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Editor's Style Guide (ESG)

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ABSTRACT

This guide is intend for the use of T10 Technical Editors working on draft standards. Following the guidelines here will ensure that the 'look and feel' of the standard being developed will be the same as other T10 standards, minimize editorial letter ballot comments, and also ease the transition to ISO standard format.

Revision History

Revision 0 - This is the first revision of this document put together from the input gathered at the T10 Editor's meeting in July 2001.

Revision 1 - This revision contains changes generated during the November 2001 Technical Editor's meeting in Monterey, CA

Revision 2 - This revision contains changes generated during the September 2002 Technical Editor's meeting in Minneapolis, MN. Document also changed fromT10/01-313 to T10/03-049.

Foreword

This working document is being developed by T10 for the purpose of aiding T10 Editor's in the standards development process.

Introduction

The Editors' Style Guide (ESG) is divided into ten clauses:

Clause 1 is the scope.
Clause 2 enumerates the references used in the development of this guide.
Clause 3 describes the definitions, symbols, and abbreviations used in this guide.
Clause 4 describes the reasons for standards and the need for requiring consistency between standards.
Clause 5 describes the structure of a standards.
Clause 6 describes required elements and conventions in a standard.
Clause 7 describes those things to avoid in standard development.
Clause 8 describes requirements put on your work by other standards.
Clause 9 describes some state machine issues.
Clause 10 describes document preparation information.

The annexes provide information to assist with implementation and understanding of the requirements and recommendations in this guide.

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1 Scope

This Style Guide is intended to cover the style and conventions used for T10 Draft Standards and Technical Reports (i.e., working drafts). Using the guidelines outlined here will assist the editor in developing a working draft that will have the same 'look and feel' of other T10 standards. This will enable users that are familiar with other T10 standards a quicker understanding of your work.

An understanding of the information presented here, in conjunction with the working draft template (T10/03-050r0.pdf/zip (formerly T10/01-314r0.pdf/zip) for Frame and T10/-1-315r0.pdf/zip for Word) will enable the editor to concentrate on the technical aspect of the standard.

Following these guidelines should reduce the number of editorial comments during the letter ballot process and will also allow an easier transition to ISO Standard format for an international standard if the standard is going to be submitted to ISO.

2 References

The following references were used in the development of this guide:

ISO/IEC Directives, Part 3, *Rules for the structure and drafting of International Standards,* Third edition, 1997 which can be found at: www.iso.ch/iso/en/ISOOnline.frontpage

Chicago Manual of Style: The Essential Guide for Writers, Editors and Publishers, 13th Edition, by John Grossman

Merriam-Webster's Guide to Punctuation and Style, by Merriam-Webester.

A Pocket Style Manual, 3th Edition, by Dianne Hacker

ANSI style guidelines, X3T10.1/96a114r0 by John Scheible which can be found at: ftp://ftp.t10.org./t10.1/document.96/96a114r0.pdf

State Machine Phraseology, T10/02-479 by George Penokie which can be found at: www.t10.org.

Reference was also made to various existing T10 working drafts (e.g., SPC-*, SPI-*, FCP-*) to determine common characteristics and conventions currently being used. Letter ballot comments against these working drafts were also used to identify common editorial comments.

3 Definitions, symbols, abbreviations, and conventions

3.1 Definitions

3.1.1 ISO Definitions:

The definitions in subclause 3.1.1.1 through subclause 3.1.1.8 are copied from the *ISO Directives, Part 3* and have the same meaning in both NCITS T10 and ISO documents.

3.1.1.1 informative element: Those elements that provide additional information intended to assist in the understanding or use of the standard.

3.1.1.2 international standard: Standard that is adopted by an international standardizing/standards organization

and made available to the public.

3.1.1.3 normative element: Those elements setting out the provisions to which it is necessary to conform in order to be able to claim compliance to the standard.

3.1.1.4 provision: Expression in the content of a normative document, that takes the form of a statement, an instruction, a recommendation, or a requirement.

3.1.1.5 recommendation: Provision that conveys advice or guidance.

3.1.1.6 requirement: Provision that conveys criteria to be fulfilled.

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

3.1.1.8 state of the art: Developed stage of technical capability at a given time as regards products, processes and services, based on the relevant consolidated findings of science, technology and experience.

3.1.2 Other definitions:

3.1.2.1 Technical Committee: A subgroup established under NCITS responsible for developing dpANS and/or draft TR's, submitting to OMC requests for new projects in its general area of interest, and serving as a U.S. TAG upon assignment by NCITS.

3.1.2.2 TC draft: A TC working document intended to be either a draft standard or technical report.

3.2 Symbols and Abbreviations

CDB   Command Descriptor Block
dpANS Draft Proposed American National Standard
ISO   International Standards Organization
FCP-*   Fibre Channel Protocol - * (refer to www.t10.org for latest version)
NCITS   National Committee for Information Technology Standards
OMC   Operational Management Committee
SAM-* SCSI Architecture Model -* (refer to www.t10.org for latest version)
SCSI   Small Computer System Interface
SPC-*   SCSI Primary Commands - * (refer to www.t10.org for latest version)
SPI-*   SCSI Parallel Interface - * (refer to www.t10.org for latest version)
TAG   Technical Advisory Group
TC   Technical Committee
TR   Technical Report

3.3 Conventions

4 General

4.1 Overview

To a large extent this is a difference document to the *ISO Directives, Part 3* which defines standards requirements for ISO international standards. Parts of that document are reproduced here to make this guide easier to use. Those parts that are reproduced here are clearly indicated as being copied. Users of this document will need to obtain and use the *ISO Directive, Part 3* in conjunction with this guide. See clause 2 for information on obtaining ISO Directives.

