Deliverables, or other parts of the same oneM2M Deliverable.

The oneM2M Secretariat is responsible for the final preparation of the title page.

5.3.2 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\w}** for the table itself.

Tables of contents for figures and/or tables are also allowed. If present, they shall appear as the last elements (or just before the index if any), before the "History" clause. The titles shall be "List of figures" and/or "List of tables".

- Use the **TT** style for the title.
- Use the field **{TOC \t "TF" \c}** for the list of figures and the field **{TOC \t "TH" \c}** for the list of tables.

NOTE 1: The oneM2M Secretariat is responsible for the final layout of the Table of Contents.

NOTE 2: To unlock the Table of Contents: select the Table of Contents, click simultaneously: Ctrl + Shift + F11. To lock it: reselect the Table of Contents and then click simultaneously: Ctrl + F11.

5.3.3 Legal text

The legal text clause in a oneM2M deliverable is always the first unnumbered clause. The following wording shall appear:

"About oneM2M

The purpose and goal of oneM2M is to develop technical specifications which address the need for a common M2M Service Layer that can be readily embedded within various

hardware and software, and relied upon to connect the myriad of devices in the field with M2M application servers worldwide.

More information about oneM2M may be found at: http//www.oneM2M.org

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5.3.4 Introduction in a oneM2M Deliverable

The "Introduction" is an **optional** preliminary element used, if required, to give specific information or commentary about the technical content of the oneM2M Deliverable, and about the reasons prompting its preparation. It shall not contain Requirements.

The "Introduction" shall appear before the "Scope"clause and 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 5.2.1).

5.3.5 Scope in a oneM2M Deliverable

This element shall start on a new page and be clause number 1 of each oneM2M Deliverable and define without ambiguity the subject of the oneM2M Deliverable and the aspect(s) covered, thereby indicating the limits of applicability of the oneM2M Deliverable or particular parts of it. It shall not contain Requirements.

In Deliverables that are subdivided into parts, the scope of each part shall define the subject of that part of the Deliverable only.

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 oneM2M Deliverable shall be introduced by the following wording:

- *"The present document is applicable to …".*

5.3.6 References in a oneM2M Deliverable

5.3.6.1 General

The References clause shall be clause 2 of a oneM2M Deliverable.

References shall be provided if Normative References are made to other documents. Reproduction of elements from other documents is deprecated (i.e. referencing is the preferred method in oneM2M).

Normative referencing of other documents is allowed under the following condition:

- all documents shall be Publicly Available in the English language during the approval phases and for the duration of the expected lifespan of the oneM2M Deliverable, via the originating body or via the oneM2M Secretariat.

NOTE: If public availability of a referenced document cannot be guaranteed after publication of the oneM2M Deliverable has occurred, the originating body of the referenced document shall be requested to provide oneM2M with the right to make the text available; the oneM2M 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.

Normative references mentioned in the body of the oneM2M Deliverable shall be listed in clause 2.1.

Normative references list shall contain:

- the issuing organization;
- the document identity;
- the edition or version number or date of publication;
- the title.

The list shall not include the following:

- referenced documents which are not Publicly Available;
- referenced documents which are only cited in an informative manner (such references shall be listed in clause 2.2);
- other reading material not explicitly referred to in the body of the oneM2M Deliverable (such publications have to be listed in an informative annex entitled "Bibliography" see clause 5.3.6.2);
- referenced documents not available in the English language.

If **Normative References** cited in a Deliverable are not Publicly Available during the drafting stage, the Deliverable shall not be submitted to an approval procedure until the reference is Publicly Available. Or the text shall be made available.

Informative References mentioned in the body of the oneM2M Deliverable shall be listed in clause 2.2 .

Informative References should be Publicly Available (the secretariat team will not check for public availability, this needs to be done by the contributor).

The distinction between normative and Informative References must be made by the wording of the passage of the **Deliverable which refers to it**, not by the **referenced document itself**.

EXAMPLE: **"the test method shall be as described in ITU-T Recommendation M.50"**, ITU-T Recommendation M.50 is a **Normative Reference**.

