



IEEE

Education, Mentoring, Support  
Installment Two  
10 November 2003

IEEE Standards Style Manual and Frame Maker Tutorial

# Presenters

- Howard Frazier, Vice-Chair, IEEE-SA Standards Board
- Jennifer Longman, Managing Editor, IEEE Standards Information and Industry Publishing
- David Law, Vice-Chair, 802.3
- David Cypher, Technical Editor, 802.15

# The IEEE Standards Style Manual

- What is it and why do I need it?
  - The style manual was developed to guide working groups in the preparation of proposed IEEE standards.
  - It answers many of the frequently asked questions about writing and preparing drafts.
  - It illustrates the preferred editorial style for the preparation of IEEE Standards.

# The IEEE Standards Style Manual

- It describes the optional and required contents of these drafts, and provides style instructions on submitting drafts for IEEE Standards Board approval and publication.
- Also includes information for preparing submissions to ISO, IEC, and ITU
- Following the guidelines in the style manual will help you write your standard more quickly and with greater confidence that you are doing it right.

# The IEEE Standards Style Manual

- Note that in some cases it is necessary and appropriate to alter style to accommodate special requirements. Standards developers should keep in mind that flexibility is allowed, and that IEEE Standards Project Editors are able to assist working groups in preparing drafts that will suit their particular requirements.

# The IEEE Standards Style Manual

- Submitting your draft in the proper format and style will allow your standard to be edited and published more quickly by IEEE editors
- Will help to allow your document to “sail through” approval by RevCom

# Where can I find the Style Manual?

- The direct link to the style manual is:  
<http://standards.ieee.org/guides/style/index.html>
- You can also find it at: <http://standards.ieee.org/> and click on the icon for Standards Development Online (bottom right-hand corner of home page).
- The style manual is no longer available in printed form.

# Editorial Checklist

- IEEE Standards Project Editors have a list of items they look for when reviewing your draft
- The following are items that need to be addressed before your draft is should be considered complete

# Labeling your draft properly

- **Labeling:** Is the draft properly labeled, in accordance with IEEE requirements, including designation, date, draft number, correct title, copyright year? (See the IEEE Standards Style Manual, subclauses 4.1, 4.1.1, 4.1.2)
- Using the Frame Maker will help ensure that your draft is labeled properly

# Introduction and Working Group Lists

- **Introduction:** Has an introduction been prepared, giving the history of the standard and a description of its purpose?
- Has a list of the working group members been included?

# Organizing the draft

- **Overall completeness and quality:** Is the draft complete and legible? Are all pages included, with figure and tables? All pages should be numbered.
- **Organization:** Is the draft properly structured, with clauses in order according to IEEE style requirements? (See Clause 10 in Style Manual.)
  - Clause 1: "Overview"
    - Subclause 1.1: "Scope" (Be sure not to exceed your Scope as detailed on the PAR!)
    - Subclause 1.2: "Purpose"
  - Clause 2: "References"
  - Clause 3: "Definitions"

# Organizing the draft

- Annexes need to be labeled as “Informative” or “Normative”
- Keep the Normative Annexes together and the Informative Annexes together
- Refrain from mixing in Informative clauses into the body of the standard

# Abstract and keywords

- Does the draft contain an Abstract and keywords? (See subclause 9.2 in Style Manual.)
- Inclusion of abstracts and keywords allows the documents to be referenced in a wide range of bibliographic environments, thereby increasing their utility, visibility, and availability to the public.
- Abstracts and keywords shall be included on the title page of each standard.
- Abstracts should be based on the Scope and Purpose of the standards as indicated on the PAR.
- Keywords should highlight key terms and phrases from the abstract.

# References

- **References:** Are the references handled appropriately? (See subclause 10.3 in the Style Manual.)
- References are normative documents that contain material that must be understood and used to implement the standard.
- The role and relationship of each referenced document shall be explained in the body of the standard.
- References are not numbered and appear alphabetically.
  - For example:  
ANSI Y32.9-1972, American National Standard Graphic Symbols....  
IEEE 1512-2000, IEEE Standard for.....