4.2 Objective of a standard

A significant portion of clause 4.2 is reproduced from *ISO Directive, Part 3* for the convenience of the user of this guide. Please refer to *ISO Directive, Part 3* for full details.

The objective of a standard is to define provisions in order to facilitate design, test, and manufacture of interoperable products from various companies for the benefit of their customers. To achieve these objectives the standard should:

   a) be complete as necessary within the limits specified by its scope,
   b) be consistent, clear and accurate,
   c) take full account of the state of the art,
   d) provide a framework for future technological development, and,
   e) be comprehensible to qualified persons who have not participated in its preparation.

While all the above are very important, the last point needs particular consideration since most of the users of the standard do not have the opportunity to participate in its development.

Uniformity of structure, style, and terminology throughout a particular standard and associated standards is essential. The structure of associated standards and numbering 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 should be used throughout each standard or series of standards to designate a given concept. The use of an alternative term (i.e., 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 important to ensure comprehension of the standard and to derive the maximum benefit available through automated text processing techniques and computer-aided translation.

Reference to the most current T10 working drafts (e.g., SPI-*, SPC-*) can provide valuable information regarding style, format, and layout (even content for areas like clause 3) during the development of other standards.

5 Document Structure

5.1 Front matter

The front matter of the T10 working draft consists of the following elements:

1) T10 cover page with document number and other standard information and contact information on the reverse,
2) An ANSI cover page giving a brief description of the standard and ANSI copyright and patent information on the reverse,
3) A revision history (removed prior to forwarding for first public review),
4) A table of contents,
5) A table of tables,
6) A table of figures,
7) Forward, and
8) Introduction.

5.2 Actual standard

The body of standard consists of the following elements:

1) Clause 1: Scope (brief description of what this standard covers and how it relates to other standards within the SCSI family of standards),
2) Clause 2: Normative References (a list of other standards whose requirements are incorporated in this standard by reference),
3) Clause 3: Definitions, symbols, abbreviations, and conventions,
4) Clause 4: General (gives an overview of what the standard is covering with capabilities and limitations and other details that will help the user understand the rest of the information in the standard),
5) Clause 5 through n: provides normative information as necessary to understand the requirements for this standard, and
6) Annex A through n: provides supplemental normative information with requirements or informative information to aid in the understanding or use of the requirements defined in other parts of the standard. Providing annexes is optional.

The number and content of clauses and annexes depends on the requirements and other information that are necessary to convey the standard's scope and objectives.

5.3 Subdivision of working draft

5.3.1 ISO Definitions

Clauses 5.3.2 through 5.3.5 of this guide are paraphrased from of *ISO Directives, Part 3.*

The terms used to designate each division or subdivision of a working draft are shown in Table 1. For an example of the divisions and numbering of the elements of the standard refer to *ISO Directives, Part 3*.

Table 1 — Names of divisions and subdivision

Name	Example
clause	1
subclause	1.1
subclause	1.1.1
paragraph	no numbering
annex	A

Other elements of the standard may include tables, figures, notes, footnotes and or examples.

5.3.2 Clause

The clause is the basic component in the subdivision of the content of a standard. The clauses in each standard shall be numbered with arabic numerals, beginning with 1 for the 'Scope' clause. The numbering shall be continuous up to but excluding any annexes.

Each clause shall have a title, placed immediately after its number, on a line separate from the text that follows it.

5.3.3 Subclause

A subclause is a numbered subdivision of a clause. A primary subclause (e.g., 5.1, 5.2) may be subdivided in secondary subclauses (e.g., 5.1.1, 5.1.2), and this process of subdivision may be continued as far as necessary.

Subclauses shall be numbered with arabic numerals (see *ISO Directives, Part 3*). A subclause shall not be created unless there is at least one further subclause at the same level (e.g., there shall be no 8.1 unless there is also an 8.2).

Each primary subclause shall be given a title, which shall be placed immediately after its number, on a line separate from the text that follows it. Secondary subclauses may be treated the same way. Within a clause or subclause, the use of titles shall be uniform for subclauses at the same level (e.g., if 8.1 has a title, 8.2 shall also have a title). In the absence of titles, key terms or phrases (composed of distinctive type) appearing at the beginning of the text of the subclause may be used to call attention to the subject matter dealt with. Such terms or phrases shall not be listed in the table of contents (e.g., the definitions subclauses).

5.3.4 Paragraph

A paragraph is an unnumbered subdivision of a clause or subclause.

"Hanging paragraphs" such as those shown in the figure 1 shall not occur since reference to them is ambiguous. Basically, if there are subclauses in the clause, there shall be no text between the clause title and the first subclause title.

