THE KEYSTONE PROFESSIONAL

APEGM The Association of Professional Engineers and Geoscientists of the Province of Manitoba

OCTOBER 1999
www.apegm.mb.ca

New Dean of Engineering Appointed at U of M

By: J. A. Blatz, EIT

As of July 1, 1999, the University of Manitoba has a new Dean: Dr. Doug Ruth, Ph.D., P. Eng.

Dr. Ruth was born and raised in Manitoba, and he received both his Bachelor's and Master's degrees from the University of Manitoba. He then went on to complete his Ph.D. at the University of Waterloo. After graduation, he spent close to ten years working as a research engineer in the oil industry before returning to the University of Manitoba where he has served as professor, Department Head of Mechanical Engineering, as well as Associate Dean of the Faculty. His list of teaching and research awards is far too long to list. He is also actively involved with a number of professional societies and organizations.

I had the opportunity to ask the new Dean a few questions about his plans for his term and would like to share his responses with you.

On engineering education: We are quickly establishing a reputation as a Canadian leader in the development of design components within our courses, specifically the first-year engineering design course. We have already started the discussion about how to bring new educational systems into our programs. We now have some of the most advanced multimedia education facilities available, which will result in a movement toward a more tutorial-based system, introducing back into the program aspects important to the engineering practitioner. Basically, we will use more advanced teaching methods to get back to the basics and ensure that the information our students need is being delivered effectively.

On the research front: We have an extremely accomplished research program and a very strong graduate-student program, but there are areas in need of improvement. Recent reductions in teaching positions have reduced the number of post-graduate courses offered, resulting in students attending other universities to meet their core course requirements. I would like to concentrate on standardizing core requirements for graduate courses. This will be a real challenge, considering we are in a period of re-growth. Many of our professors who have been



Dr. Doug Ruth, Ph.D., P. Eng.

Continued on page 4

Association of Professional Engineers and Geoscientists of the Province of Manitoba



ANNUAL GENERAL MEETING

Canad Inns Fort Garry, Winnipeg

Friday, October 29, 1999

Professional Development Conference

8:00 a.m.	Registration
8:40 – 9:25	Information Technology and the Death of Engineering as We Know It?
9:25 – 10:00	GPS/GIS Introduction and Impacts on Engineering and Geoscience
10:30 – 11:00	Security Issues in e-commerce and Internet Communication
11:00 – 12:00	Issues and Impacts of Technology on How We Communicate
12:00 noon	Lunch & Networking
1:00 – 1:45	Inter-personal Communication in Relation to Conflict Resolution
1:45 – 3:00	Managing Change/Managing Technology
3:15 – 4:30	Panel Discussion: Technology & Society
4:30 – 4:45	Closing Remarks

Saturday, October 30, 1999

8:30 a.m.	Registration
9:00 – 10:00	Information Session
10:30 – 12:00	Issues Forum
12:00 – 1:30	Lunch & Guest Speaker
1:30 – 4:00	Business Meeting
6:00	Reception
7:15	Presentation of APEGM Awards Dinner & Entertainment

THE KEYSTONE PROFESSIONAL

OCTOBER 1999

Published by the Association of Professional Engineers and Geoscientists of the Province of Manitoba

850A Pembina Highway,
Winnipeg, Manitoba R3M 2M7

Ph. (204) 474-2736 Fax (204) 474-5960

E-Mail: apegm@apegm.mb.ca

APEGM COUNCIL

M.G. Britton, P.Eng., President
A.E. Ball, P.Eng.; E. Eddy, Ph.D., B.P.T., M.C.P.A., M.C.S.P.; R.J. Eschenwecker, P.Eng.; L.R. Ferchoff, P.Eng.; J.R. Hosang, P.Eng.; J.M. MacLeod, P.Eng.; R.N. Matthews; A.J. Poetker, P.Eng.; A.J. Pollard, P.Eng.; L. Quinn; S.H. Rizkalla, P.Eng.; C.S. Roberts, P.Eng.; B. Thomson, R.N.; P. Washchyshyn, P.Eng., Past-President

APEGM STAFF

D.A. Ennis, P. Eng., Exec. Director and Registrar
S.M. Matile, P. Eng., Director of Admissions
K.A. Buhr, P. Eng., Manager, Administration
J.C. McKinley, Administrative Officer
D. Bilodeau, Admissions Co-ordinator
E. Ryan, Accounting & Membership
L. Dupas, Receptionist/Secretary
K.D. Birrell, Administrative Secretary

COMMUNICATIONS COMMITTEE

B. Stimpson, P.Eng., Chair; M. Baril, P.Eng.; J.A. Blatz, EIT; J.W. Bogan, P.Eng.; V.L. Dutton, P. Eng. (Ret.); A.N. Kempan, P.Eng. (Ret); M.W. Morrison, EIT; J.E. Nordstrom, EIT

CORRESPONDENTS

P. Yamada, P. Eng., Thompson
S. Trivett, P. Eng., Brandon

The Communications Committee would like to hear from you. Comments on your newsletter can be forwarded to us through the Association office. Members are also encouraged to submit articles and photos on engineering or business topics that would be of interest to the membership.

Although the information contained in this publication is believed to be correct, no representation or warranty, expressed or implied, is made as to its accuracy and completeness. Opinions expressed are not necessarily those held by the APEGM or the APEGM Council.

APEGM

Is Your Company Using Engineering Titles Correctly?

By: S.M. Matile, P. Eng.

Design Engineer. Systems Engineer. Environmental Geoscientist. Software Engineer. Maintenance Engineer. Intermediate Engineer. All of these titles, and any other titles containing the words "engineer" or "geoscientist" (except for "Power Engineer" and "Aircraft Maintenance Engineer") are protected, under the "prohibitions" section of the Engineering and Geoscientific Professions Act ("the Act"), for the use of registered members of this Association **only.**

The Act requires that the practices of engineering and geoscience be carried out by only registered professional engineers and geoscientists (and persons working under their direct supervision). It also restricts the use of the titles "engineer" and "geoscientist" to members of this Association's two professions.

And who does the government obligate to administer the Act? The Association. US! We (the 3000 engineers and geoscientists in Manitoba) have a legal obligation to ensure that no one is misleading the public by using an inappropriate title. We have a responsibility to the public (and to the credibility of the professions) to ensure that only qualified engineers and geoscientists practise engineering and geoscience in this province, and that only qualified practitioners call themselves engineers and geoscientists.

Almost every week, Manitoba newspapers contain advertisements for engineering and geoscience positions. Many specify a requirement for registration with this Association – for which we are most appreciative. Many of the firms placing the advertisements are aware of the requirements of the Act and fully intend to fill the positions with qualified registered engineers or geoscientists even though their advertisements may not specify this. Some, however, are unaware that it is illegal to give an engineering title to someone who is not qualified to practise engineering. It is our responsibility to apprise them of the requirements of the Act, and ensure that anyone practising engineering and/or holding an engineering position is registered with this Association.

If you know of anyone who holds an engineering title but is not registered with this Association, please consider it your duty to either arrange for corrective action or notify the Association office so that we may investigate. Most of the offenders are simply unaware of the Act and are quite willing to comply, once they are made aware of its requirements.

Meanwhile, a great big THANK YOU to all of the firms and government departments which advertise and enforce professional registration as a condition of employment for engineering positions. You are making our Act enforcement task a lot easier! ■

Licences Issued July & August 1999

F. Arsene (ON)
J.E. Burson (TX)
E. Schultz (FL)
D.M. Stuart (FL)

EITs Enrolled July & August 1999

R.D. Andrushuk
R.K. Beardy
K.R. Bindle
K.R. Braid
K.A. Bush
M.J. Duggan
M.L.C. Foo
R.M. Ilagan
S. Janjic
R. Janzic
M. Jojic
K.D. Klymchuk
M.A. Kuusela
D.E. Kristjanson
J.P. Laninga
C.S. Leong
K.L. Lunc
T.V. Luong
R.B. MacGowan
W. Pakingan
A.R. Powell
C.M. Recto
S.J. Shabaga
C.J. Spivak
H.D. Townshend
J.T. Turner
Z. Vuksa
J.C. Waddell
D.B. Wiebe
D.D. Wilson
D.P. Zilinski

Reinstatements July & August 1999

D.J. Seargeant

New Members Registered July & August 1999

R.N. Buschau
D.W. Chambers (AB)
B.W.J. Corkal
P.E. Davies
R. Deziel (PQ)
C.W. Dubeau (ON)
M.J. Ferguson (SK)
K.D. Gawne
R.D. Ginn
W.R. Gunter
R.C. Homeniuk
J.W.P. Lengyel
B. Mandelzys (ON)
W.M. Maudsley (BC)
M.L. Menard
P. Narayanaswamy
C.N. Perrett
D.S. Rapinda
C.R. Ratay (AB)
K.R. Richards
P.G. Rowbotham
E.B. Scalera (ON)
E. Schroth
G.D. Schrum
D.L. Stregger
R.J. Tremblay (ON)
H.C. Turner
A. Yassa (QC)

In Memoriam

The Association has received with deep regret notification of the deaths of the following members:

Wilfrid A. Hinz

Stanley L. Wilson



President's Message

Ron Britton, P.Eng.

Making Haste Slowly...

Almost a year has passed since the Association honoured me with the privilege of serving as its President. It has been a year of challenge and opportunity. It has also been a post-graduate course in professional governance.

When I accepted this opportunity, I had spent four years on Council and felt that I had gained a reasonably thorough understanding of our organization and the issues that required attention. Now, with the benefit of 20/20 hindsight, I realize that my view was actually quite introspective. In spite of our provincial mandate and our provincial legislation, the ebb and flow of decisions outside our legislated sphere of influence are, to say the least, significant. This presents management problems for your elected representatives and your Association staff.

A major "outside" issue to engulf APEGM Council in 1998/1999 was the debate over the Software Engineering program at Memorial University and CCPE's reaction to that program. This led to debates over protection of the title "engineer" and interference with academic freedom. Many of you chose to express your opinion on the subject, and that input allowed those of us who had to react on your behalf to do so in a more informed manner. It also reinforced the need to take a much less prescriptive view of the basic definitions upon which our association is founded.

The Professional Development By-Law vote of last Fall illustrated a need to advance more effort to seek out member opinion. We have attempted to do just that. The Membership Competence Task Force was established to find out what you want Council to do on your behalf when it comes to representing ourselves as competent professionals. You will find a report from this group elsewhere in this issue of the Keystone Professional.