"the test method is described in ITU-T Recommendation M.50", ITU-T Recommendation M.50 is an **Informative Reference**.

The list of references under clause 2 shall be introduced by the following wording:

Text below in red to be included into the Deliverable ...

---

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

NOTE: While any hyperlinks included in this clause were valid at the time of publication oneM2M cannot guarantee their long term validity.

2.1 Normative references

The following referenced documents are necessary, partially or totally, for the application of the present document. Their use in the context of this TS is specified by the normative Statements that are referring back to this clause.***... end of text to be included into the Deliverable.***

The above wording is also applicable to a part of a multipart document.

- Use the **EX** style, enclose the number in square brackets and separate it from the title with a tab (you may use sequence fields for automatically numbering references, see clause A.4: "Sequence numbering") (see example).

EXAMPLE:

[1] ETSI EN 301 025-3: "Electromagnetic compatibility and Radio spectrum Matters (ERM); VHF radiotelephone equipment for general communications and associated equipment for Class "D" Digital Selective Calling (DSC); Part 3: Harmonized EN under article 3.3 (e) of the R&TTE Directive".

[2] ETSI EN 300 163: "Television systems; NICAM 728: transmission of two-channel digital sound with terrestrial television systems B, G, H, I, K1 and L".

For online referenced documents, information sufficient to identify and locate the source shall be provided. Preferably, the primary source of the referenced document should be cited, in order to ensure traceability. Furthermore, the reference should, as far as possible, remain valid for the expected life of the document. The reference shall include the method of access to the referenced document and the full network address, with the same punctuation and use of upper case and lower case letters.

Normative References shall be numbered “[n]” where n is an integer, unique for each Normative Reference.

Text below in red to be included into the Deliverable ...

2.2 Informative references

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

Informative references should be publicly available (the secretariat team will not check for public availability, this needs to be done by the contributor)).

... end of text to be included into the Deliverable.

- Use the **EX** style, add the letter "i" (for informative) before the number (which shall be in square brackets) and separate this from the title with a tab (you may use sequence fields for automatically numbering references, see clause A.4: "Sequence numbering") (see example).

EXAMPLE:

[i.1] ETSI TR 102 473: "Digital Video Broadcasting (DVB); IP Datacast over DVB-H: Use Cases and Services".

[i.2] ETSI TR 102 469: "Digital Video Broadcasting (DVB); IP Datacast over DVB-H: Architecture".

Informative references shall be numbered [i.n] where n is an integer, unique for each Informative Reference.

5.3.6.2 Presentation of other reading material

This list within an annex shall be introduced by the following clause heading:

Annex <X> (informative): Bibliography

The Bibliography shall include the following:

- list of Standards, books, articles, or other sources on a particular subject which are not referenced in the document. Those publications might or might not be publicly available (the secretariat team will not check for public availability, this needs to be done by the contributor).

The Bibliography shall not include the following:

- Normative References (such references shall be listed in clause 2.1);
- Informative References (such references shall be listed in clause 2.2).

Use the **Normal** style or a bulleted style (e.g. B1+) and do not use numbered references. (If you want to refer to such a publication from the text use *(see annex <X>*or *see Bibliography)* instead.)

EXAMPLE 1:

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

EXAMPLE 2:

- <Primary responsibility>. <Title>. <Edition>. <Year>, <Issue designation>, <Page location>.
  (e.g. WEAVER, William. "Command performances". December 1985, vol. 42, n° 12, p. 126-133).
- ISO/IEC 17875: "Title".

5.3.6.3 Non-specific references

Many Standards bodies, (e.g. ISO, CEN, CENELEC, etc.) have a policy of regularly reviewing/maintaining their deliverables. Their procedures also involve the automatic withdrawal of the previous version. It therefore follows that any oneM2M Deliverable making specific references to such documents will need to be revised. It may, therefore, be appropriate that a oneM2M Deliverable contain non-specific references, provided that the following requirements can be fulfilled:

- it is accepted that it will be possible to use future versions of the document referred to for the purposes of the referring oneM2M Deliverable;
- it is granted that the structure of the document referred to will not change for the specific areas which are used by the referring oneM2M Deliverable.