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┌─────────────────────────────────────┐   ┌─────────────────────────────────────┐
│              Correct                 │   │             Incorrect                │
├─────────────────────────────────────┤   ├─────────────────────────────────────┤
│ 5  Designation                       │   │ 5  Designation                       │
│                                      │   │                                      │
│ 5.1  Xxxxxxxxxxx                     │   │ xxxxxxx x   xxxxxxxxxxxxx  }          │
│                                      │   │                                      │
│ xxxxxxx x   xxxxxxxxxxxxx            │   │ xxxxxxx x   xxxxxxxxxxxxx  }   hanging│
│                                      │   │                               paragraphs│
│ xxxxxxx x   xxxxxxxxxxxxx            │   │ xxxxxxx x   xxxxxxxxxxxxx  }          │
│                                      │   │                                      │
│ xxxxxxx x   xxxxxxxxxxxxx            │   │ 5.1  Xxxxxxxxxxx                     │
│                                      │   │                                      │
│ 5.2  Xxxxxxxxxxx                     │   │ xxxxxxx x   xxxxxxxxxxxxx xxxxxxxxxxxxxxxxx│
│                                      │   │                                      │
│ xxxxxxx x   xxxxxxxxxxxxx xxxxxxxxxxxxxxxxx│ 5.2  Xxxxxxxxxxx                     │
│                                      │   │                                      │
│ 5.3  Xxxxxxxxxxx                     │   │ xxxxxxx x   xxxxxxxxxxxxx xxxxxxxxxxxxxxxxx│
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│ xxxxxxx x   xxxxxxxxxxxxx xxxxxxxxxxxxxxxxx│ xxxxxxxxxxxx xxxxxxxxxxxxx xxxxxxxxxxxxxx│
│ xxxxxxxxxxxxxx xxxxxxxxxxxxxx xxxxxxxxxx│ xxxxxxxxxxxx xxxxxxxxxxxxx           │
│ xxxxxxxxxxxx xxxxxxxxxxxxx xxxxxxxxxxxxxx│                                      │
│ xxxxxxxxxxxx xxxxxxxxxxxxx            │   │ 6  Test report                       │
│                                      │   │                                      │
│ 6  Test report                       │   │                                      │
└─────────────────────────────────────┘   └─────────────────────────────────────┘
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Figure 1 — Hanging paragraph example.

The hanging paragraphs indicated in figure 1 cannot be uniquely identified as being in 'clause 5' since strictly speaking the paragraphs in 5.1 and 5.2 are also in clause 5.

5.3.5 Lists

Lists may be introduced by a sentence, a complete grammatical proposition followed by a colon, or by the first part of a proposition without a colon, completed by the items in the list.

An unordered lists implies no priority between items in the list. Each item in an unordered list shall be preceded by an alpha character(s) as shown below.

This is an unordered list of items:

   a) green
   b) red
       A) light red
       B) dark red
   c) yellow
   d) blue

An ordered lists does imply priority between items in the list. Each item in an ordered list shall be preceded by a numeric value as shown below.

This is a list of ordered items:

   1) get passport
   2) get visa
   3) get reservations
       1) airline tickets

2) hotel
3) rental car
4) buy new clothes

There shall be no line spaces between list entries.

5.3.6 Tables

Tables shall follow one of two formats illustrated in table 2 and table 3. All tables shall have a double-line outline and either a single-line or double-line separator between the column headings and the items listed in the columns (see *ISO Directive, Part3* for additional details on table requirements). These requirements also apply to other data format layouts (e.g., CDB's). Tables shall be referenced in the text.

5.3.6.1 Table numbering

Tables are number with arabic numerals beginning with 1. Tables are numbered sequentially through the document without regard to clause numbers or figure numbers up to any annexes. The table number and title shall appear directly above the table. Numbering of tables in annexes are preceded with the annex letter (e.g., Table A.1) and begin with number 1 in each annex.

5.3.6.2 Table outline

All tables shall be outline using double lines as shown in table 2. The separator between the table heading and table body will be determined by the separator used for the in the body. See 5.3.6.2.1 and 5.3.6.2.2.

5.3.6.2.1 Single-line separator table

Single-line separator tables are used to separate the headings from the items in the table when there are no lines used to separate the rows of items in the table. Table 2 is an example of a single-line separator table.

Table 2 — Single-line separator

Heading 1	Heading 2
Item1	Item 1description
Item 2	Item 2 description[a]
Item 3	Item 3 description
Item 4	Item 4 description[b]
NOTE 1 First table note about something NOTE 2 Second table note about something	
[a] Table footnote about Item 2 description [b] Table footnote about Item 4 description	

5.3.6.2.2 Double-line separator table

Double-line separator tables are used to separate the headings from the items in the table when there are lines used to separate the rows of items in the table. Table 3 is an example of a double-line separator table.

Table 3 — Double-line separator

Heading 1	Heading 2
Item 1	Item 1 description
Item 2	Item 2 description[a]
Item 3	Item 3 description
Item 4	Item 4 description[b]
NOTE 1 First table note about something NOTE 2 Second table note about something	
[a] Table footnote about Item 2 description [b] Table footnote about Item 4 description	

5.3.6.3 Tables positioning

Tables shall as far as possible be on a single page. Tables shall not float. If the table spans more than one page there shall be an indication of continuation in the table format. If the table continues on multiple pages the table notes and footnotes shall appear at the bottom of the table frame on each page.