Another impact of the Professional Development By-Law vote was to cause members of Council to accept that our vision of the purpose of APEGM and the visions of the membership were not exactly in sync. We have spent a considerable amount of time attempting to correct that shortcoming.

One of the interesting statistics to emerge as we attempted to gain a better understanding of APEGM is the nature of our membership. About one quarter of APEGM members live outside Manitoba; for the most part, in Ontario, British Columbia and Alberta. Assuming that these engineers and geoscientists are also members in their province of residence, they find themselves subject to a second, or third, set of "issues". Their issues become our issues. In Ontario, the question of advocacy has been a subject of vigorous debate. British Columbia has the problem of technical specialist certification, and who will control it. Alberta has a maturing mandatory professional development program. The unanswered question for APEGM Council is, how do these "external" debates impact on what we should be doing? The answer to that question, of course, depends on the wishes of membership, not the Council.

So where does this lead to? It is apparent that we need to improve communication among all members. This is accomplished not by creating a new magazine or holding organized forums, but, rather, by encouraging each member to write, phone or e-mail in reaction to things that are either proposed or "accomplished". It is easy for your Council to become buried in the mountains of paper that flow through the system. It is easy for the staff to become buried in the details of their respective tasks. I have often suggested that education is too important to leave to the academics. Similarly, governance of our profession is too important to leave to those of us who have been elected to Council.

So, as my year in the Chair winds down, I would like to thank those who have supported my efforts on your behalf. The APEGM staff have, as I was told they would, provided outstanding support. The Council has contributed well beyond any reasonable level of expectation. And those of you who cared enough to take the time to express your opinions on the issues of the day deserve special thanks. As an organization, APEGM needs members who care. Please continue to provide your elected members with your input. It is the single most important piece of information we can receive. ■

Programs Earn Continuing Education Units

By: M. Peterson Elias

The University of Manitoba's Continuing Education Division is a participating partner in the Engineering Institute of Canada's (EIC) Technical Professional Development Program. Management Development Programs (partnership initiative of the University's Faculty of Management and Continuing Education Division) are assigned CEUs (Continuing Education Units) for purposes of tracking continuing professional education.

One program that will be of particular interest to engineers is the University of Manitoba Mid-Management Program, which is a 12-week series designed to provide middle managers and high-potential managers with the basic concepts and practices of business management. The program is a broad survey of subject areas normally found in a business-school degree program. The program is intended to provide participants with the knowledge needed to work cross-functionally within their organizations. There are no prerequisites for this program.

The purpose of the program is to help practising managers become more effective in current business theories and practice. This 12-week survey of business subjects will give participants a framework for making informed decisions about issues affecting their company and career. The scope of the program will allow participants to develop a broader understanding of functional areas outside normal activities and professional training.

The program is designed for:

- Mid-level managers with several years of experience who want to develop a broader awareness of the many aspects of business
- Technical professionals moving into management positions
- Managers who want to become conversant with a variety of functional areas in order to move up in the organization
- Executives or business graduates who need to update their business skills and education
- Professionals who are interested in setting up their own practice or who currently have a practice but require more knowledge in order to manage more effectively

Each three-hour session focuses on a different aspect affecting organizations today:

The Challenge of Leadership

Decision Making

Understanding Financial Statements

Using Accounting Information

Human Resource Management

Information Resource Management

Marketing Management

Customer Satisfaction and Quality

Managing Change

Operations Management

Financial Management

Strategic Management

The Mid-Management Program is 3.6 CEUs.

The Program will be offered January 10-April 3, 2000 (Monday evenings), 6-9 p.m. at the Faculty of Management.

The $1,295 enrollment fee includes tuition, textbook, course binder, and handout materials. Additional registrants from the same company are charged a reduced rate of $1,165 per person.

To get a brochure with more detailed information call 474-7189; 1-888-216-7011 (toll free); or visit our website at www.umanitoba.ca/ConEd/CEP

Continued on page 6



Letter to the Editor

Sir,

In response to the "President's Message" in the June issue, it should not come as a surprise that the Newfoundland court has found that our profession does not have any propriety right to the use of the word engineer.

Back in the 70's, this writer argued before a cabinet committee of the then labour minister, Howard Pawley, against using the term "Power Engineer" in a proposed Act and was given the same answer.

We simply do not seem to grasp the fact that we are our own worst enemies when it comes to the preservation of our right to reservation of title under the Act.

For instance, in the past we also successfully argued before the Manitoba Court against inclusion of employee Professional Engineers into a non-professional union as proposed in the Labour Relations Act. Howard Pawley unsuccessfully appealed this in the Court of Queen's Bench. Yet regardless of this finding Professional Engineers in the employ of the Provincial Government voluntarily joined a non-professional union.

Our local consulting engineering firms regularly advertise for engineering positions without any mention of APEGM membership requirements. Also, the term Professional Engineer is seldom seen in ads for engineering positions. Practising in other jurisdictions requires registration with the Association or Ordre in that jurisdiction according to the Director Of Admissions. However, Professional Engineers working for the Federal Government are exempt, and so are the military. And the list goes on and on.

No wonder the general public and the judiciary are confused! But where does the CCPE stand? They should have jumped into the fray in Newfoundland with all the legal power they could muster to emphasize the fact that they alone are empowered to accredit engineering courses in Canadian universities. Instead, CCPE are busy debating the pros and cons of "Carver Management Strategies".

All these anomalies have not gone unnoticed by Federal and Provincial politicians. Attempts were already made years ago to curb the responsibilities of the professions viz:

"Report on the legal status of Professionals in Manitoba" and "The Report of the Professional Organizations Committee to the Ministry of the Attorney General of Ontario" to name a few.

These reports propose the formation of a "Professions Board" to oversee all professions with the power of decision making regarding licensure and the appropriateness of the existing division of functions (for instance between architecture and engineering).

Before all this becomes a fact of life, our profession should wake up and take a more active role in advising regulatory bodies so that engineering concerns are being addressed in political decision-making. However, most engineers would rather excel in their respective functions than waste their efforts debating in a political forum. So we find ourselves in a Catch-22 situation from which we must extricate ourselves if we wish to enhance our position in society.

Perhaps all Canadian Engineering Associations and the Ordre should band together and forcefully lobby the CCPE to convince the Federal Government that they represent the voice of all Canadian Engineers and, therefore, should deserve status in any debate on technological issues affecting the public.

If we do not act effectively we could find ourselves relegated to the rear echelon with a "Professions Board" that regulates our profession.

Sincerely,
F.A. Jost, P.Eng.(Ret.)

New Dean of Engineering

Continued from page 1

extremely productive are now nearing retirement. We must find strong new professors to fill these positions and support them in order to facilitate the transition for the benefit of the students.

On the industry perspective: The faculty has a great deal to contribute to the economy of Manitoba, which is very technically based. We need to share our knowledge and capabilities with the high-tech sector. Research projects can be academically challenging as well as productive for industry. I would like to see more activity that models European Universities where engineering faculties have institutes within them. The institutes focus on research for a certain sector of the economy. We have already moved down this path with facilities such as the Intelligent Sensing for Innovative Structures (ISIS) Centre of Excellence. ISIS is a perfect example of groundbreaking research with advanced practical applications which are being implemented concurrently.

On the undergraduate program becoming more practitioner-oriented to ease the transition to industry *(a question related to the movement of CEAB to increase the design component in many courses)**:*** We have two type of graduates: the "typical graduate" who goes directly into industry with a Bachelor's degree and the graduate who chooses to pursue graduate studies. There is also a combination where the Master's degree is essentially the base requirement for certain areas of practice, such as geotechnical engineering and petroleum engineering. I believe that in 20 years most areas of engineering will look for a Master's degree as the entry-level degree for industry positions, while the Bachelor's degree will prepare you well for going on to something more specialized such as science, management, or law. Engineering schools have been under a lot of pressure lately to introduce new material into the curriculum – specifically for students with Bachelor's degrees going directly into industry. People are looking for management material and many complain there is a lack of formal training in this area. They note the trend for engineers to become managers five to ten years after graduation. I would argue that there is something we are doing right in engineering that allows graduates to move into management roles very quickly. Anything we pull out of our program may dilute the basic engineering education that is currently allowing them to succeed. Having said that, there are many areas that we need to work on. We also need to stimulate and challenge undergraduate students to choose careers in teaching and research and proceed to graduate studies. This is oneof the reasons for the movement back to a tutorial-based curriculum.

On skills-based courses: In the near future I expect to see technical electives including skills-based courses, such as machine-shop practice, welding, and AutoCAD, such as those taught at institutions such as Red River College and South Winnipeg Technical Centre. An engineer will not be a technologist, a machinist, or a welder. However, in order to be able to work effectively with these skilled trades-people, there must be a basic understanding of their skills. I believe that if, on your first day as a mechanical engineer, you walk into a machine shop and you don't know the difference between a drill press and a lathe, you will be seen as incompetent and you will be viewed that way as long as you work there. If you know the difference, you will be accepted. We need to understand how concrete tests are performed, how to hook up as well as manufacture computers, and how to solder as well as design a circuit board. We will not be asked to perform these tasks in our careers, but we need to understand the skill sets required and to appreciate the difficulty of the tasks in order to help us communicate our ideas to those who will implement our designs.

On engineering education: Our real strength in engineering is breadth in the pure and applied sciences, and the sharing of program components among departments. This allows a Biosystems engineer to know a little about civil engineering, a mechanical engineer to know a little about electrical engineering, etc. This breadth allows us to interact with managers and other engineers while maintaining a very deep knowledge of our respective specialties. We need to have all these components in our program. We are not training our students to enter a specific industry

Continued on page 8

ENCON

ENCON offers an endowment in the amount of $7,500 annually to an individual wishing to pursue studies in the area of engineering failure investigation, risk management, and/or materials testing.

As CCPE endorsed insurance program managers since 1970, we believe this field of engineering dealing with analysis of materials failure and accident prevention to be an integral aspect of risk management for professionals in the 90's.