5.3.6.4 References to the oneM2M Deliverable as a whole in its own text

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

5.3.6.5 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";
- "see figure B.2 in clause 5.4".

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

- "as specified in clause 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 shall be **consistent** throughout the document.

References shall be made in the forms indicated in clauses 5.3.6.3 to 5.3.6.6 and shall not be made to page numbers.

5.3.6.6 References to tables and figures

Every table and figure included in the oneM2M Deliverable shall be referred to in the text, for example using 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.

5.3.6.7 References to specific or non-specific references

The following form shall be used consistently throughout the Deliverable:

- " … in accordance with ES 201 001 [n], clause 3, … ".

5.3.6.8 Guidance for including references to documents of other organizations in oneM2M Deliverables

5.3.6.8.1 Scope

These rules for including references to documents of other organizations in oneM2M Deliverables are intended to ensure that implementers and evaluators of Deliverables standardized by oneM2M, and other interested parties, have access to all materials needed to implement those Deliverables. These rules apply to documents that are produced in accordance with the oneM2M rules of procedures but also to any Deliverables that are developed elsewhere that are sent to oneM2M to be standardized.

Two categories of references are possible:

a) "Normative References" are references to documents to which conformance (totally or in part, according to the normative Statements of the oneM2M deliverable referencing the documents) is necessary to claim compliance to the oneM2M Deliverable containing the reference.

b) "Informative References" are references to documents that may be useful in implementing a oneM2M Deliverable or add to the reader's understanding but which are not required for conformance to the oneM2M Deliverable.

These rules are pointed toward Normative References because they are functionally a part of the oneM2M Deliverable itself. It is best practice to follow these principles for Informative References as well, but more flexibility is permitted for Informative References because these documents are not strictly necessary for the implementation of a oneM2M Deliverable.

5.3.6.8.2 Documents that may be referenced

In considering whether a Normative Reference to a document should be included in a oneM2M Deliverable, preference should be given to Standards and specifications issued in the English language by recognized Standards development organizations.

Normative referencing of documents under the possession of other organizations is allowed where the use of such Normative References has been justified by the Working Group in charge of development of the oneM2M Deliverable containing the reference.

A Normative Reference to such a document is permissible only if the referenced document is Publicly Available, during the approval phases and at the time of publication of the oneM2M Deliverable. If public availability cannot be ensured after publication of the oneM2M Deliverable has occurred, the originating body of the document shall be requested to provide oneM2M with the right to make available the text.

If Normative References in a oneM2M Deliverable are not Publicly Available during the drafting stage, the Deliverable shall not be submitted to an approval procedure until the reference is Publicly Available or the text shall be made available to be held by oneM2M.

5.3.6.8.3 Intellectual Property Rights (IPRs)

oneM2M promotes a policy that any essential Intellectual Property Rights (IPRs) embodied in normatively referenced documents be available for use in oneM2M Deliverables on licensing and disclosure terms that do not materially differ from the terms defined in the oneM2M IPR Policy. This Normative Reference policy, however, does not imply any obligation on the Technical Plenary, oneM2M members or Technical Plenary members to investigate or ensure the availability of any essential normatively referenced IPRs, under any specific licensing and disclosure terms, at the time a Normative Reference is provided, explicitly or implicitly, within a oneM2M Deliverable.

5.3.6.8.4 Stability and maintenance

Normative References may be "specific" or "non-specific":

a) A "specific" reference is a reference to the particular revision or version of the normatively referenced document. Specific references are favoured because they lead to permanence and stability in oneM2M Deliverables. Normative References generally should be limited to documents that are finally approved by the organizations responsible for issuing them.

b) A "non-specific" reference is a reference to a Deliverable of another organization that will apply to all future revisions and versions of the originally referenced document. Non-specific references require additional procedures to ensure that any revisions made necessary to the oneM2M Deliverable by virtue of revisions made to the normatively referenced materials are considered by the appropriate technical body in charge of the oneM2M Deliverable.