5.3.6.4 Notes to tables

Notes to tables are only to give the user help in understanding or to give guidance to the material. No requirements (i.e., no 'shall') are allowed in the notes. Notes are preceded with the term 'NOTE' for a single note or 'NOTE 1', NOTE 2', etc. for multiple notes (see *ISO Directive, Part 3* for additional detail on notes to tables). All notes are contained within the table frame (see table 3). Notes precede footnotes to tables.

5.3.6.5 Footnotes to tables

Footnotes to tables may specify requirements. Footnotes to tables are contained within the table (see table 3) and are treated separately from footnotes to text. Footnotes to tables are specified with superscript lowercase letters (e.g., [a], [b]). Footnotes to tables follow any notes to the table if present and are contained within the table frame (see *ISO Directive, Part 3* for additional details on footnotes to tables).

5.3.7 Figures

5.3.7.1 Figures Usage

Figures are used to help explain information or give details to aid the user of the document (see *ISO Directives, Part 3* for additional detail on figures). Figures shall be referenced in the text.

5.3.7.2 Figure numbering

Figures are numbered with arabic numerals beginning with 1. Figures are numbered sequentially through the document without regard to clause numbers or table numbers up to any annexes. The figure number and title shall appear directly below the figure and if present any notes or footnotes. Numbering of figures in annexes is preceded by the annex letter (e.g., Figure B.3) and begin with the number 1 in each annex.

5.3.7.3 Notes to figures

Notes to figures are only to give the user help in understanding or to give guidance to the material. No require-ments (i.e., no 'shall') are allowed in the notes. Notes are preceded with the term 'NOTE' for a single note or 'NOTE

1', NOTE 2', etc. for multiple notes (see *ISO Directive, Part 3* for additional detail on notes to figures). All notes are listed directly below the figure and above the figure number and title. Notes precede footnotes to figures if present.

5.3.7.4 Footnotes to figures

Footnotes to figures may specify requirements. Footnotes to figures are treated separately from footnotes to text. Footnotes to figures are specified with superscript lowercase letters (e.g., ^{a}, ^{b}). Footnotes to figures follow any notes to the figure if present and are directly above the figure number and title (see clause 6.6.4.9 in *ISO Directive, Part 3* for additional details on footnotes to tables).

5.3.8 Notes, examples and Footnotes to text

5.3.8.1 ISO on notes, examples and footnotes

The *ISO Directives, Part 3* goes into great detail on the requirements of different types of notes, footnotes, and examples. There are references to the ISO docs in the clauses here that will just summarize the requirements for each type of note, example, and footnote. T10 numbering is different than ISO

5.3.8.2 Notes to text and examples

Notes to text and examples are only there to give the user help in understanding or to give guidance in use of the material. No requirements (i.e., no 'shall') allowed in notes to text or examples.

Notes are indented and preceded with the term 'NOTE' and follow the text that they apply to. Notes shall use a smaller font than the main text (i.e., main text 10pt font, notes 9pt font). If there is more than one note in the document they are numbered sequentially throughout the document including annexes if present.

Examples follow the same rules as notes for indenting and numbering and are preceded with the term 'EXAMPLE' (see *ISO Directives, Part 3* for additional details on notes and examples).

5.3.8.3 Footnotes to text

Footnotes to text only give additional information and do not specify requirements. Footnotes are always on the bottom of the page and separated from the other text by a thin line. They are numbered sequentially through the document with superscript arabic numbers followed by a parenthesis at the referenced location in the text (see *ISO Directives, Part 3* for additional details on footnotes).

5.3.9 Annexes

5.3.9.1 Annex usage

Annexes provide supplemental information that can be either normative or informative. Annexes appear in the order that they are referenced in the document (see *ISO Directive, Part 3* for additional details). All normative annexes shall precede informative annexes.

5.3.9.2 Normative annexes

Normative annexes are an integral part of the standard and include provisions required to comply with the standard (see 6.3.8 in *ISO Directive, Part 3* for additional details). Normative annexes are clearly labeled as such.

5.3.9.3 Informative annexes

Informative annexes provide information to assist the user in understanding or provide guidance in implementing the requirements of the standard (see *ISO Directive, Part 3* for additional details). Informative annexes are clearly labeled as such.

5.3.9.4 Annex numbering

Annexes are numbered as "Annex A", "Annex B", etc. followed with an indication of either "(normative)" or "(informative)" (see *ISO Directive, Part 3* for additional details). Tables and figures in annexes have the table or figure number preceded with the letter of the annex (e.g., Table A.1, Figure B.3).

6 Required Style Elements

6.1 Describing Requirements

When describing requirements the standard is placing on application clients, initiators, targets, logical units, etc. the editor shall use the following terms (see *ISO Directive, Part 3* for additional details):

   a)   shall - a keyword indicating a mandatory requirement.
   b)   should - a keyword indicating a flexibility of choice with a preferred alternative; equivalent to the phrase "it is recommended".
   c)   may - a keyword indicating a flexibility of choice with no implied preference.
   d)   may not - keywords indicating a flexibility of choice with no implied preference.

Avoid other terms, especially those that may be inconsistent or ambiguous (see 7.1).