Canadian Council of Professional Engineers / Conseil canadien des ingénieurs

For further information contact the
CCPE National Scholarship Program
Canadian Council of Professional Engineers
401 - 116 Albert Street, Ottawa, Ontario, K1P 5G3
Tel-(613)232-2474, Ext. 246
Fax-(613)230-5759
E-mail: lynn.villeneuve@ccpe.ca
Website - http://www.ccpe.ca

APPLICATION DEADLINE: April 1, 2000

ENCON Insurance Managers

Suite 700, 350 Albert Street, Ottawa, Ontario K1R 1A4
Telephone: 613-786-2000 • Facsimile: 613-786-2001
Toll Free 1-800-267-6684 www.encon.ca

Canadian Council of Professional Engineers / Conseil canadien des ingénieurs

CCPE National Scholarships

2000 Call for Entries

The Canadian Council of Professional Engineers (CCPE) invites entries to the 2000 CCPE National Scholarships. Six cash awards totalling $52,500 will be presented to worthy Canadian engineers in support of advanced studies and research.

To be eligible, candidates must be registered as full members of one or more of the 12 provincial and territorial associations/ordre which regulate the profession of engineering in Canada.

The following scholarships are available:

- Three **CCPE–MANULIFE FINANCIAL** Scholarships valued at $10,000 each to provide financial assistance to engineers returning to university for further study or research **in an engineering field. Candidates must be accepted or registered in a Faculty of Engineering.**
- Two **CCPE–MELOCHE MONNEX** Scholarships of $7,500 each to support engineers returning to university for further study or research **in a field other than engineering. Candidates must be accepted or registered in a Faculty other than Engineering.** The field of study chosen should favour the acquisition of knowledge which enhances performance in the engineering profession.
- A **CCPE–ENCON Endowment** of $7,500 will be awarded to a professional engineer pursuing studies in the area of engineering failure investigation, risk management, and/or materials testing. This area of engineering is concerned with analyzing the causes of materials failure and preventing accidents in the industrial, manufacturing, or construction sector.

The Deadline for all applications in all categories is:

April 1st, 2000

Scholarship application forms are available from your provincial or territorial professional engineering association/ordre or from:

CCPE National Scholarship Program,
Canadian Council of Professional Engineers,
401 - 116 Albert Street, Ottawa, Ontario, K1P 5G3
Tel - (613) 232-2474, Ext. 246; Fax - (613) 230-5759;
E-mail – lynn.villeneuve@ccpe.ca
Website – http//www.ccpe.ca

CCPE thanks ENCON Insurance Managers Inc., Manulife Financial, and MELOCHE MONNEX INC. and its subsidiaries, Monnex Insurance Brokers Limited and J. Meloche Inc., for their support of the CCPE National Scholarship Program.

Practical Flexible Working Arangements

By: B.A.K. Danielson, P.Eng.

A sub-committee of the Women in Engineering Advisory Committee (WEAC) has prepared a series of articles to provide information to members of APEGM about flexible working arrangements that will appear in "The Keystone Professional" over the next six to seven issues. The members of the sub-committee are: Brenda Danielson (Chair), Elan Swatek (WEAC Chair), Meghan O'Laughlin, Carolyn Geddert, Kelly Olischefski, and Robin Hutchinson.

This series of articles is intended to serve as a reference tool for professional engineers and their employers when considering flexible workplace arrangements. Such arrangements assist men and women wishing to balance their work and personal commitments such as family, community, education, professional development, religion and general interests.

In today's economic culture where dual-income households prevail, the need for alternative work arrangements has never been greater. The challenge of balancing multiple responsibilities can cause employees to experience fatigue, difficulty concentrating, and absent-mindedness. This, in turn, affects corporate profitability by reducing productivity and performance. Flexibility in the workplace is clearly a solution that benefits both engineers and their employers. Employees who find their lifestyles satisfying and rewarding because of the ability to balance all commitments will be hard-working, dedicated, and productive.

Described in this series of articles are seven practical flexible working arrangements: flexible hours, job sharing, permanent part-time work, telecommuting, v-time, on-site day care, and phased retirement. Each section provides a brief description of the arrangement along with considerations, advantages, and disadvantages.

It is important to note that successful flexible workplace arrangements are achieved through mutual trust, compromise, negotiation, and above all FLEXIBILITY between the employee and employer. Both parties are responsible for ensuring that the arrangement is suitable and is working. Some employees may prefer to prepare a detailed proposal outlining their interest in a flexible workplace arrangement or that their employer adopt formal policies to address these issues. Others may slowly migrate to an arrangement preferring the informal arrangements that are made between themselves and their immediate supervisor. Every situation is different. Formal policies are designed to protect the employee but in some instances are too rigid or, on the contrary, too open to interpretation. Informal arrangements may initially work well but are subject to re-consideration in the event that supervisors change.

Recognizing a general lack of understanding of flexible workplace arrangements, this series of articles has been prepared with the hopes of heightening people's awareness of their options. We encourage all readers to share the information presented with their peers and their Human Resources department.

The following is the first in a series of seven.

Flexible Hours



1. Description

Flextime is a system by which employees are provided some degree of freedom to choose their working hours.

Typical flextime arrangements define core hours during which all employees must be present on the job. Such arrangements include flex bands at the beginning and at the end of each day during which employees make up the necessary number of hours of work.

Typically, employees will be paid under the assumption that they are working a standard number of hours; some adjustment may be necessary if the paid hours differ from the actual hours worked. These adjustments are made at the end of a "settlement period" which may be anywhere from a day to several weeks. In this way, employees can work extra hours every day in order to gain an extra day off during the settlement period. Alternatively, many flextime programs also allow for some degree of work week compression by which employees complete the prescribed number of weekly hours in fewer than five full days.

2. Considerations

Flextime allows some flexibility to an individual's work schedule without any effect on income or benefits. Typically, flextime will not address the problem of overwork. It may, however, reduce stress if the work schedule is one of the main problems.

Advantages

- improves comfort and efficiency on the job
- can tailor workday to family commitments and schedules (such as taking children to and from care givers or being home when children return from school)
- allows changes in schedule without any reduction in hours and, thus, income
- may accommodate non-routine commitments such as family illness, health care appointments, or special events
- potential for more convenient commuting

Disadvantages

- greater effort may be required to organize adequate staff supervision
- greater difficulty in coordinating group activities
- can sometimes run afoul of overtime legislation ■

Continuing Education Units

Continued from page 3

Other Management Development Programs:

Professional Development for Senior, Middle, and High-Potential Managers.

Two-and three-day programs – interactive and highly focused on such topics as:

- Accounting for Non-Financial Managers
- Developing a Business Plan
- Developing and Maintaining a Customer Focus
- Negotiating for Success
- Managerial Decision Making
- Organizational Analysis (one day)
- Effective Business Communication
- Developing a Marketing Plan
- International Finance
- Leadership

AND MORE ■

Engineers in the News

James S. Townsend, P.Eng. recently achieved Fellow status in the American Society of Agricultural Engineers. The ASAE Fellow Induction Ceremony was held at their International Annual Meeting in conjunction with the Canadian Society of Agricultural Engineers (CSAE).

Townsend's peers in the ASAE nominated him for the award. The ASAE Board of Trustees approved his nomination as an agricultural engineer of extraordinary accomplishments. Townsend, a member of ASAE for 41-years, recently retired professor from the University of Manitoba, is currently president of SEATAB Consulting Services in Winnipeg, Manitoba, Canada. ■

Member Competence Task Team Works To Find a Way Forward...

By: R.J. Eschenwecker, P.Eng.

Last October, a professional development program as proposed in a bylaw was defeated by a wide margin. Following that membership decision, Council passed a motion to appoint a Task Force to provide a recommendation for a way forward. The Member Competence Task Force, which was formed in early 1999, represents a broad cross-section of the membership in terms of opinion, discipline (including geoscience), gender, level of experience, and size and type of organization. Given the controversy associated with the earlier program, and the wide range of opinion, the Task Force has operated using a consensus approach - everyone must be able to agree or "live-with" a decision.

The Member Competence Task Force defined for itself a specific objective: "To recommend a process that will demonstrate to the public-at-large due diligence on the part of the Association in assuring appropriate competence and ethical behavior of its members and which will be accepted by the membership."

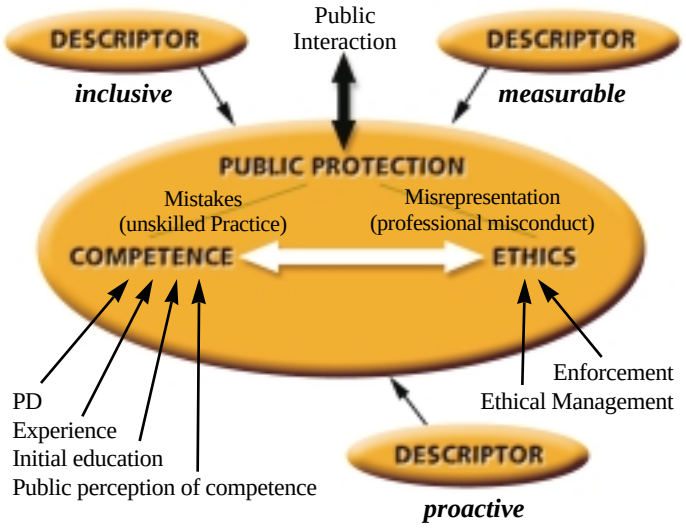
In order to determine how to meet the objective the Task Force went "back to basics", exploring a variety of basic questions: What are we trying to achieve from a 'global' perspective? What do we really need? What are the expectations of the stakeholders of engineering services? One of the major results of our deliberations was to formulate, as most engineers would, a model – illustrated in Figure 1.

The Task Force brain-stormed to identify a full range of possible methods to achieve the objective. However, as we set out to develop criteria for evaluation, we again came up against a lack of data on the expectations and needs of our customers – the stakeholders of engineering services in our province. As a result, we are now in the process of developing a stakeholder survey to establish those needs and expectations prior to continuing our work.

It is the intent of the Task Force to logically develop a recommendation to Council for the way forward. The limits of possibilities range from the extremes of "doing nothing" to some formal mandatory program. However, well before that recommendation is developed, the Task Force needs your feedback on both our approach and our model. This article is the first communication of our process. It is also the intent of the Task Force to hold an information session at the Annual General Meeting in October.

Please provide feedback to the team via the APEGM office. We will continue to provide updates on our progress. ■

Figure 1: **Task Force Model**



Canadian Council of Professional Engineers
Conseil canadien des ingénieurs

$10,000
For Your Pursuit of Excellence.

The Manufacturers Life Insurance Company, underwriters of your life insurance and RRSP programs, shares your drive to excel. That's why, together with the **Canadian Council of Professional Engineers**, we sponsor a Scholarship Program to promote excellence in engineering.