If a Normative Reference is non-specific, the technical body in charge of the oneM2M Deliverable should establish a process for gaining access to all future revisions and versions of the normatively referenced material. In addition, the technical body should establish a work plan for ensuring that any such new revisions and versions of the normatively referenced material do not require a substantive amendment to the oneM2M Deliverable referencing that document or, alternatively, for ensuring that any such needed amendments are made and approved appropriately. Any future versions incorporated by reference should meet with the requirements for public availability and Intellectual Property as set forth above.

5.3.6.8.5 Test suites

If conformance with a specification that includes Normative References requires the use of a test suite, the test suite for the normatively referenced part should also be made Publicly Available. Any such test suite should be usable by potential implementers on terms at least as favourable as those contained in the oneM2M IPR Policy.

5.3.7 Terms and definitions in a oneM2M Deliverable

This is an optional element giving definitions necessary for the understanding of certain terms used in the oneM2M 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 TS-0011 and the following] apply:

. A term defined in the present document takes precedence over the definition of the same term, if any, in TS-0011 [1].”

- A definition shall not take the form of, or contain, a Requirement.
- **The form of a definition should be such that it can replace the term in context**. Any 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.

If a term or definition is taken verbatim from another source the definition should include the reference to the document from which it is taken.

EXAMPLE 1:

Application: [i.7]:A structured set of capabilities, which provide value-added functionality supported by one or more services.

Where [i.7] is an Informative Reference to the ITU document from which the definition is taken

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

EXAMPLE 1:

Communal Site: location at which there is more than one fixed transmitter

NOTE: There are two types of communal site; one having separate equipment and antennas but housed in a common equipment room, and the other having an engineered system employing common antenna working where the isolation between equipments is determined by the filter system.
At all communal sites equipment installed on the site must meet the limits as specified in the relevant Standards.

- The term shall be in **bold**, and shall start with a upper case letter (unless it is always rendered with a leading lower case letter) 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 are 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: Provision that conveys criteria to be fulfilled

5.3.8 Symbols and abbreviations in a oneM2M Deliverable

This is an optional element giving a list of the symbols and abbreviations necessary for the understanding of the oneM2M Deliverable. The following introductory wording, modified as appropriate, shall be used:

For the purposes of the present document, the [following] {<symbols>|<abbreviations>} [given in ... and the following] apply:

This list shall contain all technical abbreviations and their corresponding full terms which are used within the oneM2M Deliverable in alphabetical order.

This element, if it exists, shall be combined with the definitions in order to bring together terms and their definitions, symbols, abbreviations and acronyms under an appropriate composite title, for example "Definitions, symbols, abbreviations and acronyms".

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

Use the **EW** style (**EX** style for the last element in the list).

- Separate the abbreviation from the full term with a tab.

EXAMPLE:

dB	decibel
DDI	Direct Dialling-In, or direct dialling-in

5.3.9 Requirements

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

a) all characteristics relevant to the aspect(s) of the product(s), process(es) or service(s) covered by the oneM2M Deliverable, either explicitly or by reference;

- the required limiting values of quantifiable characteristics.

A clear distinction shall be made between Requirements, Statements and Recommendations (see also clause 6).

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

oneM2M Deliverables listing characteristics for which suppliers are required to state values that are not specified by the oneM2M Deliverable itself shall specify how such values are to be measured and stated.

5.3.10 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 or as separate parts). A test method shall be prepared as a separate oneM2M Deliverable if it is likely to be referred to in a number of other oneM2M Deliverables.

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

Every requirement of a oneM2M Deliverable 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.

5.3.11 Annex in a oneM2M Deliverable

5.3.11.1 General

For the description of normative and informative annexes, see clauses 5.3.11.2 and 5.3.11.3.

Each annex shall start on a new page.

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 5.2.1). The annex heading shall be followed by the indication "(normative):" or "(informative):", and by the title on the next line.

EXAMPLE 1:

Annex A (normative):
Title of annex A

NOTE: Exceptions to this rule are for the TR and INF Deliverable types which are entirely informative. Thus the addition of "(normative):" or "(informative):" after the annex identifier is superfluous and shall not be provided.

EXAMPLE 2: Annex A:
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 5.2.1).

