



# THE CONSULTANT

The Newsletter of the IEEE Consultants Network of Long Island

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## Chairman's Corner

—Murray Kleiner, Chairman

At our September meeting, Andrew S. Haimes, P.E., will be speaking on *Engineering and the Law*. There has been a change of plans, however, for our October meeting. Instead of a guest speaker, we are going to have an exchange of ideas. The theme will be *Tips & Tricks* as they apply to using technology in our businesses. This may include how to maintain our computer systems and how to use the internet in our businesses. Peter Buitenkant will be the moderator. We can discuss anything you want. If there are any special issues that interest or concern you, email them to me and/or Peter, and we'll make sure that they get addressed.

In our August 1997 newsletter, I provided some rules and recommendations on how to write units in a technical paper. A number of people found it quite useful. I think that sufficient time has gone by that it is permissible to reprint it.

### Writing Units

Metric units are known as *SI units* where *SI* is an abbreviation for the French *Système International*. Periodically, decisions made by several international committees regarding *SI units* are published by the International Bureau of Weights and Measures. Here are a few rules to follow when you have to use *SI units*.

1. Use Roman type when writing units. Do not use italics. (Note: I violate this rule in the following text for illustrative purposes.)

2. Use lower case letters when spelling out units—even if it's a proper name (e.g., ohm, volt, hertz, decibel, meter). When used in the beginning of a sentence, treat the unit as any other word.
3. For values greater than 1, add an *s* when spelling out a unit (e.g., 5 ohms, 3 volts, 10 meters).
4. Use the singular for values less than 1 (e.g., 0.5 meter, not 0.5 meters).
5. When using an abbreviation, capitalize the unit only when it is named after a person (e.g., dB, Hz, V, m, etc.). Do not add a period to an abbreviation or add an *s* to make it plural.
6. Use lower case when spelling out metric prefixes (e.g., micro, kilo, mega, giga).
7. When abbreviating metric prefixes, capitalize units representing values greater than 1000 (e.g., M, G, T). Always use the lower case *k* when abbreviating *kilo* (e.g., km).
8. You may use the lower case *l* or upper case *L* for liter. In the United States, the upper case is preferred.
9. Avoid compound units such as *decimillimeters* or *millimicrons*.
10. Insert a space between a value and the unit or its abbreviation. Hyphens may be inserted in the space (e.g., 2.5-km), but there is such a thing as overusing hyphens, and you are probably better off avoiding them.
11. Do not use parenthesis when using powers of units (e.g., MHz<sup>-1</sup>, m<sup>3</sup>, not (MHz)<sup>-1</sup>, (m)<sup>3</sup>).
12. Do not mix full spelling and abbreviations (1 W/m<sup>2</sup>, not 1 watt/m<sup>2</sup>).
13. Current *SI units* include: *s*, not *sec*; *g*, not *gm*; *micrometers*, not *microns*; and *K*, not °K. Do not,

## Chairman's Corner Continued -

however, omit the degree sign with degrees Celsius (e.g., 100°C, not 100 C nor 100 °C).

14. Avoid overuse of slashes when writing units. 1 J/cm<sup>2</sup>/s should be rewritten as 1 J/(cm<sup>2</sup> s) or 1 J cm<sup>-2</sup> s<sup>-1</sup>.
15. Use the centered dot (preferred in the U.S.) when multiplying abbreviated units (e.g., 5 N•m). When spelling out the units, however, use a space or a hyphen (e.g., 5 newton meters or 5 newton-meters). Internationally, 5 N.m and 5 N m are also acceptable.

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## Long Island Consultants' Network - Meeting Schedule:

### Time and Place

Tuesday, October 11, 2005 – 7:00 PM – The IEEE Consultants Network of Long Island will host a lecture "Running Your Business, Tips & Tricks", a discussion group lecture moderated by Mr. Peter Buitenkant, Consultant, of Dix Hills, NY.

#### Meeting Place:

Briarcliffe College, 1055 Stewart Avenue, Bethpage, N.Y.

Admission is free (no charge) and no pre-registration is required. For information, contact John Dunn at (516) 378-2149.

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## Editor's Note

--Andrew Franklin Baxt, BEE

Well after several years of being the editor the monthly IEEE Long Island Consultants Network Newsletter I have blown the deadline by almost a month... Sorry about that... But if it's any consolation this month I got married, my contract with L3 communications has ended and, I have moved to Boca Raton Florida. I guess there is a lot of new and exciting things happening in my life, that's the reason, that this month I have decided to handover the position as editor to someone else. Our Chairman Murray was able to find a volunteer to take over. Dick LaRosa has volunteered to take over as the new editor. Also, I would like to wish all of our Jewish engineers a happy and healthy Jewish New Year. Finally, I would like to say that I have enjoyed being the editor and I look forward to many more years of associating the IEEE Long Island Consultants Network.

Best Regards –Andy Baxt

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### Deadlines

Articles for publication in **THE CONSULTANT** must be submitted by the 7th of the month prior to publication.

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