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Institute of Electrical and Electronics Engineers (IEEE) Documentation Style

Introduction

The IEEE exists to promote advancement of theory and practice in the areas of electricity, electronics, communications, computer science, and related areas of engineering. The IEEE publishes several major scientific journals, and for those publications the organization designed its own documentation style and standards. This handout will introduce the basics of that documentation style. The entire IEEE Editorial Style Manual can be accessed online at: http://www.ieee.org/portal/cms_docs_iportals/iportals/publications/authors/transjnl/stylemanual.pdf. A printed copy of this manual is also on hand in the UMR Writing Center, Room 113 CSF, and tutors will be happy to assist you in its application.

In-Text Citations

The distinguishing feature of the IEEE documentation style is the use of reference numbers enclosed in square brackets to cite resources.

Basic Format:

Follow cited material with the appropriate reference number [1].

Example:

According to technical experts, IEEE is the most valuable style for aspiring engineers to learn [1].

Reference numbers are in sequential order as they appear in the text, and are listed in this order on the reference list.

Author's Name Substitution

The reference number may replace the author's name whenever appropriate.

Example:

According to [7], current Internet technology is still years behind industry projections...

The only major exception to the substitution rule is when citing a theory commonly attributed to one person.

Example:

Quantum mechanics is dependent on Einstein's theory of relativity...

In this case, do not substitute a reference number for "Einstein."

Citation Note Placement

Place note numbers directly after the reference rather than at the end of the entire sentence *unless* the reference also ends the sentence. Always place punctuation after the square brackets except for internal commas used to separate multiple references.

Examples:

One study [2] examined the mRNA levels of Jun C, Jun B, and Jun D in mouse tissues.

New technologies that can efficiently run autos on electricity are slow in development, one study suggested [5].

Multiple-Reference Citations

When more than one work is involved in the same citation, place all reference numbers within one set of brackets with commas separating them, but without spaces. If three or more citation numbers occur in sequential order, separate the range with a hyphen.

Examples:

Though unlikely, the same effects were reported by [2,7,12].

Motion or centrifugation can speed up the diagnosis of some viral infections [19-23].

Direct Quotation

If you reference a source word-for-word, you must enclose the section in quotation marks and indicate any changes you make in square brackets. If you quote more than three lines, indent the quoted material by 1/2". Provide the page number from which the quotation is drawn on the reference list item.

U.S. Government Documents

Basic Format:

[#] Legislative Body. Number of Congress, Session. (year, month day). *Number of bill or resolution, Title*. [Type of medium].

Available: site/path/file

Example:

[10] U.S. House. 102nd Congress, 1st Session. (1991, Jan. 11). *H. Con. Res. 1, Senso of the Congress on Approval of Military Action*. [Online]. Available: LEXIS Library: GENFED File: BILLS

Patents

Basic Format:

[#] Name of the invention, by inventor's name. (year, month day).

Patent Number [Type of medium]. Available: site/path/file

Example:

[4] Musical toothbrush with adjustable neck and mirror, by L. M. R. Brooks. (1992, May 19). *Patent D 326 189* [Online]. Available: NEXIS Library: LEXPAT File: DESIGN

- [2] M. Semilof. (1996 July 15). Driving commerce on the Web—Corporate Intranets and the Internet: Lines blur. *Communications Week* [Online]. 6(19). Available: <http://www.techweb.com/se/directlink.cgi?CWK19960715S0005>

Papers Presented at Conferences

Basic Format:

- [#] A. B. Author. Title. Presented at Conference title. [Type of medium]. Available: site/path/file

Example:

- [1] Process Software Corp., MA. Intranets: Internet technologies deployed behind the firewall for corporate productivity. Presented at INET'96 Annual Meeting [Online]. Available: <http://www.process.com/Intranets/wp2.htm>

Reports and Handbooks

Basic Format:

- [#] A. B. Author. (year, month). Title. Company. City, State or Country. [Type of medium]. Available: site/path/file

Examples:

- [3] S. L. Talleen. (1996, Aug.). The IntraNet Architecture: Managing information in the new paradigm. Amdahl Corp, CA. [Online]. Available: <http://www.amdahl.com/doc/products/bsg/intra/html>
- [4] Netscape Communications Corp. (1997, Dec.). The new way to share workgroup information. [Online]. Available: <http://home.netscape.com/comprod/a>

Examples:

“Effects at hours post-impact are statistically ambiguous” [18]. Previous studies did not address this issue, however, because [t]hey neglected any effects of liquid surface tension and viscosity, so that their results are applicable only to the initial stages of droplet impact, when these forces are negligible compared to their inertial effects [at the time of impact] [19].