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

5.3.11.2 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 oneM2M Deliverable. Their presence is optional and their status (except for INFs and TRs, see note in clause 5.3.11.1) shall be indicated in the heading of the annex.

5.3.11.3 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 oneM2M Deliverable and shall not contain Provisions to which it is necessary to conform in order to be able to claim compliance with the oneM2M Deliverable. Their presence is optional and their status (except for INFs and TRs, see note in clause 5.3.11.1) shall be indicated in the heading of the annex.

The following annexes are optional and if present, will be displayed in the following order before the history box (see clause 20):

- Bibliography (see clause 5.3.12),
- Index (see clause 5.3.13),
- Change history or Change request (history) (see clause 5.3.14).

NOTE: Each of these elements shall start on a new page.

5.3.12 Bibliography in a oneM2M Deliverable

"Bibliography" and shall be the last annex.The annex entitled "Bibliography" identifies Informative References and other reading material. Those publications might or might not be Publicly Available (the secretariat team will not check for public availability, this needs to be done by the contributor).

, but are definitely not mentioned in the document itself.

- For the "Bibliography" annex use **Heading 8** style

NOTE: For TRs, the style Heading 9 shall be used.

For the listed material use the **Normal** style or bulleted lists (e.g. **B1+**).

5.3.13 Index in a oneM2M Deliverable

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.

5.3.14 Change history/Change request (history)

A change history / Change request (history) annex is optional, if present it shall be presented as a table.

5.3.15 History in a oneM2M Deliverable

A history box shall be provided by the oneM2M Secretariat as the final unnumbered element in a oneM2M 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 Notes and examples

6.1.1 Notes and examples integrated in the text

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

Notes and examples integrated in the text shall only be used for giving additional information intended to assist the understanding or use of the oneM2M Deliverable. They shall not contain any information considered indispensable for the use of the Deliverable.

A single note in a 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 element (e.g. clause), they shall be designated "NOTE 1:", "NOTE 2:", "NOTE 3:", etc. (see also clause 5.2.1).

The word NOTE shall appear in upper case.

Use the **NO** style.

Separate NOTE: from the text of the note with a tab.

EXAMPLE 1:

NOTE: Text formatted with the **NO** style will be formatted **with** a space after the paragraph.

END of EXAMPLE 1

A single example in a 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 element (e.g. clause), they shall be designated "EXAMPLE 1:", "EXAMPLE 2:", "EXAMPLE 3:", etc. (see also clause 5.2.1).

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 2:

EXAMPLE: Example text.

END of EXAMPLE 2

6.1.2 Footnotes to the text

Footnotes shall not be used in oneM2M Deliverables. If necessary notes integrated in the text shall be used.

6.1.3 Notes to figures and notes to tables

6.1.3.1 Notes to figures

Notes to figures shall be treated independently from notes integrated in the text (see clause 6.1.1) and for this reason may contain Requirements. 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 5.2.1). A separate numbering sequence shall be used for each figure.

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.

6.1.3.2 Notes to tables

Notes to tables shall be treated independently from notes integrated in the text (see clause 6.1.1) and for this reason may contain Requirements. 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 5.2.1). A separate numbering sequence shall be used for each table.

Use the **TAN** style.

Separate NOTE: from the text of the note with a "Ctrl" + "→" (tab).

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 (see note 2)	Column 3 cell	Column 4 cell (see note 1)
NOTE 1: This cell is a merged cell. NOTE 2: This cell is also a merged cell.			

6.2 Figures

6.2.1 Usage

Figures should be used wherever appropriate to present information in an easily comprehensible form. Each figure shall be referred to explicitly within the text and, therefore, be numbered.

6.2.2 Format

Figures shall be prepared in accordance to clause 6.17.

Use the **FL** style on the paragraph which contains the figure itself.

Maximum width for figures is 17 cm and maximum height is 22 cm.

Figures that have been prepared in accordance to clause 6.17 shall be included as editable objects.

6.2.3 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 5 is figure 5.1, second figure in clause 5.1.1 is figure 5.2, third figure in clause 5.2.3 is figure 5.3.