Through this Program, we offer **three $10,000 scholarships** to provide financial assistance to engineers returning to university for further study or research **in an engineering field**. **Candidates must be accepted or registered in a faculty of Engineering.**

For details, please contact:

National Scholarship Program
CANADIAN COUNCIL OF PROFESSIONAL ENGINEERS
#401–116 Albert Street, Ottawa,
Ontario K1P 5G3.
FAX: (613) 230-5759
EMAIL: lynn.villeneuve@ccpe.ca
http://www.ccpe.ca
The deadline for applications is **April 1, 2000.**

Manulife Financial
The Manufacturers Life Insurance Company

Council Report

Tuesday, July 13, 1999

By: B. Stimpson, P.Eng.

AT WHICH PROGRESS IS MADE ON A NUMBER OF FRONTS

The busy summer season required one councillor to squeeze in two hours between field visits, while another made time in the middle of a "panic" business situation to phone to take part in a discussion of a particular agenda item. Six other councillors were able to give all or most of the afternoon to the meeting, which lasted from 1.30 p.m. to 4.00 p.m. Several important steps were taken by Council over that time.

Negotiations continue with the Manitoba Association of Architects regarding the terms of the Memorandum of Agreement (MOU), which was due to expire on June 18th, 1999. In order for discussions to continue, the MAA approved an extension of the current MOU to July 30th, 1999 (MAA had earlier indicated that it intended to let the MOU lapse as of June 18th). Your Council reviewed and approved a position statement on the areas of professional practice in relation to the MAA, which would then go forward to a Joint Board meeting with the MAA on July 26th.

Under The Engineering and Geoscientific Professions Act, a partnership, corporation, or other entity engaged in the practice of professional engineering or professional geoscience is entitled to carry on such practice in its own name provided that it has a Certificate of Authority. APEGM's powers to deal with such "group practice" are laid out in the Act, together with any By-Laws written thereunder. In order to develop these By-laws, Council approved documents dealing with incorporation, categories of entity, requirements for a Certificate of Authorization, and insurance requirements for a Certificate. Furthermore, legal counsel for APEGM has provided an opinion that the requirements for a Certificate of Authority depend upon the "point of interface between the operating entity and the consumer." In counsel's view, this restriction arises from the definition in the Act of the practice of professional engineering in which engineering is viewed as a "service" rather than the goods or products that result from that service. Thus, in this view, a trailer manufacturer selling "off the line" standardized trailers would not require a certificate because the design and testing work (which must be done by a professional engineer or the holder of a Certificate of Authority), is being "consumed internally" and not being provided at the point of interface with the public.

Our new Act has also drawn attention to The Limitations of Actions Act of Manitoba. Council reviewed a position paper on reforming the Act prepared by a Task Group from APEGM and the Consulting Engineers of Manitoba and approved the proposal whichproposed that the Act be amended to reduce the current ultimate liability period of 30 years to 10 years. It was also recommended that the position paper be provided to the architects, land surveyors and technologists with the request that they pursue the matter with the Government concurrently or jointly.

Council was pleased to learn that the Canadian Geoscience Council Standards Board has been able to develop recommended syllabi for geology, geophysics, and environmental science. Council members received copies of the document.

As readers of The Keystone Professional will note in this issue, the legal battle now underway with Memorial University, CCPE, and APEGN over the right to use the term "Software Engineering" , has elicited some interesting letters from our own membership. While there is an expressed desire by Deans of Engineering to see the matter settled outside the courts, APEGM's President, Dr. Ron Britton, has written correspondence presenting his concern that the academic community tends to see the problem as only an academic one to be solved by the academy. However, "there is life beyond the campus" and the action taken by universities in naming programs any way they choose, can have serious consequences for the Associations who are given the responsibility of enforcing the Acts under which they operate. ■

New Dean of Engineering

Continued from page 4

and use specific systems. A training period within any institute is a reality and companies have to recognize this. We will produce graduates who can be trained quickly and effectively and retrained again if necessary. **We are educating for a career, not a particular job.**

On continuing education: I believe that education does not end after students walk across the stage to receive their degree. We must look for continuing education to maintain our skills. We are currently looking at the idea of a post-baccalaureate diploma. The program would be inter-disciplinary with ten courses taken from a number of available departments. We now have a management minor for our engineering program where 18 credit hours of management courses in addition to the core engineering requirements earns a minor in management. This has led us to explore ideas such as joint degrees in engineering and computer science, or civil engineering and architecture. The latter would take longer to complete, but would allow a graduate to be registered as both an architect and an engineer.

On the proposed engineering building refurbishment: We will need considerable financial commitment from both local companies and past graduates. I will be speaking to organizations such as technical societies and the chamber of commerce to get across the message of what engineering is all about. Engineers are the enablers of civilization. If there were no engineers we would not enjoy the standard of living that we have today. This is why I take the preparation of every generation of engineers so seriously.

On APEGM membership: At least 65% of the APEGM members are graduates of the University of Manitoba. We can be very proud of that. My plan is to build and maintain that pride. We need assistance from the current membership to raise the profile of engineering at the University of Manitoba. We expect the practitioners will give us their commitment to help us to the position I know we can achieve – being the best Engineering Faculty in Canada. ■

Public Safety Message

RUFFNECK Heaters – XL4 Retrofit Program

RUFFNECK Heaters of Calgary, Alberta, has voluntarily launched a retrofit program involving approximately 11,000 XL4 hazardous-location electric air-heaters manufactured prior to March 5, 1999, and sold throughout Canada, the mainland United States, Alaska, and overseas. The retrofit also includes heaters manufactured under private label for Modine Manufacturing Company (HEX4 series), Crouse-Hinds (EXH4 series), Stelpro Heating (XUH series), and Ouellet Electrical Heating (OAX series).

These industrial heaters are primarily used to heat buildings in the energy industry. Other users include pulp and paper mills, coal mines, hazardous-waste-storage facilities and waste-treatment plants, etc.

Since the introduction of the XL4 heater in 1993, three rupture incidents have occurred. Property damage was minimal and there were no injuries. Following inspections by a third-party engineering firm, and in-house testing at RUFFNECK Heaters, it has been determined that XL4 heat-exchangers can develop internal gas pressure that may lead to an eventual rupture.

RUFFNECK Heaters is very proud of its exemplary safety record and has worked diligently to develop a retrofit to address this potential problem. "While we believe the potential for problems with these heaters is very slight", says Kevin Starozik, the company President, "we have a commitment to the total safety of our customers and our products."

RUFFNECK Heaters is asking anyone who uses an XL4 heater, or its private label equivalent, to register with us immediately to receive details of the retrofit program. Please visit our website at www.rhretrofit.com, or contact us by phone (403) 291-5488 or toll-free at 1-800-661-8561 U.S. & Canada. ■

Annual Reports

Director of Admissions' Report



S.M. Matile

Between August 1, 1998, and July 31, 1999, this Association received 502 applications. Of these, 35 were referred to the Academic Review Committee for the assessment of the applicants' academic credentials, 155 were enrolled as Engineers-in-Training (EITs), 120 were registered under the Inter-Association Mobility Agreement, 16 were re-instated to membership, and 90 EITs became registered as professional engineers. In addition, 70 non-resident Canadian and U. S. Engineers were granted temporary licences to practise engineering in Manitoba, and applications for registration under the grandparenting criteria were received from 14 geoscientists. On top of this, approximately 531 EIT and corresponding supervisor reports were considered by our incredibly hard-working Experience Review Committee.

A major undertaking for the Admissions Department this year was the development of procedures for the registration of geoscientists and geoscientists-in-training (GITs). (When the Engineering and Geoscientific Profession Act was proclaimed on June 29, 1998, there was absolutely nothing in place for the registration of geoscientists - only the results of a survey, conducted in April, 1998, indicating that yes, indeed, the geologists and geophysicists in Manitoba were in favour of professional registration under a combined Act with the engineers.)

The process started with the revision of the Code of Ethics to include geoscientists (approved by the membership in November, following the Annual General Meeting). Next came the recruitment of geologist Ray Reichelt, P. Geo., to the Experience Review Committee, and geologist Nancy Chow, Ph.D., and geophysicist Ian Ferguson, Ph. D., to the Academic Review Committee. Then came the replacement of the engineers' professional practice seminar and examination with the more generic national Professional Practice Examination, which all geoscientist applicants would be required to take. "Grandparenting" criteria, to provide an opportunity for all practising geoscientists to become registered without unnecessary hardship, were developed, as were application forms and associated information packages. These became available to geoscientists in January, 1999. The first national Professional Practice Examination was conducted in Manitoba in April, 1999.

Meanwhile, the Association's database had to be modified to accommodate the incorporation of geoscientists into the system. This was accomplished in April, and our first two geoscientists were registered in May. The geoscientists already registered as professional engineers were also asked to exchange their P. Eng. seals and certificates for P. Geo. seals and certificates. Sixteen of them did so (the first, Dan Bosowec, was recognized at the APEGM awards ceremony during National Engineering Week), and 11 others received P. Geo. seals and certificates in addition to their P. Eng. credentials.

To enable us to enroll GITs, criteria for the academic qualification of a "P. Geo." had to be developed, and acceptable geoscientific work experience had to be defined. While the experience requirement was quickly developed and agreed upon, the academic requirement was somewhat more complicated. However, by the end of July, 1999, all of the i's were dotted and the t's crossed, and the geoscientists were notified, early in August, that the Association is now accepting applications for GIT enrollment.

On August 9, the Geoscientist Grandparenting Task Force (GGTF) met for the first time, and considered eight applications for registration (two had previously been approved by the Registration Committee, based on registration as professional geoscientists with other Associations). Two of the first-time applicants were registered in

Continued on page 10

Canadian Council of Professional Engineers / Conseil canadien des ingénieurs

2000

National Scholarship Program Competition

MELOCHE MONNEX, which offers you the home and automobile insurance program endorsed by the Canadian Council of Professional Engineers, is proud to be associated with this scholarship. Our support of this program reflects our own commitment to professional development and continuous improvement, which helps us provide you with high quality services.

Through the CCPE National Scholarship Program, MELOCHE MONNEX offers two scholarships annually in the amount of $7,500 each to provide financial assistance to engineers returning to university for further study or research in a field other than engineering. Candidates must be accepted or registered in a Faculty other than Engineering.

Deadline for all applications
is April 1st, 2000.

