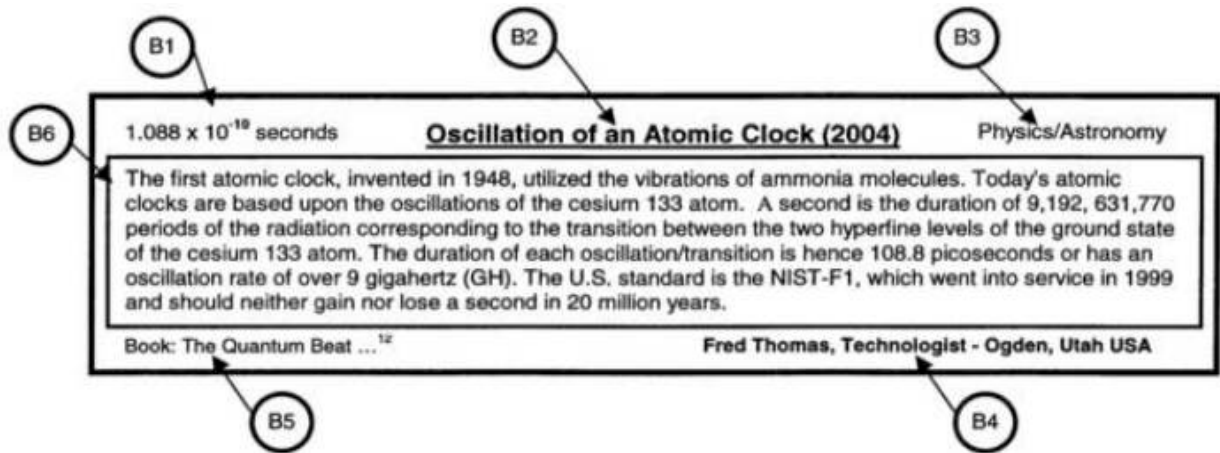


## Writing a “Perspective Block”



## “Perspective Block” Element Breakdown

**B1: Magnitude/Unit Entry.** This is the number (magnitude) with “appropriate units” which quantifies the subject of the “Perspective Block” (B6). It is a three (3) digit exponential number (base 10) with a decimal point after the first digit. The list of quantities and their “appropriate units” will continue to grow. At this point in time that list includes the following twenty (22) quantities:

| Quantity                               | Appropriate Units                                 | Quantity                                  | Appropriate Units                    |
|--|---|---|--------------------------------------|
| Distance                               | meters (m)  | Area – Areal Density of Data Storage      | meter <sup>2</sup>                   |
| Time – 1/Frequency and 1/Transfer Rate | seconds (s)                                       | Acceleration                              | meters/second <sup>2</sup>           |
| Mass                                   | kilograms (kg)                                    | Pressure – Stress - Modulus of elasticity | pascal (newtons/meter <sup>2</sup> ) |
| Electrical current                     | ampere (A)  | Energy - Work                             | joule (N•m) (J)                      |
| Temperature                            | kelvin degrees (k)                                | Digital capacity – Data compression       | bytes                                |
| Luminance                              | candela/meter <sup>2</sup> (cd/m <sup>2</sup> )   | Power                                     | watts                                |
| Density                                | kilograms/meter <sup>3</sup> (kg/m <sup>3</sup> ) | Speed - Velocity                          | meters/second (m/s)                  |
| Magnetic flux density                  | Gauss (Wb/m <sup>2</sup> )                        | Electrical potential                      | volts (watt/ampere) (V)              |
| Viscosity                              | pascal-second (Pa•s)                              | Electrical capacitance                    | farads (A•s/V) (F)                   |
| Jerk                                   | meters/second <sup>3</sup> (m/s <sup>3</sup> )    | Electrical inductance                     | henery (V•s/A) (H)                   |
| Thermal conductivity                   | watt/meter•kelvin (W/m•K)                         | Force                                     | newtons (kg•m/s <sup>2</sup> ) (N)   |

**B2: Block Title.** Subject of “Perspective Block.” Short and interesting, not more than 35 characters. If the entry is technology based and time sensitive, include the year of known validity for the block in the title. Example: Magnetic Hard Drive Data Rates (2004).

**B3: Field of Endeavor.** Field of science or technology that this “Perspective Block” entry is related to. Present list of fields includes:

- Physics/Astronomy
- Biology/Medicine
- Chemistry/Chem. Eng.
- Architecture/Civil Eng.
- Materials
- Mechanical/Mech. Eng.
- Humanities
- Information Tech.
- Geology/Geography
- Electro-Optics/Photonics
- Transportation
- Automation
- Tribology
- Animals/Zoology
- Data Storage
- Weather/Meteorology
- Nano Science/MEMS
- Aviation/Space
- IC & Electrical Arts
- Defense/Lethal Arts
- Other

Obviously there is some overlap, chose the best and most comfortable fit for your topic.