EXAMPLE 2: First figure in clause 7 is figure 7.1, fifth figure in clause 7 is figure 7.5.

EXAMPLE 3: 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 6.2.1. For the numbering of figures in annexes, see clause 5.1.11.1.

Should you wish to number figures automatically, "Sequence numbering" (see clause 6.16) is highly recommended. Also see clause 5.2.3.

6.2.4 Layout of title

The figure title shall be below the figure. An explicit figure title 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 title.

6.3 Tables

6.3.1 Usage

Tables should be used wherever appropriate to present information in an easily comprehensible form. Each table shall be referred to explicitly within the text and therefore be numbered.

Centre tables horizontally.

The "space between columns" is 0,1 pt or 0,05 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).

6.3.2 Format

The following styles should be used in table cells.

Table Headings	**TAH**
Text Left aligned	**TAL**
Text Centred	**TAC**
Text Right aligned	**TAR**
Table Note	**TAN**
List in tables Level 1	**TB1**
List in tables Level 2	**TB2**

6.3.3 Continuation of tables

The column headings shall be repeated on all pages after the first.

Use the table headings tool (**Table, Heading Rows Repeat**)

6.3.4 Numbering

Tables may be numbered sequentially throughout the document without regard to the clause numbering, e.g. the 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 5 is table 5.1, second table in clause 5.1.1 is table 5.2, third table in clause 5.2.3 is table 5.3.

EXAMPLE 2: First table in clause 7 is table 7.1, fifth table in clause 7 is table 7.5.

EXAMPLE 3: 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.

One level of subdivision only is permitted (e.g. table 1 may be subdivided as 1 a), 1 b), 1 c), etc.). See also clause 5.2.1. For the numbering of tables in annexes, see clause 5.3.11.1.

Should you wish to number tables automatically, "Sequence numbering" (see clause A.4) is highly recommended. Also see clause 5.2.3.

6.3.5 Layout of title

The title shall be above the table. An explicit table tile 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 title.

6.3.6 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 within the column heading.

EXAMPLE:

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

6.4 Use of capital letters

Unnecessary use of capital letters should be avoided.

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

6.5 Different items concerning text

Use **bold** to emphasize text (the underline attribute causes confusion when revision marks are used).

Use *italic* for citations, linguistic expressions or when a word/text/expression is extracted from a specific context.

Use non-breaking spaces (°) or non-breaking hyphens (-) in order to avoid unexpected wrap around between two words and/or numbers (e.g. 50°cm, 1°000, clause°6 etc.). These characters appear as normal spaces ( ) or hyphens (-) when printed out.

Use "straight" quotation marks ("...") not “curly” or ‟smart quotes″.

It is **not recommended to use underlined text** (to avoid confusion with revision marks).

Do not put more than one space after a full stop.

Do not precede comma (,), semicolon (;), colon (:), full stop (.), question mark (?) or exclamation mark (!) by spaces.

Do not use spaces in place of tabs when indentation/alignment is required; this can cause text to be misaligned.

6.6 Pagination

Unnecessary forced 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.

6.7 Use of trade names (trade marks)

Proprietary trade names (e.g. trade marks) for a particular good or service should as far as possible be avoided, even if they are in common use. Instead a correct designation or description of a product should be given.

If, in exceptional circumstances, trade names cannot be avoided, their nature shall be indicated, e.g. by the symbols ® or ™ 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 1: "… [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 oneM2M 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 2: " … [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 oneM2M of this (these) product(s)."

6.8 Representation of numbers and numerical values

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

NOTE 1: 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.

Each group of three digits reading to the left 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 $1,8°\times°10^{-3}$ (not $1,8 * 10^{-3}$ or $1,8 \bullet 10^{-3}$ or $1,8 . 10^{-3}$).

NOTE 2: The exception are vector values because it makes a difference whether multiplying with a "•" (scalar value) or with a "×" (vector value).

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: ES°201°150.

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

EXAMPLE 8: 2ºpages 4ºseconds 15º%.

Write a number preceded by a unary operator (sign) without an intervening space, except for ≤, ≥, >, <:

EXAMPLE 9: … a level of -3°dB … but > 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" + 8) for the minus sign.