For further details, contact your provincial or territorial professional engineering association/ordre, or the National Scholarship Program, Canadian Council of Professional Engineers, 401-116 Albert Street, Ottawa, Ontario K1P 5G3

Fax: (613) 230-5759
E-mail: lynn.villeneuve@ccpe.ca
Website: http://www.ccpe.ca

Meloche Monnex
Where insurance is a science
...and service, an art

A Canada Trust Company

ANNUAL REPORTS ANNUAL REPORTS ANNUAL REPORTS ANNUAL REPORTS

The Kelsey Chapter

D. Harfield, *Chair*



Chapter Executive
J.M. MacLeod,
Past Chair, APEGM Councillor
B.E. Kurczaba,
Vice-Chair
J.I. Reagan, Secretary
T.P. Meier, Treasurer
J.E. Hewitt,
Member-at-Large
K.M. Pawliuk, Member-at-Large
P.G. Rowbotham, Member-at-Large
F.R. Ara, Member-at-Large

The Kelsey Chapter has been recognized by APEGM and APEGS (The Association of Engineers and Geoscientists of Saskatchewan) as a joint chapter of the two Associations since February 26, 1998. The Chapter serves Flin Flon and The Pas and the surrounding regions in Manitoba and Saskatchewan including such centres as Cranberry Portage, Denare Beach, Creighton, Cumberland House and Snow Lake. The Chapter is unique in Canada in representing two provincial associations and covering an area spread out over several smaller communities within a 2 hour drive from each other. This adds diversity and strength to its membership.

This was our second year of activity as a Chapter and we have been very fortunate to have a very active membership and enthusiastic executive. We held nine monthly meetings with presentations covering a wide variety of engineering- and geoscientist-related topics:

September 21	Presidents' Visit
October 22	Construction Materials
November 18	The Pas Bridge Repairs
January 21	Wave Power Generation
February 11	Continuing Education and Professional Development
March 18	New Ore Deposit (777) in Flin Flon
April 15	Papermill Presentation and Tour
May 20	Ducks Unlimited Projects
June 11/12	Konuto Mine Presentation and Tour

We also had a successful display booth at the Otineka Mall in The Pas during Engineering Week from March 3 to 6. The school students and staff enjoyed the "straw tower" contest.

Through the initiative of our Vice-Chair Brian Kurczaba and others in Flin Flon, we now have a logo for our Chapter. The two major industries of this area – mining and forestry – are represented by the miner's hammer as the upper right arm of the 'K', and the tree at the base. The 'K' leans forward demonstrating the progressive nature of our membership.

As we look ahead to the upcoming year, we have several significant initiatives and activities planned. In September we have our annual Presidents' Visit with representation from both APEGM and APEGS, and career symposiums for the high schools in both The Pas and Flin Flon. During the year, we intend to respond to the request from the Kelsey School Division and become involved in presentations and activities in the local schools in The Pas. This will involve volunteer training of several interested members through Innovators in the Schools. Other activities will include our Chapter AGM with the election of the new Executive, presentation meetings throughout the year, and the Engineering Week display booth and contests.

We now have a web page on the internet for improved communication with our membership as well as our parent and partnering organizations. From our web page at www.apegs.sk.ca/kelsey which can be accessed from links from APEGM or APEGS websites, individuals can be kept abreast of our upcoming activities and can find out who to contact for further information on our Chapter. We appreciate the efforts of Allan Morrison, P. Eng., in our Chapter, and Deb Kuzek of APEGS in making this happen. We encourage you to check us out!

We are very appreciative of the time and energy devoted to our Chapter and want to thank each of the executive members, members, guest speakers, and others who have made this year an enjoyable and successful year. We anticipate another exciting year ahead of us as we reach the year 2000. ■

Thompson Chapter Annual Report

T.J. Nykoluk,
Chair



Chapter Executive
K. Derksen, Vice-Chair
D. Gauthier, Secretary
H. Bloomer, Treasurer
G. Swaine,Past Chair

Greetings from north of 55° !!

Our past year up in the Thompson region was an exciting one despite challenging times with respect to the mining industry.

Our winter information session featured speaker Dave Pashniak, P.Eng. from ACRES International Ltd.

National Engineering week was celebrated at the City Center Mall in Thompson with the Spaghetti Bridge Contest. The event was very well attended with some excellent entries from the younger contestants.

A joint Thompson-Kelsey Chapter meeting held in June proved to be very informative with an underground tour of the Konuto Lake Mine.

As many return from holidays this summer, we look forward to our upcoming year with renewed enthusiasm.

On a closing note, we welcome the Geoscientists as the newest addition to the Chapter and look forward to their contribution to the Association. ■

Director of Admissions' Report

Continued from page 9

August, and the other six were approved for registration subject to their successful completion of the Professional Practice Examination.

By the end of August, 14 months after the proclamation of the Engineering and Geoscientist Professions Act, this Association had registered four new geoscientists. We expect next year's numbers, given the expiry of the grandparenting criteria on June 29, 2000, to be somewhat higher!

Another major undertaking this year was the implementation of the acceptance of Pre-Graduation Work Experience. Across the country, engineering Associations have become receptive to the concept of accepting exceptional work experience obtained prior to graduation – typically in co-op or intern program situations – as part of the four-year work-experience requirement. Given the mandatory nature of this Association's Pre-Registration Program, the introduction of the consideration of Pre-Graduation Experience was no small task. The program is now in place, however, and full details and application forms are available at our web-site.

The Admissions workload continues to rise, with no corresponding increase in staff. An official reorganization took place this year, however, whereby more staff were allocated to the admissions process, and those already involved became more so. Donna Bilodeau, our very efficient Admissions Co-Ordinator, now essentially runs the Pre-Registration Program (which is, in itself, with over 500 EITs and their supervisors reporting at least semi-annually, a full-time job). She receives the capable assistance of Lorraine Dupas and Kelly Birrell (and, during the summer months, Jean McCorrister), all of whose versatility and enthusiasm are very much appreciated. Joan McKinley, who serves as Secretary to the Academic Review Committee, continues to provide excellent service to both the Committee and our examination candidates. Thank you, all. This Association is fortunate to have such a loyal, dedicated staff. ■

Professional Development Committee

H.M. Turanli, *Chair*



Members
B. G. Bettess
R.J. Bruce
B.D. Clegg
T.J. Cornell
V.L. Dutton
G.D. Hamilton
W.T. Jackson
G. Kibria
D.B. McKibbin
M.B. Tokarz
E. Eddy *(Liaison Councilor)*

During the past year, the Professional Development Committee has primarily been involved with the following tasks:

- Organizing PD Breakfast Meetings
- Organizing a Management Seminar
- Liaison with the Member Competence Task Force
- Participation in the Annual General Meeting (AGM) Professional Development Task Force
- PDNETWORK

The PD breakfasts continued this year and the following topics were presented by various speakers:

- Information Session on MPDP
- Information Session on the PD Program at the AGM
- Criteria for Evaluation of Flood Control Measures: Red River Flood of 1997 Case Study – Dr. S. Simonovic, P.Eng.
- Meeting the Millennium Challenge – C. McMichael and K. Mason, Government of Manitoba
- (What) If It (Eastern Ice Storm) Happens Here? – V. Steciuk, P.Eng., E. Tymofichuk, P.Eng.
- Performance Contracting – R. McDowall, P.Eng.
- Effects of Kyoto Declaration on Energy Generation/Manufacturing – Dr. B. Glanville, B. Hamlin, P.Eng.
- Technical Writing – Get to the Point – R. Blicq

Planning is underway for several breakfast meetings this fall. Suggestions for topics for future PD Breakfast presentations are always welcome and may be made to any PD Committee member or the APEGM office.

A Management Seminar was held in January 1999 on the broad topic of Ethics and Professionalism in Today's Competitive Environment. There were ten speakers covering topics including *"Confidentiality Agreements and Trade Secrets"*, *"Copyright - What Does It Protect?"*, *"Searching Patent Data Bases and Reading Patents With a View To Avoid Infringement"*, *"Ethics and Professionalism"* and *"Code of Ethics for Engineers"*, *"Ethics in Mining and Mineral Exploration: The Geoscience Challenge"*.

The keynote lecture was given by Mr. Roger Boisjoly, P.E., Ethics Lecturer and Forensic Engineer. The title of Mr. Boisjoly's talk was *"The Focus on Excessive Profits versus Professionalism, Ethics and Safe Quality Products"*.

The PD Committee has been represented by Wally Jackson on the Member Competence Task Force, which was formed by the Council following the AGM last year.

The PD Committee also actively participated in developing and organizing a PD session at the 1999 AGM through the Annual General Meeting Professional Development Task Force.

The PDNETWORK was an initiative of the PD Committee to work with other technical and management organizations to publicize each others' PD activities and to offer as wide range of PD opportunities as possible to each others' members. The PDNETWORK now has been implemented and maintained by staff at APEGM, and is accessible through the APEGM web page.

The committee wishes to recognize and thank Shirley Matile, P. Eng., Ken Buhr, P. Eng., and Lorraine Dupas for their on-going support and assistance. ■

Registration Committee

K.J.T. Kjartanson, *Chair*



Members
J.W. Campbell
W.R. Newton
D.G. Osman
D.I. Waldman
C.S. Roberts
(Liaison Councillor)

The primary responsibility of the Registration Committee is to register members of the Association. This duty is carried out within the policies of Council as laid down in the Association's Manual of Admissions. The Committee reviews credentials of candidates and relies on recommendations from the Academic Review Committee, the Experience Review Committee, and Association staff in making decisions. Additional responsibilities of the Committee include the consideration of appeals against decisions of the other Committees and the staff, and the review of registration-related issues and provision of recommendations respecting the same to the Admissions Board, the Executive Director, and Council.

The Registration Committee was, once again, very busy during 1998-99. In this period, the Committee held 12 regular meetings and one special meeting. Insofar as statistics are concerned, during this past year 155 EITs were enrolled, 120 members were registered under the Mobility Agreement, 90 members were registered for the first time, 70 licenses were issued for practice, 16 reinstatements were approved and 21 Academic Review Committee recommendations were verified. Nine applications were reviewed and not approved by the Committee for a variety of reasons. Council heard one appeal against a decision of the Registration Committee respecting a reinstatement request. Council denied the appeal.

