



APEGN gets tough on “software engineering” title

by Karen Hawthorne

Months of fierce debate over the label “software engineering” used for a computer science program at the Memorial University of Newfoundland came to a head in late February, when the association that licenses the province’s engineers withdrew its consent for accreditation of the university’s engineering programs.

Effective June 30, 1999, APEGN has withdrawn its consent for accreditation evaluations to be completed by the Canadian Engineering Accreditation Board on the four undergraduate engineering programs offered by the university. Graduates of these programs after that date will no longer be automatically considered to have fulfilled the academic requirements for licensing as a professional engineer, and could be asked to write the examinations written by graduates of non-accredited programs.

Despite repeated attempts to resolve this dispute amicably, the university’s administration refused all requests to change the name “software engineering,” says Gerry Suek, P.Eng., president of the Association of Professional Engineers and Geoscientists of Newfoundland (APEGN). “There was no other course of action open to us in the face of the university’s unwillingness to respond to our legitimate concerns.”

The university is calling the move a “pressure tactic” that sacrifices its 700 engineering students as “pawns” in a two-year legal battle over the “software engineering” title. APEGN and the Canadian Council of Professional Engineers (CCPE) have jointly sued Memorial for infringing on CCPE’s trademark on

“engineering,” despite the university’s assurances that students and the public are aware that the program is not engineering. The case is before the federal court and is expected to be heard later this year.

“The quality of instruction and research, and the quality of our students are beyond question,” says Arthur May, Memorial’s president. The university’s engineering programs are among the best in Canada and there has never been a problem with evaluations or accreditation, he says.

“We’ve been given no reason for this action,” he adds. “But it appears that it is connected to the software engineering issue, and it appears that the professional engineers’ associations are willing to put these programs at risk because of this unrelated dispute, which is before the courts.”

The university uses the controversial name to describe an honours program offered through its faculty of computer science. Because the curriculum does not meet the criteria for accreditation as an engineering program, graduates will not have the qualifications to obtain a licence to practise engineering, APEGN says. If graduates call themselves software engineers in the marketplace, they will be violating Newfoundland’s engineering act. PEO has voiced similar concerns over several misnamed Ontario software programs (see *Engineering Dimensions*, Jan/Feb 1999, pp. 4-5).

The Memorial program was introduced in September 1997 over objections by APEGN and CCPE. APEGN is not asking the university to change the curriculum or course content of its software program, only its name.

“We’re simply asking that, for the protection and benefit of the public, the students and the integrity of the profession

of engineering, the university change the name of the program,” says Allen Steeves, P.Eng., APEGN’s executive director, calling the name “misleading.” “The program name should not include the word ‘engineering,’ when it is not, in fact, an engineering program.”

The meaning of the word “engineering” is “having some level of skill,” argues Paul Gillard, head of Memorial’s computer science department. Gillard says the public is “intelligent enough” to recognize the term as a “qualifier” for the advanced software skills of the university’s computer science graduates who specialize in “software engineering”—and will not confuse this expertise with professional engineering practice.

Citing its obligations under law, APEGN is adamant it will reinstate its consent for accreditation evaluations only if the name change is carried out. “It is APEGN’s duty to protect the public from the misuse of the term ‘engineering’ and to protect the integrity of the engineering profession,” says Steeves.

Memorial has the support of universities across Canada on this issue, May argues: “It is the universities’ responsibility, not that of outside agencies, to define academic programs.”

Memorial’s engineering programs are accredited until June 1999, so APEGN’s decision will not affect students graduating this spring. Memorial engineering students caught in the legal crossfire will voice their views at a university senate meeting March 9.

APEGN members and students have given APEGN’s move mixed reviews on the member’ forum of APEGN’s website. Most support the call for the name change, but they are divided on using APEGN’s future members as “bargaining chips.”

Ontario to raise mining standards and investors' confidence

Regulators scarred by the Bre-X scandal plan to adopt an action plan designed to protect investors and restore confidence in Canada's tarnished mining industry.

In February, the Toronto Stock Exchange (TSE) and the Ontario Securities Commission (OSC) unveiled 66 recommendations in a final report to improve mining standards, picking up on suggestions from a PEO working group and other stakeholders. The sweeping list of recommendations centres on disclosure of exploration results and better surveillance of labs that evaluate drill results.

The report is the work of the TSE/OSC's Mining Standards Task Force, established after the collapse of Calgary-based Bre-X in March 1997. The Bre-X gold find in Indonesia was exposed as a hoax, costing shareholders about \$3 billion in the stock crash.

"This is one task force report that isn't going to gather dust on the shelves," said John Geller, vice-chair of the OSC, at the news conference held to announce the final recommendations, many of which will be enacted into rules and policies throughout the mining industry.

However, there are no guarantees that increased regulation will stop future mining fraud. "There is nothing in these regulations short of closing down the marketplace that will stop criminal activities," Geller said. "The best we can hope for is to make fraud more difficult at an earlier stage."

"We feel that our efforts were worthwhile," said Ross Lawrence, P.Eng., chair of PEO's Mining Standards Working Group, which made two submissions to the TSE/OSC task force. The first was made in November 1997 prior to the release of the task force's interim report in June 1998; the second provided PEO's feedback on the interim report. Lawrence said the final report reflects "many of our comments and concerns."

One major concern for the working group was the "qualified person" concept, requiring an independent geoscientist or a licensed engineer with at least five years of training to be responsible for all scientific and technical aspects of exploration and development. Each mining company would delegate a "qualified person" to oversee matters and approve all company reports that are made public.

In its submissions to the task force, PEO recommended that the "qualified person"

be a licensed professional, or that an engineer licensed by PEO have some involvement in the mining reports. The task force has called on the Ontario government to create a self-regulating licensing body for Ontario geoscientists—a move that is currently underway.