6.9 Quantities, units, symbols and signs

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

6.9.1 Indication of dimensions and tolerances

Dimensions and tolerances shall be indicated in an unambiguous manner.

NOTE 1: In the text below, ° represents the non-breaking space character.

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).

EXAMPLE 4a: X = [1..8].

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.

6.10 Mathematical formulae

6.10.1 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 5.3.8. 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, ..., integer part (N/3).

6.10.2 Presentation

It is recommended to use Microsoft® Equation Editor.

Use the **EQ** style.

Insert one tab before the equation to centre it.

6.10.3 Numbering

If it is necessary to number some or all of the formulae in a oneM2M Deliverable in order to facilitate cross-reference, Arabic numbers in parentheses shall be used, beginning with 1:

EXAMPLE 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 2: First equation in clause 5 is equation 5.1, second equation in clause 5.1.1 is equation 5.2, third equation in clause 5.2.3 is equation 5.3.

EXAMPLE 3: First equation in clause 7 is equation 7.1, fifth equation in clause 7 is equation 7.5.

EXAMPLE 4: 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 5.2.1. For the numbering of equations in annexes see clause 5.3.11.

Should you wish to number equations automatically, "Sequence numbering" (see clause A.4) is highly recommended. Also see clause 5.2.3.

Insert a tab between the equation and the number to right-align the number.

6.11 Presentation of computer language and other code

Computer code (e.g. ASN.1, GDMO, C, C++, etc.) may be included in a oneM2M Deliverable but should be clearly marked as such.

Use the **PL** style.

Large volumes of program code, source code or formal description language shall be placed in an electronic attachment accompanying the oneM2M Deliverable.

In case of inconsistencies between code contained in the Deliverable and code contained in an electronic attachment, the code in the electronic attachment shall be considered the definitive version.

6.12 Use of photographs

Photographs shall be used only in accordance with the relevant Provisions of the oneM2M IPR Policy and the oneM2M Guide on IPRs.

If the photograph shows a person and if there are doubts about the respect of the rights of personality of that person, a written confirmation that those rights have not been invaded and have been fully respected shall also be obtained from the author of the photograph.

6.13 The oneM2M styles

Use table 3 when determining which style to use for various elements of the Deliverable. Do not alter existing styles or formats pre-set in the oneM2M styles, do not add new styles to the oneM2M template and do not delete oneM2M styles (see style FP in table 3).

Table 3 oneM2M styles

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 and INFs 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
TB1	List in tables Level 1
TB2	List in tables Level 2
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 1
General styles	**For different items**
Normal	Standard paragraph, Definition
TT	Contents list title
PL	Programming language
EQ	Equation
Header	Header (portrait and landscape pages)
Style which can be user-defined	
FP	Free Paragraph
→ 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 Secretariat only.

Editor's Note	Editor's Note – May only be used in the drafting phase, Editor's notes will be removed during the document clean up prior to approval.

6.14 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 and footers.

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

6.15 Configuration of your PC environment

Set your PC environment to use the English (International) conventions.

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 your PC are at your discretion.

6.16 Sequence numbering and bookmarking

Sequence numbering is highly recommended to automatically number sets of items within a Deliverable, especially if the document is long and/or contains numerous references, tables, figures, equations, etc. It avoids renumbering the whole sets when inserting new items.

Sequence numbers may also be bookmarked, in order to facilitate cross-referencing throughout the text: it avoids renumbering cross-references and guarantees their accuracy.

For further discussion. Use the following sequence identifiers (**Insert/Field/Numbering Seq** and type in the relevant sequence identifier):

Table 4: Sequence numberings

Sequence	Bookmark name	Description
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 oneM2M Deliverable by using the switch **\r1** (e.g. **{ seq fig \r1 }**). NOTE 2: "xx" represents the identifier for the particular object concerned, e.g. "fig_ProcessControl" or "ref_en300466". 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

Bookmark each entry in a sequence (select it and use **Insert/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 } …

Remember to refresh the fields in order to view the correct numbers by using the "Update fields" command (F9).