6.2 Fonts

Pick one font (i.e., Arial or Helvetica) and stick with it. Symbol font may also be used if necessary. Mixing in other fonts makes PDF files larger and more complex. Also, an editor in the future may not have all the fonts you have chosen to use making maintenance difficult.

When using a mono space font (e.g., Courier for code examples), two spaces between sentences are OK. When using a proportional space font (e.g., Helvetica, Arial) do not add additional spaces between sentences.

6.3 Paragraph alignment

Full justification shall be enabled. Paragraph text shall be aligned on both left and right margins.

6.4 Number Representation

6.4.1 Decimal numbers

The decimal sign is a comma on the line between the whole and fractional numbers. Spaces are used to separate groups of three digits on either side of the decimal sign. A value less than 1 is written with a zero preceding the decimal sign (see *ISO Directives, Part 3* for additional details).

   EXAMPLES   0,034   10,345 567   12 345 567   12 345,567 987

When indicating years (e.g., 1998, 2001) it is not necessary to make a group of three digits.

6.4.2 Zero or '0'?

Generally single digit numbers (i.e., 0 - 9) used to indicate quantities (as opposed to numerical values of physical quantities) are shown in alpha characters (e.g., zero, three, nine). Values of ten or greater are shown as numeric characters (e.g., 13, 42, 77). If for clarity it makes sense to do something different, do it.

EXAMPLE 1 Carry out the test with five cables, each cable 6 m long.

EXAMPLE 2 Additional testing with 20 cables, each cable 12 m long...

To express physical quantities use numeric characters with the appropriate international symbol for the unit being measured.

EXAMPLE 3   Use a 3 m cable...

EXAMPLE 4,   Connector pins with 1,27 mm (0,05 in) spacing...

6.4.3 Binary numbers

Binary numbers are represented with a 'b' at the end of the value.

EXAMPLES   1011b   01b

6.4.4 Hexidecimal numbers

Hexidecimal numbers are represented with an 'h' at the end of the value.

EXAMPLES   34h   FE3Dh   FEDC BA98h

6.4.5 Number presentation

Numbers should be shown as the correct number of digits required for the field being described.

EXAMPLE 1   A three bit field is shown as 010b

EXAMPLE 2   A two byte field is shown as 30DFh

6.5 Usage of i.e. and e.g.

Use 'e.g.' in place of 'for example'. The format is: (e.g., item1, item2,...). There shall be no 'etc.' within the parentheses since 'for example' implies there are additional items that fit the category.

EXAMPLE 1   "Single digit numbers (e.g., one, three, five) are...".

Use 'i.e.' in place of 'that is'. The format is: (i.e., item1, item2,...).

EXAMPLE 2   "All single digit numbers (i.e., 0 - 9) are...".

6.6 Table and figure reference

All tables and figures in the document shall be referenced somewhere in the text, preferably somewhere near the table or figure being referenced. References to tables and figures shall be explicit.

   EXAMPLE 1   "Figure 3 is intended..." not "The above figure is intended...".

References to multiple tables or figures shall also be explicit.

   EXAMPLE 2   "Table 23, table 24, and table 26 show..." not "Tables 23, 24, and 26 show...".

6.7 Describing bit values

When describing the state of bits be explicit. The bit is set to one or set to zero.

   EXAMPLE 1   "When the EMDP bit is set to one the target..."

   EXAMPLE 2   "When the DQUE bit is set to zero the target..."

Using the term 'cleared' or 'reset' is prohibited when describing bit states.

6.8 Acronyms

Specify acronyms in the acronyms subclause with their definition. Be consistent in their use. For example don't switch back and forth between using 'Command Descriptor Block' and 'CDB' as you go through the document. Pick one and stick with it. Acronym use should be minimized.

6.9 Nouns and verbs

Make sure that nouns and verbs match for the number of objects, tense, etc. in your sentences.

   EXAMPLE   "These five bits are used..." not "These five bits is used..."

6.10 In the standard or not?

Often there are subjects (e.g., internal error recovery, operating system behavior) mentioned in the standard that are clearly beyond the scope the standard. When something is not within the scope of the standard, clearly state "outside the scope of this standard" for the referenced subject.

6.11 No requirements in "informative" annexes

There shall be no requirements in "informative" annexes. That is to say the word "shall" shall not appear in an "informative" annex.

6.12 This standard

When self reference is required within the document use the term "this standard" to avoid confusion.

6.13 Initiator or application client or ?

Use care when making reference to SCSI objects. Are your referring to the initiator or application client? Are you referring to the target or logical unit? Are you referring to the entire target or a target port? Are you referring to the logical unit or device server? Or are you referring to some other object? There are layers in the SCSI Model. So, application clients interact with device servers and initiators interact with targets, but application clients do not interact with targets. Make sure you are using the term you really mean. Check the latest version of SAM, SPC, etc. to be sure.

6.14 Already defined?

Many terms (e.g., hard reset, initiator) are already defined in other standards (e.g., SAM-*, SPC-*). When using terms already defined in other standards make sure your usage is the same. If you need a term to define something different, use a different term and put it in clause 3 of your standard. Be sure to check other standards first to ensure you are not treading on some other use of the term.

6.15 Capitalized?

Don't capitalize terms like initiator, target, logical unit, etc. unless they are the first word in a sentence.