Paraphrase

Most of the time it is impractical to quote sources directly, so you must put the information in your own words (known as a “paraphrase”). It is important to document every source you use, even when you reword the text. Failing to give credit to sources is plagiarism.

Example:

Single-shot flash photography yields better results than fast-motion movies [12].

Reference Page

The reference page should include all sources used in your research. The following guidelines describe how to set up the reference page.

General Formatting Information

The title, “References,” is placed flush with the left margin. Likewise, reference numbers are set flush with the left margin and form a column 2 or 3 spaces outside the body of the reference. Entries are numbered sequentially based on their appearance in the text. Each appendix will have its own reference list. When a source is cited more than once, it is given the initial reference number and not duplicated in the list of references. Entries are double-spaced within and between. First names of authors and editors are abbreviated to the initial only, and precede the last name. Use all names; *et al.* is only used if names are not given by the source document. Occasionally an organization or corporation will be given as the author. In these cases, begin the citation with the name of the organization. If the author is not known, begin the citation with the title, discounting articles (*the*, *an*, or *a*). Do not combine references; there must be only one reference per number. If there is a URL included with a print reference, it can be included at the end of the reference. If a single author produced two or more consecutively numbered references, the name is replaced by five (5) underscores and followed by a comma.

References

- [1] D. Jones, *Tech. Writing Style*, Toronto: Allyn and Bacon, 1998.
- [2] H. Inose, W. Friend, A. Smith and J.R. Pierce, *Information Technology and Civilization*, New York: Freeman, 1984.
- [3] A. B. See, "Great Discoveries," *J. Basic Eng.*, ser. C, vol. 28, pp. 10-12, Jan 2002.
- [4] _____, "More Great Discoveries," *J. Basic Eng.*, ser. C, vol. 28, pp. 13-15, Jan 2002.

Types of References

—Print Resources—

Periodicals

Basic Format:

- [#] A. B. Author, "Name of paper," *Abbrev. Title of Periodical*, vol. #, no.#, pp. ###-###, Abbrev. Month, year.

Example:

- [11] J. S. Turner, "New directions in communications," *IEEE J. Select. Areas Commun.*, vol. 13, pp. 11-23, Jan. 1995.

Example:

- [6] J. Jones. (1991, May 10). *Networks* (2nd ed.) [Online]. Available: <http://www.atm.com>

E-Mail

Basic Format:

- [#] A. B. Author. (year, month day). *Title* (edition) [Type of medium]. Available e-mail: Message:

Example:

- [3] S. H. Gold. (1995, Oct. 10). *Inter-Network Talk [online]*. Available e-mail: COMSERVE@RPIECS Message: Get NETWORK TALK

—Resources in Full Text Databases—

Journal Articles—These may be in locally available electronic formats or in online databases.

Basic Formats:

- [1] A. B. Author. (year, month). Title. *Journal* [Type of medium]. *volume(issue)*, paging if given. Available: site/path/file
- [2] A. B. Author. (year, month day). Title. *Journal* [Type of medium]. *volume(issue)*, paging if given. Available: <http://www>. (URL)

Examples:

- [1] J. Bourke. (1995, Mar.). A comparison of RF electrode models. *J. Phys.* [CD-ROM]. 32(4), RD2-RD3. Available: JPY File: Science Periodicals Ondisc Item: 95-76401

Standards

Basic Format:

[#] *Title of Standard*, Standard number, date.

Example:

[2] *Letter Symbols for Quantities*, ANSI Standard Y10.5-1968.

—On-Line Resources—

On-line resources are documented similar to printed resources, but the order of the citation elements differs, the type of medium needs to be given, and the URL or equivalent access information is essential. Note as well that the punctuation between elements is a period rather than a comma, and the citation does not end in a period.

