



Lisa Lazareck

online visibility: EMBS gets e-savvy

I came across an e-newsletter from the British Museum last week advertising free delivery when you spend more than £100 on British Museum sculptures and replicas. Inasmuch as my small flat in London could use a bust replica of an Egyptian noble woman or a Rosetta Stone coffee mug, it was the ending of the newsletter that caught my eye in particular. To help others find this newsletter, the British Museum has conveniently provided links to ten networking Web sites (some of which I have never heard of): Digg It!, Del.icio.us, Newsvine, Reddit, StumbleUpon, Facebook, Google, Twitter, Myspace, LinkedIn. The British Museum is e-savvy. I started to think about the IEEE and the IEEE Engineering in Medicine and Biology Society

(EMBS), and I thought I would share some of our own proud e-achievements and current endeavors that we have come a long way over the past several years.

First, the EMBS is now on Facebook, where users can connect with bioengineering colleagues from across the world (join the IEEE EMBS Student Group). This group has been especially helpful for arranging student-shared accommodation for the IEEE Engineering in Medicine and Biology Conference (EMBC) 2009. The EMBS Graduates of the Last Decade (GOLD) Web site has been developed and is now live: <http://www.gold.embs.org>; a site completely dedicated to the young professionals of EMBS. The IEEE GOLD conveys its quarterly newsletter entitled *GOLDRush*

for young professionals via e-mail, Web site (<http://www.ieee.org/gold>), Facebook (join GOLDRush group), and Twitter (IEEEGOLDRush). Also, free GOLD-sponsored Web seminars (also known as Webinars) are produced and executed throughout the year. For example, members enjoyed the EMBS-related *Innovation for Developing Countries* in August 2009, describing sustainable technology deployment in emerging regions. The Webinar was recorded and uploaded for future use (<http://www.ieee.org/gold>, see "Events"). The IEEE is currently encouraging its leaders (and council/Society webmasters) to contribute to Wikipedia articles because of its high visibility on the Internet. For councils/societies that did not



Fig. 1. EMBS Student Chapters as of 28 May 2009 (courtesy of Google Maps and the EMBS Executive Office).

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Fig. 2. EMBS Student Clubs as of 28 May 2009 (courtesy of Google Maps and the EMBS Executive Office).

have a Wikipedia presence, TAD staffs have published short and factual articles. (TAD refers to the Technical Activities staff members of the IEEE, who assist volunteers in carrying out the activities of councils and societies.)

Networking Web sites aside, the EMBS provides access to its publications online. For example, EMBS student members receive full online access to EMBS publications through *IEEE Xplore*, including *IEEE Transactions on Biomedical Engineering*, *IEEE Transactions on Medical Imaging*, *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, *IEEE Transactions on Information Technology in Biomedicine*, and the newly created *IEEE Transactions on NanoBioscience*. Next, in collaboration with IEEE.tv, the EMBS has filmed five new videos readily available online for viewing by members. *Engineering in*

Medicine and Biology: Value for Membership is a three-part video series focusing on the value proposition of EMBS as well as the scope of emerging technologies and career opportunities in the field. *The Biotransmitters—Making Science Fun* is a showcase of a team of graduate and undergraduate students from California Lutheran University (Buena Vista Student Chapter) as they visit and introduce middle-school children to the profession of biomedical engineering through lecture, skits, and hands-on experiments. *Emerging Field of Biomedical Engineering* is a new video that provides an overview of career possibilities in biomedical engineering. Lastly, members can now submit their Chapter/club activity funding requests online. The activity funds (which are on an as-available basis) are a resource for EMBS Chapters, Student Branch

Chapters, and Student Clubs. Specifically, your Chapter/club may wish to apply for funding for events such as guest speakers, career fairs, or industry tours. The EMBS provides up to US\$500 for clubs and US\$1,000 for Chapters; however, this is matching the funding. Your club or Chapter must raise seed money, and EMBS provides additional support using a 2:1 matching ratio. For example, if your club raises US\$100, then you may apply for up to US\$200 from the EMBS.

Presently, similar to the IEEE's encouragement of developing Wikipedia entries, the EMBS is working on its own online visibility. For example, forming and renewing a Student Chapter/club is beautifully described on the student Web site and is an online process. However, once established, these Chapters/clubs need to be more e-visible.

Members from around the world should be able to search for EMBS Chapters/clubs closest to them and immediately find the closest group of like-minded people. The EMBS will be encouraging each established Chapter/club to update their Web sites to include such basic details as executive contacts, meeting times/dates/places, meeting minutes, and activities (such as membership promotion, education, professional development, community service, social activities, communication, future plan-

ning, etc.). Furthermore, the EMBS will help those Chapters/clubs that do not already have a Web site, providing them with a template from which they can insert their own information and update/upgrade accordingly. Also, on a continual basis, the EMBS will utilize Google mapping (<http://maps.google.com/maps>) to pinpoint EMBS Student Chapters/Clubs around the world (see Figures 1 and 2) so that our members can visually find their nearest EMBS group and contact information. Like the

British Museum, *a museum of the world, for the world*, the EMBS is a *Society of the members, for the members*. Stay tuned for more, great, e-savvy endeavors from the EMBS, always working in the present toward a better future for our membership.

Lisa Lazareck has completed her doctorate of philosophy in electrical engineering in the Engineering Science Department, University of Oxford. She is currently living in London.

From the Editor *(continued from page 3)*

I encounter this shortcut again, and I suspect that others experience this problem as well.

So what can be done about this? Of course, the simple solution would be to just improve my memory; but unfortunately, in my case, things are going in the opposite direction. Another simple solution might be to use only those abbreviations that everybody knows. There are many of these in biomedical engineering such as EKG or ECG (it would be nice if we could all agree as to which one to use) to represent the electrocardiogram; BP to represent blood pressure (but, clinical staff will often use this as an abbreviation for bed pan!); IR and UV for infrared and ultraviolet radiation; FET for field effect

transistor; MRI for magnetic resonance imaging; and so on. Yet, I find many abbreviations that are not commonly understood but are used just to shorten an extended phrase that is frequently included in the writing, such as PVV for peak voltage value; CD for cell death; or CO for cardiac oscillations. It's these latter contractions and other similar convenient word and phrase truncations that give me trouble.

Perhaps a practical approach would be to have authors and investigators include a table of abbreviations with their manuscripts or proposals. Yes, this might take up more space than just discarding the abbreviation altogether and using the full word or phrase, but it would make life a lot easier for the reader or reviewer.

Another approach might be just to agree on a set of standard abbreviations for biomedical engineering and only use them, but this will involve committees, meetings, and controversy. One wonders if it would be worth the effort.

So I expect that the bottom line is: let's do none of these. Instead, let us as authors and principal investigators be aware of the problems that readers might encounter upon reviewing and assessing our writing and try to avoid or, at least, carefully and perhaps repeatedly, define non-routine abbreviations. Not only will this make the document much easier to read and understand, but it will hopefully help to keep the readers' frustration and anger levels at a minimum and avoid these feelings from influencing the review.

President's Message *(continued from page 4)*

better serve our members, both in academia and industry, how to better represent the biomedical engineering community, and how to further improve

the quality of our publications and conferences. We need concerted efforts to tackle these challenges to further enhance the quality of our products and

service to the membership and the profession. I welcome any thoughts you have and can be reached at binhe@umn.edu. Thanks again for a great year.