Do capitalize terms like command names (e.g.,REQUEST SENSE) and status names (e.g., BUSY).

Small caps are used for bit and field names (e.g., EMPD). Underscores may also be used in bit or field names (e.g., WR_FLOW, QAS_REQ). When referencing the contents of a bit or field, use the bit or field name NOT in small caps. If the bit or field name has underscores then references to the values shall include underscores.

6.16 Other checks

Also refer to *ISO Directives, Part 3* for an additional check list concerning quantities and units of measure for international standards.

7 Things to watch out for

7.1 Words to Avoid

There are certain words that may cause confusion or add no value and should be avoided in standards. In table 4 are some of these and suggested replacement words.

Table 4 — Words to Avoid

Words to Avoid	Suggested Replacement
which	that
must	shall
could	may
execute	process or perform
disk, tape, etc.	SCSI device
reset	set to zero
will	shall
require	shall
can	may, or is able to

Avoid using non-quantitative words. If you cannot put a number on it, it is probably not right.

  EXAMPLE 1   most, nearly, some, etc.

Avoid the use of superfluous adjectives and adverbs. The underlined words in EXAMPLE 2 provide no useful information.

  EXAMPLE 2 shall <u>always</u>,   <u>exactly</u> 16 bytes,   <u>effective</u> progress,   <u>explicitly</u> contains

7.1.1 Guaranteed?

Using 'guaranteed' or its variants is almost always a mistake. Seldom is anything 'guaranteed' in a T10 standard.

7.1.2 Assume?

Using 'assume' or its variants is almost always a mistake. You know what it means.

7.2 Word usage

7.2.1 Affected or effected?

Use caution with 'affected' vs. 'effected'. Generally 'affect' is used as the verb of choice. 'Effect' is generally used as a noun. Make sure you know what you are trying to say.

7.2.2 Ensure or insure?

Use caution with 'ensure' vs. 'insure'. Almost always 'ensure' is correct and 'insure' is wrong. Make sure you know what you are trying to say.

7.2.3 Specify or indicate?

Generally initiators 'specify' parameter values to tragets and targets 'indicate' parameter values to initiators. That is initiators place requirement on targets and targets report conditions.

7.2.4 What's a 'MB'?

If you use the term 'MB' do you mean a value that is 10^6 or 2^20? The same applies to 'KB', 'GB', etc. Make sure you use the correct term for the value you mean. Refer to ISO/IEC 60027-2-am2 (1999-01) or http://physics.nist.gov/cuu/Units/binary.html for correct term usage.

7.2.5 It's or Its?

The term "it's" is a contraction for 'it is'. The term "its" is the possessive form of 'it'. What do you really want to say?

7.2.6 Note?

Avoid using 'note that...'. The term 'note' is only used for notes.

8 Did you cover everything?

8.1 Introduction

There are many things that are defined as command set dependent and protocol specific within SAM-*, SPC-*, and possibly other standards that you must specify or define in your standard. You may also be required to make proposals to make changes/additions to SAM-*, SPC-*, etc. There are of course many things in SAM-* that are generic to all command sets and protocols that you must consider. In this clause are listed some of the things that you need to consider. This is NOT an all inclusive list. Check all appropriate sources to ensure you cover everything.

8.2 Command set specific

You shall have at least the following clauses in your command set:

1) Clause 4 is the device model
    A) description of the device that the command set applies
    B) description of interaction of multiple commands in the command set
    C) description of conditions under which reservation conflicts occur; and
    D) anything else that is appropriate to your circumstances.
2) Clause 5 is the definition of the command set;
    A) a table listing all commands supported by the device model including those defined in other standards (coordinate with the latest SPC version);
    B) one sub clause per command defined by this standard;
3) Clause 6 parameter data for the device model
    A) diagnostic pages
    B) log pages

> C) mode pages
> D) VPD pages
d) Support for all mandatory commands and their features (there's lots of new ones);
e) Considering the environment for your device, which optional commands and features;
f) Mode pages that are unique to your device;
g) Mode parameters on existing mode pages that are device specific;
h) Log pages and parameters that are required for your command set;
i) Changes and/or additions to inquiry data (including VPD pages);
j) Changes and/or additions to sense data; and
k) any thing else appropriate to your device.

8.3 Protocol specific

Some of the things to consider for your new protocol may include:

a) Clause 4 general description or model for the protocol
b) Mode pages that are unique to your protocol (e.g., Port Control page);
c) Mode parameters on existing mode pages that are protocol specific (e.g., Protocol-Specific Port Control, Disconnect-Reconnect page);
d) Log pages and parameters that are required for your protocol;
e) Changes and/or addition to inquiry data (including VPD pages) must be defined in SPC-*;
f) Changes and/or addition to sense data must be defined in SPC-*;
g) How does your protocol support "SCSI Protocol Services in Support of Execute Command" (this includes many things, e.g.,sending TASK COMPLETE, Data-In Delivery Service);
h) How do you define the current task;
i) How do you do tagged tasks;
j) Do you support un-tagged tasks, if so how;
k) Does the protocol require detection of overlapped commands
l) How are task management functions implemented;
m) What is the result of reset events (e.g., Port Reset, Target Reset, Logical Unit Reset);
n) How are access identifiers defined;
o) Do you support AEN and if so how;
p) How do you handle autosense;
q) Anything else appropriate to your protocol.