Books, Monographs

Basic Format:

[#] A. B. Author. (year, month day). *Title* (edition) [Type of medium]. *volume(issue)*. Available: site/path/file

Example:

[1] S. Khutaina. (1995, Aug. 15). *EMBASE handbook* (3rd ed.) [Online]. 3(21). Available: Knowledge Index File: EMBASE Handbook (EMHB)

Web Sites

Basic Format:

[#] A. B. Author. (year, month day). *Title* (edition) [Type of medium]. Available: http://www.(URL)

Books

Basic Format:

[#] A. B. Author, "Title of chapter in the book," in *Title of His Published Book*, #th ed. City of Publication, Country if not USA: Abbrev. Of Publisher, year, ch. #, sec. #, pp. ###-###.

Example:

[3] G. O. Young, "Synthetic structure of industrial plastics," in *Plastics*, vol 3, *Polymers of Hexadromicon*, J. Peters, Ed., 2nd ed. New York: McGraw-Hill, 1964, pp. 15-64.

Reports—The general form for citing reports is to place the name of the organization after the author and title, with the report number and date at the end.

Basic Format:

[#] A. B. Author, "Title of report," Abbrev. Name of Org., City of org., Abbrev. State, Rept. ###, year.

Examples:

- [1] E. E. Reber, R. L. Michell, and C. J. Carter, "Oxygen absorption in the earth's atmosphere," Aerospace Corp., Los Angeles, CA, Tech. Rep. TR-0200 (4230-46)-3, Nov. 1988.
- [2] J. H. Davis and J. R. Cogdell, "Calibration program for the 16-foot antenna," Elect. Eng. Res. Lab., Univ. Texas, Austin, Tech. Memo. NGL-006-69-3, Nov. 15, 1987.

Handbooks

Basic Format:

[#] *Name of Manual/Handbook*, #ed., Abbrev. Name of Org., City of Org., Abbrev. State, year, pp. ###-###.

Example:

[1] *Transmission Systems for Communications*, 3rd ed., Western Electric Co., Winston-Salem, NC, 1985, pp. 44-60.

Published Conference Proceedings—The general form for citing conference proceedings is to list the author and title of the paper, followed by the name (and location, if given) of the conference *in italics* using the standard abbreviations listed in the Style Manual. If the year is given in the conference title, it may be omitted from the end of the reference.

Basic Format:

[#] A. B. Author, "Title of paper," in *Unabbreviated Name of Conference*, City of Conf., Abbrev. State (if given), year, pp. #-#.

Example:

[1] G. Faber, "Design of systems with priority reservation," in *IEEE International Conference on Communications*, 1995, pp. 3-8.

Papers Presented at Conferences

Basic Format:

[#] A. B. Author, "Title of paper," presented at *Unabbreviated Name of Conference*, City of Conf., Abbrev. State, year.

Example:

[2] J. G. Kreifeldt, "An analysis of surface-detected EMG as an amplitude-modulated noise," presented at the 1989 International Conference on Medicine and Biological Engineering, Chicago, IL.

Patents—Use the "issued date" if several dates are given.

Basic Format:

[#] A. B. Author, "Title of patent," U.S. Patent # ### ##, Abbrev. Month, day, year.

Example:

[1] J. P. Wilkinson, "Nonlinear resonant circuit devices," U.S. Patent 3 624 125, July 16, 1990.

Theses and Dissertations—The name of the state is omitted if the university includes the state name (Univ. California, Berkeley).

Basic Format:

[#] A. B. Author, "Title of Dissertation," Ph.D. dissertation, Abbrev. Dept., Abbrev. Univ., City of Univ., Abbrev. State, year.

Example:

[2] N. Kawasaki, "Parametric study of thermal and chemical non-equilibrium nozzle flow," M.S. thesis, Dept. Electron. Eng., Osaka Univ., Osaka, Japan, 1993.

Unpublished Sources—The two most common types of unpublished sources are personal communications and unpublished papers. Examples for both are given.

Basic Formats:

[#] A. B. Author, private communication, Abbrev. Month, year.

[#] A. B. Author, "Title of paper," unpublished.

Examples:

[1] A. Harrison, private communication, May 1995.

[2] B. Smith, "An approach to graphs of linear forms," unpublished.