During the past year, the Committee has continued to work closely with the Academic Review Committee, the Experience Review Committee, the staff, and Council to ensure that registration procedures are appropriate. In several cases, recommendations were made to Council respecting proposed changes to the Manual of Admissions and/or the Committee Terms of Reference. It is intended that an Operations Manual be developed to assist the Committee in the carrying out of its duties. As an initial step, the Committee drafted a recommended procedure for the hearing of appeals. The Admissions Board subsequently approved the procedure.

In addition to its baseline work, the Registration Committee also reviewed and made recommendations concerning changes in the reinstatement requirements, the CCPE proposal for the consideration of pre-graduation experience, the handling of applicants for registration having transgressions with other associations, and draft recommendations from the Canadian Geoscience Standards Board to the Admissions Board or Council. The Committee, along with the staff, the Experience Review Committee and the Academic Review Committee, spent considerable time reviewing procedures for the registration of geoscientists in the Association. This included grandparenting criteria, work experience requirements, and academic qualification needs. Various miscellaneous tasks were also undertaken.

The Committee membership has not changed over the past year. The Chair has appreciated their ongoing enthusiasm and dedication. The Committee wishes to recognize and thank Shirley Matile, P.Eng., Donna Bilodeau and Dave Ennis, P.Eng., for their ongoing support and assistance which has, once again, proven to be invaluable. ■

Communications Committee

B. Stimpson, *Chair*



Members
M.E. Baril
J.A. Blatz
J.W. Bogan
V.L. Dutton
A.N. Kempan
M.W. Morrison
J.E. Nordstrom
L. Dupas, APEGM Staff
S.M. Matile, APEGM Staff

Layout: J. Toyne at Design Emporium

Once again, the Committee has been a hard-working group with each member contributing written articles and valuable suggestions and observations. Adding to the pleasure of working with such a group is the opportunity to see the fruit of our labours every two months.

The two most significant decisions over the last year were a name change and the acceptance of paid advertising. The name change was required when the new Engineering and Geoscience Professions Act was passed by the Provincial Legislature. No longer could the newsletter be called *The Manitoba Professional Engineer* as the title needed to reflect the company of geoscientists who would soon be joining the Association. Council authorized the Committee to develop a new name. The Committee chose *The Keystone Professional* on the basis that it maintains the term "Professional" while indirectly alluding to the two professions and the Province in the term "Keystone".

Many Associations now support paid advertising in their publications. Certainly, the Committee discussion on the topic did not produce the kind of concerned language that one would have heard ten or twenty years ago. Times have, indeed, changed.

We saw more written responses to articles from members than in recent years, notably with respect to the Software Engineering issue at Memorial University and the proposed Mandatory Professional Development Program (MPDP). This is always heart-warming to the Committee because it demonstrates that the newsletter is fulfilling more than its mandate of recording Association activities, but that members are actually taking the time out of their busy schedules to read it. We look forward to more member activism through the pages of *The Keystone Professional* in the years ahead.

I wish to thank every member of the Committee, the APEGM staff, and John Toyne (layout artist) for dedication to the task of producing a bi-monthly publication and their patience with the Chair, a position I will have vacated by the time this issue is mailed. To Arthur Kempan, my successor, I extend my best wishes.Enjoy. ■

Emerging Technologies Committee

J.C. Bégin, *Chair*



Members
A.S. Chadha
D.J. Fedirchuk
R.J. Hamlin
R. Kroeker
E.E. Lach
R. MacDonald
E.A. Speers
D.R. Strang
J.B. Thorsteinsson
D.S. Yarko

The Emerging Technologies (ET) Committee has a mandate to keep Council and members informed of scientific research, technological development, and innovation in Manitoba and Canada, and to identify the implications of these activities for Association members and the public.

The ET Committee met five times during the past year. One of the Committee's activities is to host luncheon meetings on topics related to research and development either in Manitoba or having direct impact on the Engineering Profession in Manitoba. Presentations are usually video-taped, and copies of the tapes in VHS format are available at the Association office for loan to members. This year, the committee hosted one luncheon presentation on the NSERC Industrial Research Chair in Infrastructure Renewal at the University of Manitoba, by Professor Dimos Polyzois.

The ET Committee also regularly publishes articles related to research and development and innovation in the Keystone Professional. This year the committee published one such article, a review of the book titled, "Technological Entrepreneurship and Engineering in Canada".

This year, in response to an appeal from the Meetings Committee and President Britton to provide help in organizing the Professional Development Conference for the 1999 Annual General Meeting, two ET Committee members joined a task group that was formed for this purpose. Plans for the conference are now being finalized.

I would like to thank the Committee members for their enthusiasm and their valued and varied contributions to the work of the Committee during the past year. Also, on behalf of the Committee, I would like to extend sincere thanks to Dave Ennis, Kelly Birrell and other APEGM staff for all their support during the year. ■

Experience Review Committee

A.D. Silk, *Chair*



Members
D.T. Anderson
C.R. Bouskill
D.S. Jayas
J.D.G. McInnis
A.J. Pollard
R.J. Partridge
R. Reichelt
P. Stanus
C.L. Stewart
C.D. Torpey
V.S. Walkes
M.E. Wilkins

S.M. Matile, APEGM Staff
D.M. Bilodeau, APEGM Staff

The Experience Review Committee assesses the experience of Engineers-In-Training (EIT) and Geoscientists-In-Training (GIT) and determines when they have sufficient experience to register. EITs and GITs are required to submit semi-annual accounts of their work experience, professional development, and professional service. A committee member will ensure that work experience is of an appropriate nature and that professional development and professional service requirements are met. Committee members' recommendations are reported at the Committee's monthly meeting. Committee members can have as many as 12 files to review during a month.

The ERC is currently working on two initiatives: the incorporation of GITs into the pre-registration program and a re-examination of our practices and procedures. The latter was brought about by the Admissions Board's review of the Manual of Admissions, which is the document that governs the pre-registration program. The committee thought that it would be appropriate to review our methods and outcomes to determine what is absolutely necessary in the pre-registration program and what could be improved or even eliminated. To that end we held a series of meetings where Committee members, former Committee members, and selected EITs examined the positive and negative features of the pre-registration program. Bob Partridge, who is one of the original members of the ERC, led these sessions.

During the past year, Ralph Eschenwecker resigned from the Committee and Dan McInnis took a leave of absence. Joining the committee were Ray Reichelt and Stirling Walkes. Bob Partridge, who is a past member of this committee, is filling in for Dan while he is on leave. ■

Discipline Committee

R.E. Scouten, *Chair*



Members
L.R. Ferchoff
G.L. Greasley
R.A. Kane
D.M. Kilgour
B.R. King
W.C. Lee
A.M. Lohse
P.J. Mignacca
G.A. Morris
D.G. Osman
L.J. Penner
D.N. Spangelo

The Investigation Committee referred three cases to the Discipline Committee, one originating in 1998, the other two in 1999. Two cases were heard in 1999, the third is pending.

A panel made up of members of the Committee heard the first case early in 1999. The results of the panel's decision and the penalty imposed cannot be reported because the case has been appealed to the Council. Council hears the appeal and makes a finding – as provided for in the Act. The decision has not been made public at the time of this report. When resolved, a summary will be reported to the membership.

The second case was heard more recently by a second panel of Committee members. The panel's decision was reported to the membership in the April issue of *The Manitoba Professional Engineer.* An appeal was not made.

A panel is being formed to hear the third case.

There were two other cases for which the Discipline Committee was asked to appoint a Committee member to consult with the Investigation Committee on penalties proposed to be levied against a member. One was resolved and the other was referred to the Discipline Committee for the hearing that is now in progress.

The Discipline Committee is concerned that its presence might be a deterrent to the taking of risk. On the contrary, members are encouraged to take risks founded upon their reasonably thorough research of the engineering problems they are asked to resolve – a recognition that no risk equates to no progress. The Discipline Committee is not here to deal with risk-taking but it is concerned with negligence arising from too little or no research, breaches of ethics (read: common sense), and unsafe practice.

To recap the workings of the Discipline Committee, the following is a repeat of a portion of last year's report:

> The Discipline Committee consists of members representing various disciplines who are prepared to serve on a disciplinary panel when called upon.
>
> A disciplinary panel compares to a judge in a court of law. It has most of the powers of a court including the power to subpoena witnesses and evidence.
>
> Typically, each case is heard by a selected panel of two or more members and a lay person (a recent requirement under the new Act). The panel has its own legal counsel to advise on procedure.
>
> The Investigation Committee lays the charge and, through its legal counsel and witnesses, presents oral and documentary evidence to the panel.
>
> The investigated member, usually represented by legal counsel, responds to the charge with countering documentary evidence and the testimony of witnesses.
>
> The hearing might take several days after which the panel studies the evidence and makes its judgement.
>
> Penalties, if any, range from a reprimand to restricted or total suspension of practice. All or some of the costs may be included in the penalty.
>
> The hearing is conducted in a formal manner that follows many of the rules of court procedure such as prior disclosure of documentary evidence, examination and cross-examination of witnesses, and the recording of oral testimony.
>
> The panel must ensure and uphold the obligations of a court of law, including:
>
> the investigated person's right to a fair and impartial trial,
>
> a high standard of impartiality, and a
>
> judgement of the facts based on a standard of proof commensurate with the charge.

On behalf of our Association I wish to thank members of the Committee who gave their time and attention to fair consideration of the professional and ethical problems upon which they were asked to rule. The Committee is also thankful to the lawyers who advised each of the parties.

Staff support was thorough and very much appreciated by the Committee. ■

Practice Standards Committee

F.L. Nicholson, *Chair*



Members
M.S. Anderson
K.G. Bolton
I.R. Dewar
E. Ferbers
M.J. Frye
E.I. Lexier
R.N. McPhail
D.G. Mulder
R.H. Payne
B.J. Rossen
T.L. Stratton
J.A. Thomson
D.I. Waldman
E. Weiszmann

The purpose of the Practice Standards Committee is to ensure that membership of APEGM is provided with information on current best practices of engineering.

The following standards are currently being developed:

General Practice Standards:

- Guidelines for the Development of Mechanical and Electrical Services for Buildings
- General Review of Construction
- Guideline on Commissioning
- Guideline for the Provision of Engineering and Geoscientific Services
- Guideline on Duty to Report
- Guidelines for Technical Review of Engineering and Geoscientific Work
- Guidelines on Provision of Design-Build Services
- Standards Required under the Report on the Building Envelope
- Land Surveyors – Manual of Good Practice

Updates to current standards:

- Guide to the Engagement of the Consulting Professional Engineer
- Guide to the Ethical Use of the Seal (including electronic use of the seal)

The Committee has met seven times since its inaugural meeting in November of 1998. Activities included determining which practices were in need of guidelines or standards, selecting chairpersons for each topic area, obtaining volunteers to serve on the sub-committees, and developing a work plan.