6.17 Supported file formats for Deliverables

The following document formats for Deliverables are currently accepted by oneM2M:

Microsoft® Word 2007 (Office Binary File Formats (for Word, Excel and PowerPoint) – Published February 15, 2008

- Word 97-2007 Binary File Format (.doc) Specification
- PowerPoint 97-2007 Binary File Format (.ppt) Specification
- Excel 97-2007 Binary File Format (.xls) Specification

Microsoft® Word 2007, 2010 and 2013

Microsoft® Word 2003

Microsoft® Word XP

NOTE 1: Versions prior to this are strongly discouraged.

The following file formats for including into a document are currently accepted by oneM2M:

Microsoft® Visio® 2003 and 2007

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 (see annex B).

Microsoft® Office® products

Note: the file formats to be used for machine readable attachments to the documents will be updated during the Specification development phase.

7. Verbal Forms

Proper development of useful Provisions is dependent upon a common understanding of normative verbs. The verb pairs in use in oneM2M are:

- **Shall/Shall not**
- **May/Need not**
- **Should/Should not**

The usage of these three verb pairs is reserved in oneM2M specifications and reports to express normantive Statements indicated in table 5 and shall not be used otherwise.

Table 5 briefly describes the effect of each verb pair and shows examples of proper usage.

Verb pair	Effect	Usage for example	Comment
Shall / Shall not	**Requirement** 1.) effect on Standard: The oneM2M Standard needs to describe the required feature (i.e. specify a technical solution for the Requirement); 2.) effect on products: every implementation (M2M Solution that complies to the oneM2M Standard) must support it 3.) effect on deployments: every deployment (M2M Service based on the oneM2M Standard) must use the Standardized feature where applicable – otherwise e.g. interoperability problems with other services could arise.	***Example 1:*** The M2M System **shall** be aware of the scheduling delay tolerance needed by the M2M Application and …	*An unconditional "shall" (as in example 1) occurs often in architecture- and protocol specifications but rarely in Requirements specifications. In Requirements it would imply that every compliant M2M Solution must implement the required feature and every deployment must use it.*
		Example 2: M2M Applications, requesting reliable delivery of a message, **shall** be notified by the M2M System of any failures to deliver the message.	*A "shall" often is bound to a condition (example 2) to express that only if the condition is met the required feature must be implemented and must be used:* *"**If** [condition is met] **then** … shall …".*
		Example 3: The oneM2M System **shall support a mechanism** for allowing M2M Applications or Connected Objects to subscribe and being notified of changes	*To mandate a feature in the M2M System but allow freedom to the individual deployment whether to use it or not it is better use a phrase like:* *"The M2M System shall **support a mechanism** [function, capability...] **to** …", "…shall **be able to** …".* *This does not mandate usage of the required feature in a M2M Solution.*

Verb pair	Effect	Usage for example	Comment
May / Need not	**Permission/Option** 1.) effect on Standard: The oneM2M Standard needs to describe a solution that allows the presence and the absence of the required feature; 2.) effect on products: an implementation may or may not support it 3.) effect on deployments: A deployment may or may not use it	***Example 4:*** The M2M Gateway **may** be capable of interfacing to various M2M Area Network technologies	*"may" allows implemen-tations of M2M Solutions (that comply to the oneM2M Standard) that may or may not include a feature.* *e.g. in example 4 a gateway that cannot interface to various M2M Area Network technologies could still be compliant to the oneM2M Standard*
Should / Should not	**Recommendation** 1.) effect on Standard: The oneM2M Standard needs to describe a solution that allows the presence and the absence of the feature. 2.) effect on products: an implementation may or may not support it, however support is recommended 3.) effect on deployments: A deployment may or may not use it, however usage is recommended	***Example 5:*** The oneM2M System **should** abstract the underlying network structure including any network addressing mechanism used	*The effect of "should" is similar to "may" but additionally recommends to implement and use the feature.*

Table 5 Verbal Forms

NOTE: Non-normative and informative verbs are only permitted for use in a oneM2M System or oneM2M Solution for descriptive purposes (e.g. can and cannot, which indicate that something is possible or impossible, respectively).