Remember that these are NOT all inclusive lists. Things change on a fairly regular basis as new proposals are brought forward and approved by T10. Check everything that may put requirements on your work (e.g., SAM-*, SPC-*) or that you may need to have changed for your work to succeed. Look at existing works and ask others for assistance.

9 State Machines

State machines diagrams or figures are useful to show behavior required to meet the requirements of your standard, but, they need to use consistent terminology and phraseology. Document T10/02-479 found at www.t10.org is a guide that can be used to ensure your state machine descriptions follow a consistent format.

10 Document preparation

10.1 PDF files

10.1.1 General considerations

Compare the *.pdf file size with the source document. The *.pdf should be smaller than the source.

Run Acrobat 5's "Tools/PDF Consultant/Audit Space Usage" and watch for anomalies.

Run Acrobat 5's "File/Properties/Fonts.../List All Fonts" and check for unexpected fonts.

Check that bookmarks are present and that the links work correctly.

Check that TOC links work correctly.

Check that "see x.y" links work correctly.

Run Acrobat 5's "File/Document Properties/Summary" and ensure that the author and title are correct.

10.1.2 Compact PDF files with Acrobat 5

Open the *.pdf file and save with "Save As..." as this will sometimes save some space.

Select "Tools/PDF Consultant/Optimize Space", default check boxes are correct, check the following boxes:

    a)   Remove Bookmarks with invalid destinations
    b)   Remove Link annotations with invalid destinations
    c)   Change Unused Named Destinations/radio: Remove unused only
    d)   save PDF

10.1.3 Unused Name Destination

PDF files shall be optimized to not include unused named destinations (a problem in Frame 6). Use Frame 6 PDF Setup and turn off named destinations for every paragraph. Select Format/Document/PDF Setup... select Links table and uncheck Create Named Destinations for All Paragraphs. Or, run the file through Acrobat 5's "Optimize PDF" to fix the problem.

Framemaker may have problems keeping track of its PDF destinations and may delete too many. Check bookmarks, table of contents, and other embedded links (e.g., see x.y) to make sure they all work.

10.1.4 Check font usage with Acrobat 5

To check font usage open PDF file and select File/Document Properties/Fonts... click List All Fonts... button (otherwise it only lists fonts loaded so far - this forces it to scan the whole file). If you see both Arial and Helvetica variants in the Original fonts list, or any other fonts other than Arial/Helvetica and Symbol, you're wasting space. If there are extra "encoding" of any font, something is awry. In Word, you can search for specific fonts by clicking More... in the Find window. Unexpected fonts are often found in figures and in blank lines associated with unexpected styles.

10.1.5 Set PDF file properties in Framemaker 6

Open file and select Format/Document/PDF Setup... select Document Info tab fill in author and title. PDF properties show up in Acrobat Catalogs/Indexes, used for multi-file searches (the binoculars with magnifying glass icon in Acrobat 5).

10.1.6 Generate PDF bookmarks in Framemaker 6

Open file and select Format/Document/PDF Setup... select Bookmarks tab and check Generate PDF Bookmarks. Make sure all the appropriate paragraph types are in the "Include Paragraphs" box. Heading types should be in that box.

10.1.7 Generate PDF bookmarks in Word files with Acrobat 5

Select Acrobat/Change Conversion Settings... select Bookmarks tab and check Convert Word Headings to Bookmarks. Bookmark Destination Magnification should be Inherit Zoom if a document is open, Heading 1..9 should be check in the bottom box.

10.2 Page numbers

Make sure page numbers are on the outside of each page (odd page numbers on the right, even page numbers on the left). Make sure that your headers/footers are correct for each page (Frame and Word can have different formats for even/odd pages and might not be in sync).

10.3 Single Column format

The document shall be done in single column format throughout with full justification.

10.4 Embedded fonts

Fonts shall be embedded in the PDF files.

10.5 Bookmarks

Acrobat bookmarks shall be included, with clause numbers and titles to all levels except for the glossary.

Annex A
(Infomative)

A.1 Elements of this template

This annex describes the elements in the template for the working draft.

A.2 Paragraph formats

This file is a template for the body of a T10 standard. This paragraph is the basic paragraph format for T10 standards, called Paragraph.

Table A.1 shows the paragraph formats available from the paragraph catalog for this document.

Table A.1 — Paragraph Formats <Not Bold>(part 1 of 2)

