

Cutbacks for students

As students who enjoyed receiving *Engineering Dimensions* on a regular basis, we were disappointed by the decision to eliminate the monthly mail-out from the list of services provided by the student membership program. Furthermore, the decision to now send membership cards to the individual's engineering student society office rather than directly to the individual has made the process increasingly frustrating.

In the March/April 2004 issue's "In Council" it was noted that PEO Councillor Seimer Tsang, P.Eng., also expressed concern over the same cutbacks. In a meeting we attended last year with several members of PEO staff on behalf of the Engineering Student Societies' Council of Ontario (ESSCO) Executive Members, great emphasis was placed on Professor Tsang's efforts and activities with the SMP—it was clear that he was highly respected within PEO's ranks. Why then, if PEO's own Councillors recognize the problem, is this cutback still being pushed forward?

What underlined our consternation was the "President's Message" (March/April 2004, p. 3) where President McMartin claimed that "PEO has raised its presence in universities, vigorously promoting its Student Membership and Engineering Intern Training programs...." Perhaps President McMartin is referring to the 15 presentations made at universities earlier this year.

This strategy of attempting to increase the presence in universities while decreasing the presence with students themselves is counter-productive. Although the presentations to students are a good idea, providing them at the expense of other services, which are more visible and regular, makes little sense.

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Global competition

The arguments presented by Bruno di Stefano, P.Eng. ("Exclusive Scope of Practice in Non-Traditional Disciplines,"

March/April 2004, pp. 50-51, 58) are well-reasoned, but we act as if the world around us is the same as it was half a century ago. Whether we like it or not, the move is towards globalization. Thus, simply amending existing legislation from the 1930s is not likely to provide any real solution. Unless we develop completely new patterns of thinking, we will probably not have much of a future. Let me just quote a statement I found in the recent *VDI nachrichten*, the German engineering weekly. The CEO Heinrich von Pierer of Siemens (certainly an international giant), was quoted: "Why should I employ a German engineer if, for the same amount of money, I can have six Chinese engineers?" And before we start again about our advanced knowledge, does Canada have the capability to launch a satellite?

Our competition is not locally. It is global. Unless we forget about our myopic world view and start thinking in totally new dimensions (just as non-traditional fields develop) we will probably wind up in Drumheller one day (and join our ancestors in the dinosaur museum).

Let me also quote from a non-engineering related article: "Significant change is rarely brought about by those who are at the centre of power in an organization, including church and state. Organizations are better dealing with yesterday's problems. And as ideas diminish, the rulebook fattens and procedures imprison.... The need for change is usually accepted only as a painful response to outside forces that have led to a crisis. These forces may be as diverse as a serious decline in participation and financial support...." (Sivern, T. "The Spur of Crisis & the Pain of Change," *Presbyterian Record*, December 2001, p. 29.)

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Uphold the culture

In reality, the quality of engineering in Ontario is not directly controlled by PEO—engineering excellence is a result of the established engineering culture, which includes the various industry infrastructures.

Giving individuals access to the profession, be they offshore or immigrants, without sufficient knowledge or understanding of the Canadian engineering culture will, over time, change that culture. PEO's responsibility is therefore to uphold the culture of the profession. It is not to respond to the needs of individuals or any particular demographic.

To this end, PEO should compare the licensing requirements with their sister profession, the Ontario Association of Architects, to see what credentials they deem are necessary to become a professional. OAA requires, in addition to a bachelor's degree in architecture, a structured internship comprising a minimum of 5600 hours (three years) of very specific Canadian experience and the successful completion of nine post-graduate examinations. To become an architect in Ontario takes total commitment as the fees for the examinations, the internship and the application are many thousands of dollars! When one makes a comparison to OAA's stringent requirements along with the burgeoning number of professional incompetence and misconduct decisions by the Discipline Committee of PEO (five hearings and one stipulated order in 2001, up to 18 hearings expected for 2004) it can be seen that it is already far too easy to become a licensed engineer in Ontario—so easy, in fact, that recent graduates in many disciplines are questioning the relevance of the licence.

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PEO protectionism

Michael Mastromatteo's article discusses the challenges PEO has in regulating projects outsourced to other countries. It does not discuss another side—the problems out-of-province and international manufacturers have in getting their mass-produced products that they ship worldwide into the Ontario market. My industry—pressure vessel manufacturing—has recently been affected by PEO and its actions on engineering outsourcing.

Pressure vessels used in Ontario are designed and built to internationally recognized ASME standards. They are subject

to Ontario Regulation 220/01–Boilers and Pressure Vessels that states, “The design for a boiler or pressure vessel shall bear the signature and seal of a professional engineer who is experienced in the design of boilers, pressure vessels, piping or fittings.” Gordon Sterling, P.Eng., then President of PEO, wrote a letter in April 2001 to the Technical Standards and Safety Authority (TSSA), stating: “While we acknowledge that many professional engineers outside of Ontario may have the appropriate skills to design boilers and pressure vessels, they are still required to be licensed by PEO to ensure that they are accountable to the people of Ontario through the *Professional Engineers Act*.”

TSSA, who regulates pressure vessels, from the simple mass-produced air receiver found in a home garage, to the giant custom industrial vessels, now only registers new or modified pressure vessel designs sealed by an Ontario engi-

neer’s stamp. Prior to 2001, engineers licensed in other provinces or countries could get their designs registered for use in Ontario.

Although Ontario is the only place in North America to have such a requirement, this would not stop others doing the same. In the worst nightmare scenario, all the other states/provinces would create legislation to allow them to do what we have done: a vessel design would require about 60 engineers’ stamps to gain access to the North American market. Although I cannot imagine this happening, others would only be doing what we have done first.

When we look at outsourcing, we must get past the not-engineered-in-Ontario mentality, and accept that other engineers in the world are capable of doing engineering work with the safety of the public at heart.

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Correction

Our March/April article “Alberta case thrown out: debate continues on software titles” (pp. 15-17) reports the Canadian Information Processing Society (CIPS) Committee on Software Engineering Issues aims to ensure only licence holders can use a title that commonly contains the word engineer. In fact the CIPS’ Committee aims to defend qualified but non-licensed Canadian practitioners, both in their use of titles with “engineer” embedded, and in their practice of software engineering. We regret the error.

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