**B4: Contributor.** Name and affiliation of “Perspective Block” contributor. That is you. No greater than 55 characters. Some examples:

Joe Jackson, Mechanical Engineer, XYZ Corp.  
Bill Boggle, Noble Laureate – Physics, Boston MA, USA  
Yiping Yen, Prof. of Architecture, Peking Uni., China  
Amy Appleton, 8<sup>th</sup> Grade Student, Seattle WA, USA

**B5: Informal Reference.** The source of information provided in the “Perspective Block” (B6). In this filed a short summary reference is placed. This “informal reference” can be no longer than 26 characters. Some examples:

Scientific Amer. 10/1997  
XYZ Corp. Website  
Laser Focus World Mag.  
UofM Physics Dept. Website

These “informal references” are followed by a footnote, which directs the reader to the formal or standard academic reference for the source. It is critical you provide this information with your “Perspective Block” submission.

**Formal References** to published literature and electronic/web-based documents should also be provided for your “Perspective Block” entry. Private communications or unpublished reports should be treated as references also. Further information on how to write a “formal reference” is provided in this short PDF file.

**B6: Perspective Block Text.** This is the text of the block entry. There is no hard and fast rule here. Length is limited to about 100 -110 words. Make it interesting and provide some perspective relative to the quantity being described. Conversion into other sets of units for the quantity is encouraged, especially, if those units are more standard to the science or technology than that provide for in the “Unit Entry” field. Remember to put quotation marks around text taken directly from your Reference (B5).

**Guide to Providing a Formal Reference to Your “Perspective Block” Entry**

***Use the following formats for books or journal articles:***

*Books:* Author(s) (list first and middle initials, then last name), book title in italic, publisher, city, and year published. (When citing a paper chapter in a book, list the chapter title in quotes, and the book title in italic, plus the page numbers.) Example: J. A. Hall, "Imaging tubes," Chap. 13 in *The Infrared Handbook*, W. W. Wolfe, G. J. Zissis, Eds., pp. 132-176, ERIM, Ann Arbor, MI (1978).

*Journals:* Author(s) (list first and middle initials, then last name), paper title in quotes, journal name in italic (abbreviate only well-known journals), volume and issue numbers, inclusive page numbers, and year published. Example: N. Bluzer and A. S. Jensen, "Current readout of infrared detectors," *Opt. Eng.* 26(3), 241-248 (1987).

***Use the following formats for Electronic/Web based documents:***

Stand-alone document, no author identified, no date:  
*GVU's 8th WWW user survey.* (n.d.). Retrieved August 8, 2000, from <http://www.cc.gatech.edu/gvu/usersurveys/survey1997-10/>

If the author of a document is not identified, begin the reference with the title of the document.

Document available on university program or department Web site  
Chou, L., McClintock, R., Moretti, F., Nix, D. H. (1993). *Technology and education: New wine in new bottles: Choosing pasts and imagining educational futures.* Retrieved August 24, 2000, from Columbia University, Institute for Learning Technologies Web site:  
<http://www.ilt.columbia.edu/publications/papers/newwine1.html>

If a document is contained within a large and complex Web site (such as that for a university or a government agency), identify the host organization and the relevant program or department before giving the URL for the document itself. Precede the URL with a colon.

**Other Electronic Sources**

Electronic copy of a journal article, three to five authors, retrieved from database  
Borman, W. C., Hanson, M. A., Oppler, S. H., Pulakos, E. D., & White, L. A. (1993). Role of early supervisory experience in supervisor performance. *Journal of Applied Psychology*, 78, 443-449. Retrieved October 23, 2000, from PsycARTICLES database.

When referencing material obtained by searching an aggregated database, follow the format appropriate to the work retrieved and add a retrieval statement that gives the date of retrieval and the proper name of the database.

**Handwritten “Perspective Block” Note Form**

Magnitude/Unit entry: \_\_\_\_\_ x 10<sup>\_\_\_\_\_</sup> \_\_\_\_\_ (list)

Block Title: \_\_\_\_\_

Field of Endeavor (list): \_\_\_\_\_

Contributor: \_\_\_\_\_

“Perspective Block” Text:

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Informal Reference: \_\_\_\_\_

Formal Reference:

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