The Canadian Engineering Profession and Software Engineering

Over the past several years, software engineering has come into the spotlight in Canada in that:
- several jurisdictions have begun licensing software engineers,
- the first three software engineering undergraduate university programs have been accredited, and
- steps have been taken to ensure that universities and certification providers understand that the practice of engineering and the use of the title engineer is restricted by law in Canada to use by licensed professional engineers in the interests of public safety.

The panel presentation will cover the following areas:
1. Accreditation of software engineering programs: The Canadian Engineering Accreditation Board (CEAB) is responsible for accrediting undergraduate engineering programs that meet or exceed the educational criteria for registration as a professional engineer in Canada. As of June 2001, there were 220 accredited programs at 35 institutions in Canada including three software engineering programs. The CEAB will be looking at approximately ten more SE programs over the next three years. This section of the panel presentation will explain the procedures used to accredit engineering programs in general and SE programs specifically. It will also discuss the challenges the CEAB faced in accrediting new programs in a new discipline and how the Board prepared to face those challenges. Presented by Deborah Wolfe, P.Eng., Director, Educational Affairs at the Canadian Council of Professional Engineers.

2. National guidelines and recommendations for licensure of software engineers, including evaluating their experience, have been developed. To ensure consistency among the jurisdictions (for mobility of engineers), a national guideline for evaluating engineering experience through both interviews and documentation assessment was established. This section of the panel presentation will discuss the assessment of software engineering experience for licensure. Presented by Digvir Jayas, P.Eng., Chair, Canadian Engineering Qualifications Board and Associate Vice-President (Research) at the University of Manitoba.

3. In this section of the panel presentation, the experiences of one of the licensing bodies in Canada (the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) regarding licensing software engineers will be discussed. There is and has been a need to evaluate applications for licensure from software engineers based on non-CEAB accredited academics given that the first set of engineers from CEAB accredited programs graduated in 2001. APEGBC had licensed approximately 26 software engineers. This licensing body has developed a comprehensive system of evaluating software engineer applicants, including evaluating their academic backgrounds, and have contributed to the national guidelines based on their experiences. Presented by Gillian Pichler, P.Eng., Director, Registration at the Association of Professional Engineers and Geoscientists of British Columbia.