Fortunately, guidelines in many of these topic areas had been developed by other Associations, such as APEGGA and PEO, and these are being reviewed by the sub-committees as a base from which to create a document which will meet our needs. Reasonable progress is being made. It is expected that the first of these new standards and guidelines will be reviewed by the Committee this Fall, and, following approval by Council, will be available both in print form and on the Association's web site.

It has been a real pleasure to be part of this dedicated group of volunteers. I thank them for their hard work and support. And of course, Dave Ennis and the staff continue to be a wealth of information and assistance to the Committee, for which we express our sincere appreciation. ■

Investigation Committee

W.M.A. McDonald, *Chair*



Members
D.E. Cross
T.H. Gillman
D.G. Hodgkinson
R.P. Hoemsen
R.A. Johnson
S.I. Kalichuk
E.I. Lexier
W.J. McCulloch
J.R. McDougall
I.H. McKay
J.A. Terris
S.L. Ursel
A.E. Ball *(Liason Councillor)*

The Investigation Committee is involved in the investigation of complaints and concerns received from both the public and members of the Association, as well as to consider questions on professional conduct received from Association members. The actions of the committee are conducted under the authority of Part 9 of the Act and guided by By-Law 43, the Code of Ethics, and the Mission Statement of the Association:

> ***"To serve and protect the public interest by governing and advancing the practice of engineering in accordance with the Engineering Profession Act of Manitoba."***

In the last year the committee held ten meetings. In addition, numerous sub-committee meetings were held to review the various complaints, concerns and questions received. A total of 31 files were reviewed; of these, thirteen were carried over from the previous year, 18 were new complaints and concerns. The present status of these files are eight are ongoing, 16 were dismissed, one formal caution was issued, one 30-day suspension was issued with the written consent of the member, three were referred to the Discipline Committee, and two involved responses to questions submitted by members.

Of the Complaints/Questions received:

- 8 resulted from situations where an engineer was concerned with the action of another engineer.
- 23 complaints resulted from concerns of various agencies and individuals on the conduct of engineers, including 4 which involved design and/or inspection of residences.

The committee is at present examining the Mediation process with the thought that this process might, in some cases, be more expedient than a formal investigation, especially in disputes between members.

Support staff, as in the past, has provided enthusiastic and dedicated service, before, during and after normal working hours. The assistance of Kelly Birrell, Charlie Bouskill, and Dave Ennis allowed the Committee to function in an effective, efficient manner. ■

Legislation Committee

D.N. Spangelo, *Chair*



Members
R.M. Gordon
J.S. Hicks
R.A. Johnson
J.M. MacLeod
J.E. Reimer
P.V. Remillard
D.G. Ford
S.A. Mailey
D.A. Ennis, APEGM Staff
S.M. Matile, APEGM Staff

This year marked a significant shift of focus for the Legislation Committee. With the new Act passed last year, the Committee has been busy this year rewriting the By-laws required by this new Act. This has required a complete rewrite of the existing By-laws. Both the format and wording have been changed from the existing By-laws for consistency with the new Act.

Members have worked rewriting numerous components of the By-laws while staff, particularly Dave Ennis, has worked on components related to administrative details. Issues and concerns with the existing By-laws that have been raised over the years have also been addressed at this time.

It is the Committee's intent to have members vote on these new By-laws this fall. Details will follow for your review.

I would like to thank all Legislation Committee members, both present and past members, as well as Dave Ennis and other staff, for their contributions. ■

Women in Engineering Advisory Committee

E.S. Swatek, *Chair*



Members
B.A.K. Danielson
C.E. Geddert
R. Hutchinson
H.D. McKibbin
M.S. O'Laughlin
K.F. Olischefski

The mandate of the Women in Engineering Advisory Committee (WEAC) is to address issues involving the concerns of women in engineering so as to enable their full participation in the profession and in Association activities. The majority of WEAC's activities in 1998-99 focused on the challenges associated with the balancing of career and family.

Recognizing the many challenges associated with balancing career and family, work on a flexible workplace document was initiated under former WEAC Chair Kelly Olischefski. The intent was to prepare a document that could serve as a reference tool for professional engineers and their employers when considering flexible workplace arrangements. Under Brenda Danielson's direction this document has been completed. The document focuses on seven practical flexible working arrangements: flexible-hours, job-sharing, permanent part-time work, telecommuting, v-time, on-site day care, and phased retirement. Plans are underway to present the document in a serialized form in future issues of *The Keystone Professional.*

The APEGM provided financial support to the Exploring Engineering Conference organized by the University of Manitoba Faculty of Engineering. WEAC members were involved as presenters and workshop leaders at this conference.

Meaghan O'Laughlin represented WEAC on the Canadian Coalition for Women in Engineering, Science, and Technology (CCWEST). CCWEST efforts in 1998-99 focused on the organization of *New Frontiers, New Traditions* – a National Conference for the advancement of women in engineering, science, and technology to be held in St. John's in July, 2000.

I would like to take this opportunity to thank all committee members, Shirley Matile, Dave Ennis, and the APEGM office staff for their assistance throughout the year. I also welcome new committee member Robin Hutchinson. ■

APEGM VISION

APEGM is the leader and a facilitator of the process that ensures excellence in engineering, geoscience and applied technology for the public of Manitoba.

APEGM

Safety in Engineering Practice Committee

F.A. Roberts, *Chair*



Members
M.S. Anderson
D.N. Burmey
D.E. Cross
A.O. Dyregrov
M.J. Frye
B.P. Gojkovic
R.E. Gottfred
W.T. Jackson
J.S. Sagoo
P.T. Sims
J.V. Weiszmann

Safety in the practice of engineering begins with good design and thoughtful consideration of all aspects, both present and future. Of equal importance is verification by the engineer of the proper application of his/her design in the completed work.

Issues that members bring to the Safety in Engineering Practice Committee most often arise because some aspects of design or verification are either being overlooked or ignored. Often, circumstances have arisen that hindered these processes.

The full committee generally refers technical consideration of an issue to a subcommittee comprised of committee members and experts from the membership at large. The following will highlight several of the issues that have come before the committee during this past year.

The Engineer and the Design-Build Contract

Engineers who provide services to design build contractors find themselves facing a number of unique problems. Designs can suffer when engineers are engaged for specific disciplines but no one is engaged to provide the overall coordination of the design. In this way, design issues can be missed and assumptions made between the disciplines can result in conflicts as well as the potential for hazards or financial loss to the ultimate owners.

Conflicts of interest can arise when engineers are asked to certify payments from the owners to their clients whose work they are obliged to inspect. Conflict of interest also occurs where the cost implications of a design result in pressure from the client to take a cheaper but perhaps less desirable solution.

While there are many examples of successful design-build projects, engineers must be aware of the pitfalls and be prepared to take tough stands where necessary.

The committee has recommended that this issue be referred to the Practice Standards Committee to prepare a guideline for members that will be useful in setting the ground rules at the beginning of a contract.

Flood-Protection Dikes

Following the "Flood of the Century", there has been a considerable amount of activity in the design and construction of structures that will prevent future flood losses.

Unique designs are being considered for "assembly dikes" that can be used to protect individual property owners by assembling just prior to a flood and then dismantling once the danger is over. These structures are useful where the weight of permanent dikes can result in riverbank instability and where owners simply do not want to have their views obstructed by a permanent earth dike.

Continued on page 17

Sports and Social Committee

C.N. Perrett, *Chair*



Members
J.F. Lavergne
(Vice Chair)
B.W. Biglow
(Past Chair)
M.E. Baril *(Scribe)*
H.F. Lobo
J. Pereira

The purpose of the Sports and Social Committee is to organize and conduct sporting and social events as venues for member interaction and networking. The Committee helps to promote pride in, and a sense of, belonging to the profession.

This past year the Committee organized the following activities:

- Golf tournament at Teulon on September 9, 1998, using an individual ball format.
- Curling bonspiel at the Fort Garry Curling Club on November 17, 1998. The day was packed with fun and the Committee would like to see an increase in attendance in the future.
- Golf tournament at Quarry Oaks on June 2, 1999, using a best-ball format. Thank you to all organizations that sponsored holes and donated prizes. Your continuing support is greatly appreciated.

In the next year the Committee plans on organizing a fall golf tournament, curling bonspiel, pool tournament, and a spring golf tournament. Please feel free to contact members of the Committee to voice concerns of the current activities and to discuss possible new activities.

The Chair thanks all Committee members and would also like to welcome Jamie Pereira to the committee. ■

Environment and Sustainable Development Committee

C.E. Anderson, *Chair*



Members
P. Janzen
D.M. McCartney
D.G. Osman
G. Rempel, Vice-Chair
L.J. Van Dusen
K.A. Buhr,
APEGM Staff

The inaugural meeting of the Environmental and Sustainable Development Committee (ESDC) was held on June 17, 1998, and subsequent to that, six additional meetings up to June 2, 1999, have been held.

The activities of the Committee have included:

- Updating the APEGM Sustainable Development Policy to reflect the membership of the geoscientists in our Association.
- A brief on the Kyoto Protocol was prepared by Jean Van Dusen for reference by Ron Britton to CCPE Council.
- An article entitled "The Undergraduate Option in Environmental Engineering is Growing" was prepared for the April 1999 issue of *The Manitoba Professional Engineer* by Daryl McCartney.
- An article entitled "The Kyoto Protocol – Opportunities, Challenges and Obligations" was prepared by Jean Van Dusen for the August, 1999, issue of *The Keystone Professional.*
- Articles have been prepared by George Rempel and Paul Janzen for subsequent issues of *The Keystone Professional.*
- George Rempel represents APEGM on the Sustainable Development Awards Independent Evaluation Committee and the Scholarship Awards Committee, both being sub-committees of The Manitoba Round Table.

The Committee will continue to monitor environmental and sustainable-development issues and report to the Issues Awareness Board and APEGM membership as appropriate. Comments from the membership are welcome so that we may serve you better. ■

Awards Committee

D.G. Osman, *Chair*

Members
M.A. Barakat
J.R.C. Doering
E.E. Lach
C.L. Lichkowski
S.H. Rizkalla
C.V. Thio
P. Washchyshyn



The Awards Committee is responsible for providing recommendations to Council for recipients of APEGM Awards and for nominees for the CCPE Awards.

