

The Engineering Institute of Canada, Its History and Importance in 2002



1.0 Historical Background

Once the largest and best-known engineering association in Canada, the Engineering Institute is striving - with some success - to regain a prominent niche in the affairs of a diversely organized Canadian engineering community.

Founded by Royal Charter in Montreal in 1887 as the Canadian Society of Civil Engineers, its objective was the dissemination of technical information and experience.

A quarter century later, membership had grown from 300 to 3000. Although the majority of the founding members were civil engineers, the Society embraced all disciplines of the time with mechanical, electrical, mining and general (civil) engineering sections and branches in Quebec City, Ottawa, Toronto, Winnipeg and Vancouver. During World War I the number of non-civil members increased and the dominance by members from Montreal declined as activities spread across the country. The Society's Charter was appropriately amended by Parliament in April 1918, to the Engineering Institute of Canada. The EIC prospered during the 1920s, survived the Depression and gained strength during World War II. By the early 1960s membership in all grades exceeded 22,000 and there were over 50 branches. However, by the mid-1960s, membership fell as more specialized Canadian engineering societies were formed, the influence of the larger American-based societies grew, the smaller branches were having difficulty surviving and the provision of services to the increasingly diverse membership became more difficult and expensive.

A solution was found in the establishment of semi-autonomous member societies within the Institute, based on technical divisions that had been established earlier. The first, the Canadian Society for Mechanical Engineering, was formed in 1970, followed by the Canadian Society for Civil Engineering and the Canadian Geotechnical Society in 1972 and the Canadian Society for Electrical Engineering in 1973. Those EIC members who declined to join one of these societies became members of the General Members' Group that in the late 1980s was re-formed as the Canadian Society for Engineering Management. By this time, these societies had become fully autonomous through incorporation. With EIC by-law changes these societies replaced individuals as members of the Institute and the Institute became a federation of societies.

In the late 1980s, the Electrical Society added Computer Engineering to its title. Then in 1993 it merged with Region 7 of IEEE to become IEEE Canada, replacing the Civil Society as the largest within the EIC. New

The EIC Mission

- Promote cooperation between the technical societies and their commitment to the vision.
- Collaborate with member societies, universities, educational institutions, industry, to make continuing education and professional development available to all engineers and engineering technology practitioners.
- Assist other national engineering bodies in promoting the good image of the profession particularly in relation to maintaining engineering competency.
- Maintain a national electronic registry of continuing education and professional development activities for engineering professionals ensuring convenience and privacy.
- Promote the maintenance and portability of professional and continuing education credentials.
- Promote the awareness of engineering history in Canada.

by *B. John Plant,*
Executive Director EIC, Ottawa, ON

member societies have since been added - the Canadian Society for Chemical Engineering in 1998, the Canadian Medical and Biological Engineering Society in 1999, and the Canadian Nuclear Society in 2001. Currently, the membership in all classes within the eight member societies exceeds 30,000. The Institute remains open to the inclusion of additional member societies.

The Institute's Life Members Organization, founded in 1954 and incorporated as a charitable organization in 1967, provides an opportunity for retired engineers of varied backgrounds to interact. Members are invited to make voluntary contributions in support of the organizations efforts to advance science and engineering in Canada and support certain benevolent activities.

In 1987 the Institute joined with the Canadian Council of Professional Engineers and the Association of Consulting Engineers of Canada to celebrate the Centennial of the founding of the original Civil Engineer's Society.

Today, the fundamental mandate of the EIC federation includes service to the member societies and the enhancement of the value of membership in those societies by providing services to their members.

2.0 The EIC Objectives

- Membership of all engineering technical societies in the EIC,
- Use of the EIC registry by all engineering professionals (engineers, engineering technologists and technicians),
- Development of the EIC Website as the primary location for communicating opportunities for continuing education and professional development,
- Recognition of EIC Honors and Awards as symbols of Canadian engineering excellence,
- Provide benchmark standards for the delivery of continuing engineering education,
- Establish a system for quality assurance checks on continuing education and professional development experiences,
- Growth in membership of our technical societies,
- Publish Institute documents in both official languages (Note: French version of this document will be available on the website: www.ieee.ca),
- Standardization of Professional Development in Canada.

3.0 EIC Services

- **A forum** for the exchange of experience and other information between member societies. The Institute is governed by a council comprising members from each member society and an executive. Meetings of the Council and workshops provide such a forum.
- **Representation** of all member societies at meetings with the other national engineering bodies such as the Canadian Council of Professional Engineers, the Engineering Academy and the Association of Consulting Engineers of Canada and the Partnership Group on Science and Engineering. For example, the EIC represents the societies at regular meetings of the National Engineering Week Committee and recently at a PEO forum on the future of engineering and has been invited to be a founding member of Registered Engi-

neers for Disaster Relief (Canada).