# References (continued)

- For the introductory sentence, you may choose one of the following two options:
- “This standard shall be used in conjunction with the following publications. When the following specifications are superseded by an approved revision, the revision shall apply.”
- “This standard shall be used in conjunction with the following publications.” (This one does not allow for superseded versions of the documents to apply.)

# References (continued)

- Documents that are mentioned for information or background and documents that served merely as references in preparing the standard are not normative and should be included in an Informative Bibliography Annex.

# References (continued)

- Are drafts or withdrawn standards included in your Reference section?
  - Referencing withdrawn standards is discouraged, but may be done. Working Groups are cautioned that withdrawn standards may contain obsolete or erroneous information and may be difficult to retrieve.)
  - Referencing unpublished drafts is discouraged unless they are dated, readily available, and retrievable. The Working Group must submit a copy of the cited draft to be placed in the IEEE SA's files.

# Bibliography

- Are the publications listed in the Bibliography being used appropriately and correctly cited? (See Clause 19 of Style Manual.)
- The Bibliography is always an Informative Annex that appears as either the first or last Annex.
- Bibliographic references are numbered (our References are not).
- Bibliographic entries shall be cited by number in text, figures, and tables where they are referenced.
  - For example: [B1], [B2], [B3], etc.

# Graphics

- **Graphics:** Is artwork clean, are fonts used consistently, and is it "camera ready"? (See Clause 16 in Style Manual.)
  - Working groups need to submit electronic files of artwork separately from the text in either TIFF, EPS, Word metafile, or Frame Maker formats.
  - Don't create figures larger than the width of our pages (8-1/2 x 11).
  - If you would like to use other formats than those listed above, please contact an IEEE Project Editor. (We will work with you.)

# Graphics (continued)

- File size is an issue for us and our customers. Color graphics cause file sizes to increase and we **STONGLY** urge working groups to use black and white graphics only.
- Printed copies of the standard will not contain color figures.
- You **shall** not use color in figures that is technically relevant to the standard. Doing so may cause problems at RevCom and will delay the publication of your standard.

# Permissions and Patents

- For Permissions see Clause 5 of the Style Manual
- For Patents see Clause 6 of the Style Manual

# Permissions and Copyrighted Material

- **Sources:** What are the sources of the tables and figures within this standard? (See Clause 5 of Style Manual.)
- If you are using figures and tables that have appeared in an earlier published source (other than an IEEE standard), the working group must identify the source and obtain written permission to use copyrighted materials.
- If it appears that any written material from another source is used, working groups must obtain written permission from the copyright owner of the source to use parts of published documents.

# Permissions and Copyrighted Material (continued)

- Working Groups are strongly encouraged to request permission from copyright owners as soon as the decision is made to include copyrighted material in the draft.
- Failure to obtain the necessary permissions may result in a disapproval by RevCom and will certainly delay the publication of your standard.
- It is overall preferred that copyrighted material be referenced rather than reprinted.

# Permissions and Copyrighted Material (continued)

- The following credit line shall be used in the event that specific language from the copyright holder is not available:
- <Indicate material> reprinted from <copyright owner, title of publication>, year of publication.
- This information goes in the Front Matter of the standard.

# Patents

- The IEEE Standards patent policy allows for the inclusion of patented technology if the Working Group believes there is a technical justification to do so.
- See Clause 6 of the IEEE-SA Standards Board Bylaws and subclause 6.3 of the IEEE-SA Standards Board Operations Manual for additional information.
- An appropriate notice statement will appear in any standard that contains known patented technology.
- A different notice appears in all standards that do not knowingly include patented technology at the time of approval of the standard.
- These notices are contained in subclause 6.3.1 of the IEEE-SA Standards Board Operations Manual.