Now it's a waiting game to see if the investment community can work together with the mining community and industry regulators to put the task force recommendations into practice, Ross said. The task force plans to collaborate with industrial and professional associations and government to

carry out the recommendations. PEO is doing its part by developing a revised guideline for the preparation of mining reports, and is being consulted in the preparation of the licensing act for geoscientists.

Support for the recommendations is widespread. A committee studying Quebec's mining industry released a report that echoes the call for improved disclosure of drill results and project risk factors. The committee includes representatives from the Montreal Stock Exchange, the Quebec Securities Commission and industry.

Karen Hawthorne

Mining Standards Task Force recommendations

The 66 recommendations in the TSE/OSC Mining Standards Task Force final report include requiring that:

- ◆ reports of new or increased reserves be approved by an independent geoscientist;
- ◆ laboratories that test mining samples be accredited by the province in which they operate;
- ◆ mining industry associations set "best practice" guidelines for the way exploration is conducted;
- ◆ analysts disclose their qualifications and any conflicts of interest;
- ◆ mining companies delegate a licensed "qualified person" responsible for mining exploration and approval of company reports that are made public; and
- ◆ detailed guidelines for news releases related to disclosures be developed, to safeguard against misinformation.

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Regulators gear up for the changing Canadian Arctic

by Karen Hawthorne

While the first-ever legislative assembly prepares to take office in Canada's newest territory, Nunavut, on April 1, the regulatory body for engineers, geologists and geophysicists in the Northwest Territories faces its own administrative challenges.

The Association of Professional Engineers, Geologists and Geophysicists of the Northwest Territories (NAPEGG) has worked out a game plan over the past year. Following the split of the current Northwest Territories, professional engineers and geoscientists in Nunavut will continue to be governed by NAPEGG. There are currently 30-odd licensees, but that number is expected to rise with increased mining exploration and infrastructure development. NAPEGG's legislation has been revised to reflect its role in regulating Nunavut professionals.

To encourage input from Nunavut-based members and provide fair representation, NAPEGG has set up a new section for Nunavut with its own executive committee and reserved a position on its council for a Nunavut member. Essentially, all administration will be directed as usual through NAPEGG headquarters in Yellowknife.

But with a staff of three, the association has concerns about managing the rising number of applicants for licences and permits, carrying out discipline and enforcement duties, and educating the new legislative assembly in Nunavut's capital, Iqaluit.

Mining development and prospects for discovering new minerals will see greater numbers of engineers, geologists and geophysicists coming to the Arctic for long- and short-term work projects, says Bob Spence, P.Eng., NAPEGG's executive

director. "Plus there's all kinds of construction in Iqaluit, and the construction going on now will snowball," he adds.

Carving up the map for Nunavut has meant splitting the Northwest Territory's government departments and revising over 200 pieces of legislation. Inuit representatives, many with no political experience, were recently elected to the legislature; these officials may have no prior knowledge of NAPEGG or its role. Government departments will be spread out in three regional centres, with branches in most of the sprawling territory's 26 communities.

Amidst the historic growing pains, NAPEGG believes that, to make its voice heard, it has to educate a new layer of government about its role in ensuring the safety of the public in the eastern Arctic. To that end, communications efforts with government officials are currently underway.

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Environment ministry flags Y2K as top priority

by Karen Hawthorne

Engineers should exterminate the year 2000 computer bug now to prevent environmental harm, says Ontario's Ministry of the Environment.

Violating provincial regulations because of a Y2K system failure is a "foreseeable and avoidable occurrence," cautions Bill Gregson, P.Eng, acting director of the ministry's approvals branch. He oversees approvals for such services as waterworks, sewage treatment and the hauling of waste.

The ministry is urging engineers to assess potential impacts of the Y2K problem and to develop remedial measures and contingency plans, Gregson says, pointing out the complexity of the issue. Y2K problems could involve such systems as computers, programmable logic controllers, human-machine interfaces, sensors, scales, flow meters and other instruments, which could wreak havoc on pollution control equipment. Gregson recommends the services of professional Y2K consultants in

situations where in-house professionals lack expertise.

"I'm not aware of any Y2K specific legislation being proposed," he says. "Compliance with existing legislation, regulations, policies and approvals will adequately protect the environment and public health." The ministry will require continued compliance with these requirements through the Y2K transition period.

Engineers may be liable for harmful results because of a Y2K failure, depending "on the facts and responsibilities surrounding any future non-compliance matter," Gregson warns.

"We are quite confident that engineers are taking action," says Bob Dunn, P.Eng., who sits on PEO's Environment Committee. "You won't see the disastrous effects predicted by all the doomsayers out there."

Dunn says he believes engineers are generally aware of potential Y2K chaos and are going "full-boar" to test systems, liaise

with suppliers and educate their clients.

Meanwhile, there is concern within the profession that, when buying high-level Y2K solutions from software "engineers," the public cannot tell whether they are dealing with licensed professional engineers.

PEO has seized opportunities to educate the public on this issue in a recent



Ontario's environment ministry is urging engineers to take the steps necessary to prevent Y2K system failures that could result in non-compliance with environmental legislation.

ad in *The Toronto Star* and an article in *The North Bay Nugget*. The association is also trying to get Ontario universities to rename software "engineering" options or specialties that are not, in fact, engineering.

"This is a problem because it misleads the public," says Pat Quinn, P.Eng., PEO's President-elect. Quinn says the public perceives that civil, mechanical or computer engineers are capable of providing services within the practice of professional engineering—and are ultimately responsible for the success and safety of their work under the association's Code of Ethics and provincial regulations enforced by PEO.

"There is no reason to believe that the public's expectations of software engineers are, or should be, any different," he says.

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