- The **EIC website** serves the societies by containing links not only to all of the societies but to practically all Canadian engineering organizational sites.
- **Director's Insurance** is purchased as a group for all member societies significantly decreasing the cost to each.
- **Professional development services** are provided to the member societies and their members alike.

1. Recognized standards for the delivery of continuing education and training have been adapted to meet Canadian Engineering needs (see http://www.eic-ici.ca/english/cont_ed/standards1.html) and agreements have been entered into with a number of providers (see http://www.eic-ici.ca/english/cont_ed/pp2.html). These providers commit to the standards and award the EIC Continuing Education Unit to participants in their programs. Compliance with the standards by these providers is monitored using a questionnaire that is sent by the EIC to individuals selected by random sampling. The EIC offers individual engineering professionals the opportunity to record these high quality professional development experiences in a registry maintained by the EIC. To take advantage of the opportunity the individual needs only to indicate to the provider that this is desired. The provider sends the information to the EIC and the EIC protects its privacy and its existence. The advantage to individuals is the ability to store professional development records that may have been obtained over space and time in such a manner that they can be readily retrieved. This activity is paid for with dues collected from the "participating provider partners".

2. Much recognized professional development cannot be awarded CEUs and many licensing bodies recognize the Professional Development Hour. As there appears to be a growing trend to have engineer professionals record their professional development, the EIC is maintaining a professional development registry (see <http://www.eic-ici.ca/english/pda/>) as a service to the engineering community. Think of it as a personal professional development diary. Use is available to all, a simple matter of registering and establishing your own file by defining an identity and a password. It is organized for the convenient entry of professional development records and the individual user can retrieve personal data simply by printing it at their own computer. In time it is intended to link the CEU and PDH registries. At present, information in the CEU registry will be supplied to the individual to whom it applies in the form of a transcript upon request.

- A new **Career Site** provides a service to the members of the member societies. (<http://www.eic-ici.ca/english/career.htm>). As a collectivity, the EIC group has the potential to attract the interest of a large number of companies and head hunters seeking to employ engineering professionals. Many job posters are looking for more than one type of engineer. Individuals who are actively or passively seeking a position can easily post their resumes by simply cutting and pasting once they register at the site. They can also indicate any restrictions that they may feel they have on salary, location etc. These users can surf the jobs that have been posted by employers. The qualifications and employment restrictions of job seekers are matched with employer needs by computer. The job posters pay a fee to post jobs or search the resume database. The revenue from this activity is shared with the member societies.
- The **Honours, Awards and Fellowships** program of the EIC represents the top in the hierarchy of the recognition programs of its member societies (see <http://www.eic-ici.ca/english/tour/haf1.htm>) Twenty engineers are recognized as Fellows each year and up to six medal winners at a banquet held in their honor. Employers etc. are

advised of these awards.

- The **History and Archives** committee serves the entire Canadian engineering community by collecting information, publishing papers (see <http://www.eic-ici.ca/english/tour/haf1.html>), lobbying for public recognition of great Canadian engineers and ensuring that historical plaques are installed at sites appropriate to the engineering history of Canada.

Member Societies of the EIC



The Canadian Geotechnical Society



The Canadian Medical and Biological Engineering Society



The Canadian Nuclear Society



The Canadian Society for Civil Engineering



The Canadian Society for Chemical Engineering



The Canadian Society for Engineering Management



The Canadian Society for Mechanical Engineering



IEEE Canada

THE ENGINEERING INSTITUTE OF CANADA

1100-180 Elgin Street, Ottawa ON K2P 2K3

Admin. Office: 1295 Hwy 2 E, Kingston ON K7L 4V1

Tel: (613) 547 5989 / Fax: 547 0195

E-Mail: info@eic-ici.ca / URL: <http://www.eic-ici.ca>

About the Author

John Plant, a retired naval officer, received his Ph.D. in Electrical Engineering (M.I.T.) in 1965 and began an academic career which culminated in his being Principal of the Royal Military College from 1984 to 1999. He was President of the Canadian Society for Electrical and Computer Engineering and a key participant in its merger with IEEE Canada. He is a Fellow and Life Member of IEEE and EIC and a recipient of the IEEE Centennial and A.G.L. McNaughton Medals, the EIC John B. Stirling Medal and the PEO Citizenship Award.



Dr. Plant is currently President of the Advanced Technology Education Consortium, Executive Director of the Engineering Institute of Canada and Treasurer of the International Association of Continuing Education and Training.