



Free the Engineering!

Late last year, I accepted the invitation to become co-editor of *Interface* safe in the knowledge that I would not actually be called upon to *do* anything for the foreseeable future.* Thanks to the outstanding ECS staff and conscientious guest editors and authors, this happy state of affairs has persisted until now. But just as “*even the weariest river winds somewhere safe to sea*,” so it is that the inevitable passage of time has brought upon a situation wherein actual effort is required on my part, viz. this editorial. The increasingly plaintive entreaties from

our admirably patient Director of Publications seeking the contents of this column can no longer, in good conscience, be ignored or fobbed off with feeble excuses.

In the perspicacious words of the Canadian humorist (and economist) Stephen Leacock, “*The writing of solid, instructive stuff fortified by facts and figures is easy enough. ... But to write something out of one’s own mind, worth reading for its own sake, is an arduous contrivance only to be achieved in fortunate moments, few and far between.*” I cannot help but agree. Seldom have these fortunate moments seemed fewer and farther apart than over the past few days. Given my particularly modest ability – and I use the word “ability” very loosely and in the broadest possible sense – when it comes to prose, the best I can hope for is that the ensuing literary lapse (to stay on the Leacockian theme) is not particularly egregious. The brave reader, suitably forewarned, may now read on!

ECS has initiated a remarkable and bold effort to *Free the Science*[™] by announcing a move toward full open access (OA) publishing. This is an excellent direction to take, and ECS is clearly poised to be a leader in OA publishing in the years to come. However, one must also consider the parallel scenario in industry, wherein current practices preclude the dissemination of information relevant to the practice of the profession. Indeed, there are parallels between the firewalls/practices in place in the non-OA publishing sector and the manufacturing sector. Dennie Mah (a.k.a. Dr. Electro) has written an insightful guest editorial for this issue wherein he bemoans certain unfortunate trends that have held back the field of electrochemical manufacturing. The most important amongst these is what he terms the “reinventing the wheel” syndrome, wherein the same mistakes are repeated by different manufacturers who remain blissfully ignorant of past failures, which invariably remain unpublished.

We must therefore also ask what can we, as a Society, do to “free the engineering” without violating the basic tenets of preserving intellectual property. It is certainly reasonable that an organization that has invested time and effort to develop a technology should reap the benefits of its endeavors. In doing so, it’s inevitable that relevant information is patented and/or kept confidential. However, the path to successfully implementing a technology is often paved with failures. And, as Dennie points out, it is most unfortunate that these failures largely remain behind the firewall. ECS can perhaps play an important role in alleviating this issue by providing a platform for a summit or forum wherein details relevant to selected past (failed or defunct) approaches/processes are collated and presented, taking care to ensure that no organization loses its competitive advantage within a given sector. The lessons to be learned from these case studies can surely benefit both experienced and fledgling organizations operating in other sectors and minimize the costs arising from “reinventing the wheel.” I do not mean to trivialize the enormity of this undertaking. But I do believe that even a small beginning (as we have made with OA publishing) would be a positive step and one that would have a large impact in the future. Your comments and suggestions in this regard would be most welcome!

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Interface Co-Editor



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*This is frequently the basis on which such assignments are cheerfully accepted. H. C. Van Ness, in his 1988 Conoco-Phillips lecture, nicely illustrates the thought process behind accepting such invitations, albeit in the context of choosing a title for an invited lecture. The lecture is archived on the website of the chemical engineering department at Oklahoma State University, the host of this lecture series (<https://cheng.okstate.edu/content/1981-1990>).