Paragraph Name	Description
Head0 Head1 Head2 Head3 Head4 Head5 Gloss2	The are the clause and subclause header paragraphs for the standard's body. Head0 is used for a clause title. Head1, …2, …3, …4 and …5, are used to insert the x.1, x.1.1, x.1.1.1, x.1.1.1.1, and x.1.1.1.1.1 subclauses, respectively. Gloss2 is used for glossary entries.
Annex0 Annex0i Annex0t Annex1 Annex2 Annex3 Annex2g	The are the clause and subclause header paragraphs for an Annex. Annex0, …0i, and …0t are used for the annex title. Annex0t is used to add "(Normative)" on the second annex title line or Annex0i is used to add "(Informational)" on the second annex title line. Annex1, …2, and …3 are used to insert the A.1, A.1.1, and A.1.1.1 subclauses, respectively. Annex2g is used for glossary entries in an annex.
Paragraph ParagraphNoSpace	Paragraph is used for most body paragraphs ParagraphNoSpace is used when there should be no white space before or after the paragraph. Note: the paragraph formats that surround a paragraph also affect the white space before and after the paragraph.
UnOrderListReset UnOrderList0 UnOrderList1	These tags produce an a,b,c ordered list. The a) entry should use the UnOrderListReset paragraph. Subsequent list entries at the same level as a) use the UnOrderList0 paragraph. One additional level of indention and numbering can be obtained using the UnOrderList1 paragraph.
OrderedListReset OrderedList0 OrderedList1	These tags produce a 1,2,3 ordered list. The 1) entry should use the OrderedListReset paragraph. Subsequent list entries at the same level as 1) use the OrderList0 paragraph. One additional level of indention and numbering can be obtained using the OrderedList1 paragraph.
Note NoteColReset NoteCol	These paragraph formats are used for body notes. Note is a single note. If two or more notes appear one after the other, NoteColReset starts the group of notes with the word "Notes" and is followed by NoteCol paragraphs for each note.

Table A.1 — Paragraph Formats <Not Bold>(part 2 of 2)

Paragraph Name	Description
Table TableAnnex Figure FigureAnnex	These are the table and figure title paragraph formats for the standard's body and annexes.
TableFootnote	This paragraph is used for normative table notes (called table footnotes by ISO). Normative table notes must appear in the bottom most footing row in the table. Use Table > Add Rows or Columns (Add Row To Footing) to get footing rows. Do not put normative table notes in a row in the body of the table.
TableNote	This paragraph is used for non-normative table notes (called table notes by ISO). Non-normative table notes must appear in the second from the last footing row in the table (immediately before the table footnotes row containing normative table notes). Use Table > Add Rows or Columns (Add Row To Footing) to get footing rows. Do not put non-normative table notes in a row in the body of the table.
CellBody CellBodyLeft	CellBody is the FrameMaker standard cell body paragraph tag. CellBodyLeft is a left aligned version of CellBody.
CellHeading CellHeadingLeft	These are the two paragraph formats used for column headings in tables.
CDBFullByteAligned CDBMultiByteAligned	These paragraph formats are used to properly format field names in data structures with full byte and multi-byte values.
CDBbyte0 CDBbyteNumber	These paragraph tags may be used to automatically number the row bytes in a CDB table, provided that all CDB bytes are shown on separate rows.
PageHeader PageFooter	These are the paragraph formats for page headings and footings. They should be used only in the master pages.
EdNote	This is the Editor's Note paragraph format. You will want to edit the paragraph numbering to insert your initials

A.3 Character formats

Table A.2 shows the character formats available from the character catalog for this document.

Table A.2 — SCSI Character Formats

Name	Description
FieldName	Use this to put field names in small caps.
NotBold	Used by the Table Sheet variable (see A.4)
Superscript	Used by cross reference for table footnotes.

A.4 Variables

Table A.3 shows the FrameMaker standard variables modified by this document for use in SCSI drafts.

Table A.3 — FrameMaker Variables Modified For SCSI

Name	Description
Table Sheet	Append this to a table title when the table crosses a page boundary

Table A.4 shows the SCSI related variables defined in this document.

Table A.4 — SCSI Variables

Name	Description
DocANSInumber	ANSI number for the standard
DocISOnumber	ISO number for the standard
DocName	Name of standard (e.g., "SCSI Primary Commands -2 (SPC-2)"
DocProject	NCITS project number for standard
DocRevDate	Date of current revision
DocRevNumber	Number of current revision
DocStatusType	Either "Working Draft" (typical) or "dpANS" (after letter ballot)

A.5 Cross Reference Formats

Table A.5 shows the SCSI related variables defined in this document.

Table A.5 — SCSI Cross Reference Formats

Name	Text	Description
(see clause)	(see clause x)	Use for parenthetical references to clauses
(see dot-clause)	(see $x.y.z$)	Use for parenthetical references to subclauses
(see figure)	(see figure x)	Use for parenthetical references to figures
(see table)	(see table x)	Use for parenthetical references to tables
Annex	Annex x	Use for a start of sentence reference to an annex
annex	annex x	Use for a mid-sentence reference to an annex
Clause	Clause x	Use for a start of sentence reference to a clause or any reference to a subclause (avoid doing this)
clause	clause x	Use for a mid-sentence reference to a clause
dot-clause	$x.y.z$	Use for a mid-sentence reference to a subclause
Figure	Figure x	Use for a start of sentence reference to a figure
figure	figure x	Use for a mid-sentence reference to an figure
Table	Table x	Use for a start of sentence reference to a table
table	table x	Use for a mid-sentence reference to an table
tableFootnote	x	Use in tables for references to table footnotes

A.6 Table Formats

Table A.6 shows the SCSI related variables defined in this document.

Table A.6 — SCSI Table Formats

Name	Example	Description
CodeList	table A.1	Use for a table where there are lines between the rows
CodeList0Lines	this table	Use for a table where there are no lines between the rows
DataStructure	none	Use for a data structure such as a mode page or a CDB format
Figure	none	Use for a figure