# Definitions

- **Definitions:** Do the definitions appear to be properly constructed? (See subclause 10.4 in the Style Manual.)
- The following introductory sentence shall appear in the Definitions Clause:
  - For the purposes of this standard, the following terms and definitions apply. The *Authoritative Dictionary of IEEE Standards Terms*, Seventh Edition, should be referenced for terms not defined in this clause.

# Standards verbs

- **Standard verbs:** Are the verb choices (*shall, should, must, will, may, can*) appropriate for the type of standard (standard, recommended practice, or guide)? (See the Clause 13 in the Style Manual.)
- ***Shall*** is used to indicate mandatory requirements strictly to be followed in order to conform to the standard and from which no deviation is permitted.
- ***Shall*** = Is required to

# Standards verbs (continued)

- **Must** is deprecated and shall not be used when stating mandatory requirements
- **Must** is used only to describe unavoidable situations
- **Will** shall not be used when stating mandatory requirements
- **Will** is only used in statements of fact
- **Should** is used to indicate that among several possibilities one is recommended as particularly suitable
- **Should** = is recommended that

# Standards verbs (continued)

- **May** is used to indicate a course of action permissible within the limits of the standard
- **May** = permitted
- **Can** is used for statements of possibility and capability
- **Can** = is able to

# Metric Units

- Are metric units provided in compliance with the IEEE metric policy? (See subclause 14.2 of Style Manual.)
- The Standards Board strongly encourages the use of metric only units where possible.
- Standards should use metric units exclusively in the normative portions of the standard, however, parenthetical inch-pound units can also be used.
- This is a recent relaxation of the metric policy.

# Numbering of Figures and Tables

- Are figures and tables numbered properly? (See subclause 15.2 of Style Manual)
- Figures and tables shall be numbered consecutively and in the order of their reference in the text.
  - For example: Figure 1, Figure 2, Table 1, etc.
- It is also acceptable to label the figures and tables according to Clause number
  - For example: Figure 5-1 would indicate that it is the first figure in Clause 5; Figure 6-7 would indicate that it is the seventh figure in Clause 6.

# Numbering of Figures and Tables (continued)

- Figures and tables in Annexes shall be labeled with the identifying letter of the Annex
  - For example, Figure A.1 would indicate that it is the first figure in Annex A; Table B.4 would indicate that it is the fourth table in Annex B.
- Be sure that all Figures and Tables are cited within the text before they are shown.

# Footnotes and Notes

- Are the footnotes and notes used appropriately? (See Clause 18 in Style Manual.)
- Footnotes may be included in a standard for information, clarification, and aid in the use of the standard. They are **Informative**.
- Mandatory requirements shall not be included in footnotes, since footnotes are not officially part of the standard.

# Footnotes and Notes (continued)

- Footnotes in the body and annexes shall be numbered consecutively using Arabic numerals.
- Footnotes in tables and figures are **Normative** and shall be lettered.

# Footnotes and Notes (continued)

- Notes are explanatory statements used in text for emphasis or to offer informative suggestions about the technical content of the standard.
- A Note is not an official part of the approved standard and should follow that paragraph to which it belongs.
- Notes in text, tables, and figures are **Informative**.

# Warnings and Cautions

- Are “Warnings” or “Cautions” used within the draft? (See subclause 18.3.)
- Warnings call attention to the use of materials, processes, methods and procedures that have to be followed precisely to avoid injury or death.
- Cautions call attention to methods and procedures that have to be followed to avoid damage to equipment.
- Note that drafts containing the terms “Warning” will automatically require a legal review. These drafts should be submitted for an Editorial Review early in your process.

# Questions?

Jennifer Longman, Managing Editor, Standards  
Information and Industry Publishing

[j.longman@ieee.org](mailto:j.longman@ieee.org)

+ 1 732 562 6355

Yvette Ho Sang, Manager, Standards Publishing

[y.hosang@ieee.org](mailto:y.hosang@ieee.org)

+ 1 732 562 3814

**And now for something  
completely different.....**

**THE FRAME MAKER TUTORIAL**