The Association of Professional Engineers and Geoscientists of the Province of Manitoba's annual Evening of Recognition, convened in March, 1999, was very successful. There were three awards presented. Dr. John (Jay) Doering, P. Eng., Department of Civil and Geological Engineering, University of Manitoba, received the Early Achievement Award, and Dr. Howard C. Card, P.Eng., Department of Electrical and Computer Engineering, University of Manitoba, received the Merit Award. The Certificate of Engineering Achievement Award went to InfoMagnetics Technologies Corporation (received by Dr. Moe Barakat, P. Eng.) and Professor Lot Shafai, P. Eng., Department of Electrical & Computer Engineering, University of Manitoba, and Mr. G. S. Pizey, P. Eng., Design Engineer, Industrial Technology Centre, Winnipeg. There was a new award category for the Committee to consider this past year. The Leadership Award is intended to recognize those achievements where a person or group of persons initiated a project or undertaking and had the involvement of professional engineers thereafter. The first Leadership Award was presented to Mr. Ernest Armitt for the Pisew Falls "Rotary" Bridge.

The Awards Committee advises that there will be two award recipients at the next Evening of Recognition in the fall. In addition to the above awards already granted this year, Council has, upon the recommendation of the Awards Committee, resolved to award the Outstanding Service Award to Ms Cathy Stewart, P. Eng. of Inco and the Honorary Life Membership Award to Mr. Walter Saltzberg, P. Eng. The Awards Committee has had the good fortune of having a very good slate of candidates for these awards and wishes to advise the membership that we are always looking for nominations. The above recipients are considered to be very deserving of the awards for their considerable contribution to the APEGM. The public's image of the engineers of Manitoba and Canada has been greatly enhanced by these individuals.

We are looking for your input to this process to ensure all deserving candidates are given consideration. Please contribute to the process by nominating a fellow professional or non-professional for any of the appropriate awards that APEGM or CCPE has to recognize the efforts and achievements of its members. It is important that the membership continue to contribute to the process.

I would like to thank Joan McKinley and all the Award Committee members for their significant efforts over the last year. It has been a pleasure working with you. I wish to thank Lawrence Ferchoff, P. Eng., Nadia Maksymiw, P. Eng., and Cathy Stewart, P. Eng., for their significant contributions over the last few years. Additionally, I would like to welcome new members Jay Doering, P. Eng., Peter Washchyshyn, P. Eng., and the first EIT, Clifford Lichkowski. ■

Issues Awareness Board

R.N. Matthews, *Chair*

Members
C.E. Anderson
M.S. Anderson
J.C. Begin
M.G. Britton
B.A.K. Danielson
D.N. Spangelo
P. Washchyshyn
D.A. Ennis,
APEGM Staff



This was the first year of operation for the Issues Awareness Board (IAB). The purpose of the IAB is to receive reports from six APEGM committees and report on the leading issues to Council. A requirement of the IAB is that the Chair of the Board must be a member of the APEGM Council.

The IAB met for approximately two hours on the following dates: November 18, 1998, January 13, 1999, March 17, 1999, May 19, 1999 and September 1, 1999.

A summary of the topics presented to the IAB will not be presented here as these issues are covered under the respective committee submissions. Exceptions are:

- consideration of a survey of the range of employment conditions for professional engineers across Canada. It was noted that, with few exceptions, professional engineers in Manitoba and other provinces are excluded from the equivalent of the Employment Standards Act. It was concluded that, for the time being at least, APEGM should not take a position in the matter;
- a recommendation to the Council that the Association not make a presentation to the Capital Region Review Board of the Province of Manitoba; and
- a preliminary review of a very interesting survey of graduates of the Faculty of Engineering at the University of Manitoba conducted as part of the Association's University liaison activities. ■

Salary Research Committee

E.G. Parker, *Chair*

Members
W.B. Todd
W. Czyrnyj
G. Norberg
I. Mikawoz
A.M. Mian
D.D. Mann



To satisfy our objective of providing salary information for use by the public and Association members, the Salary Research Committee conducted its annual employer salary survey this spring. In addition, an employee survey was completed in May. A report on the results was distributed with the summer edition of *The Keystone Professional.*

This year, for our employee survey, we received 544 responses, which is a 5% increase in the number of responses from last year. The members reported an average increase of 5% in base salary for the year ending April 1st, 1999. The median salary increase was 2.5%. In terms of job function, the three largest categories were Management, Design Engineering, and Consulting. The detailed report is also available at our website (www.apegm.mb.ca). It has links to membership salary information from British Columbia, Alberta, Saskatchewan, and Ontario.

The committee is currently revising the APEGM Job Classification Rating Guide to simplify the rating process and include the Geoscientist/Geologist job functions in the comparative job descriptions. The committee is also reviewing the use of our website in the collecting and disseminating of the survey information.

Thank you to the members who completed our survey and a special thanks to those employers who provided their corporate salary data to the committee. Many thanks to the committee members for their efforts this year and to Dave Ennis and Joan McKinley for their continued support. Finally, a special thanks to Ken Buhr for the excellent presentation of the survey information at our website. ■

Nominating Committee

P. Washchyshyn,
Chair

Members
M.G. Britton
V.M. DeWiele
J.R. Hosang
W.M.A. McDonald
A.D. Silk
C.L. Stewart
J.M. Symonds
H.M. Turanli



The Nominating Committee continued its task under the reorganization of committees under ORAP and commenced last year under the very capable chairmanship of J.M. Symonds. Two of the members are elected from the floor at the Annual General Meeting. Last year's committee broke ground in the new process that greatly assisted the current committee in fulfilling its task. However, there are still growing pains that will need to be addressed over the years to come.

Under the committee structure, over 200 volunteers are required to fill the committees, thereby fulfilling the mandate of APEGM. The current list of APEGM serving volunteers is in the order of 190 with a waiting list of some 60. The waiting list is made up of Professional Engineers and Geoscientists, and Engineers- and Geoscientists-in-Training, who have indicated their interest in committees and, as soon as vacancies exist, will be nominated to committees of interest.

The first committee meeting of the year was on November 23, 1998, followed by six meetings leading up to the AGM. Seven very capable nominees for four vacant Council positions have been nominated. Committee rosters, in accordance with ORAP have been filled. As mentioned above, APEGM is fortunate to have waiting lists of volunteers eager to serve on many committees.

The new Act continues to provide for the appointment of two lay-councillors. Similarly, certain committees require members from the general public to serve. To assist, and in the interest of fostering cooperation with other associations, we have notified other associations such as the College of Physicians and Surgeons and the Manitoba Association of Optometrists, inviting them to nominate members for consideration for appointment to our Council and committees. In the same invitation, we have offered to reciprocate by nominating APEGM members to their committees. We have had favourable response from a number of associations that will require follow-up in the new year.

The strength of our Association is very dependent on the quality and dedication of members and members-in-training serving on the Council and the various committees of the Association. The members of the Nominating Committee have worked diligently, focussing on the role that each nominee must play in the well-being of the Association. ■

Admissions Board

D.G. Chapman *Chair*

Members
E. Eddy
(Liaison Councillor)
K.J.T. Kjartanson
S. M. Matile
(Secretary)
A.D. Silk
(Vice-chair)
B. Thomson
(Liaison Councillor)



This was the first year of operation of the Admissions Board – a Board reporting to Dave Ennis as Registrar. The Board was established to deal with broad registration issues and detailed registration policies (Council sets the over-arching Registration Policy) and to provide a forum for co-ordination of the committees involved in the registration process.

The Board met five times in the last year and dealt with a range of important issues, including:

- registration of geoscientists, including grandparenting of geoscientists,
- registration-related appeal processes,
- professional practice seminar/examinations,
- changes to the policies and procedures of the Experience Review, Academic Review, and Registration Committees,
- the use of lay members on registration-related committees,
- recommendations from CCPE on international agreements.

To ensure a fair and open appeals process, the Board does not discuss specific registration cases. As the membership list indicates, the members of the Board include the Chairs of the three registration-related Committees and two members of Council. At this time, both Councillors are also lay representatives. It is intended that there will always be at least one lay member on the Board.

I would like to thank the Board members for their contributions. ■

Safety in Engineering Practice Committee

Continued from page 14

While offering attractive solutions to property owners, there are many dangers that may only become evident at the peak of a flood, possibly long after a designer's involvement has ceased. The availability of the proper materials and fasteners and the skill of the installer can mean the difference between a structure that performs as designed and one that will fail under the weight of rising waters.

Because of the increased interest in this type of dike, engineers are being asked to undertake these designs, often as a new venture. The SEPC recently issued a bulletin warning members of the important design issues that must be considered. The bulletin cautions that all such designs should include a multidisciplinary approach with a geotechnical study, hydrological design to consider the effects of water and ice momentum, as well as the structural design. The committee would like to emphasize that without this multidisciplinary approach, failures may occur resulting in loss of life and property.

Snow Removal from Building Roofs

The SEPC has reported to members on the impact of the rather significant changes recently made to the National Building Code when calculating snow loads on large roofs. This past year we have issued a bulletin to members outlining problems that must be considered when preparing procedures for the removal of snow in order to avoid damage to the structure.

The committee is in discussion with building authorities to issue a bulletin to building owners and property managers outlining these same cautions and emphasizing the requirement for a proper procedure when removing snow from roofs.

Thanks to Committee and Subcommittee Participants

I wish to thank the committee members, who have given a great deal of their time and those from the membership at large who have joined to share their expertise in tackling difficult technical problems on the various subcommittees.

On behalf of the committee, I would also like to thank Mr. Dave Ennis for his considerable personal efforts and support of the work of the committee. ■



COMMITTEE REPORTS COMMITTEE REPORTS COMMITTEE REPORTS COMMITTEE REPORTS

Advocacy & Member Services Board

C. S. Roberts, *Chair*



Members
D.G. Osman
E.G. Parker.
C.N. Perrett
R.H. Bernhardt

Under our new organisational structure at APEGM, several new Boards report to the Executive Director. These Boards represent committees that deal with non-mandated issues and, ultimately, assist the staff in serving the membership. The Advocacy and Member Services Board consists of the Chairs of the Awards Committee, Salary Committee, Sports Committee, Image Enhancement Committee, and Education Support Committee. (The Education Support Committee does not yet exist due to lack of a Chair.) A Councillor is appointed as Chair.

As a new Board, we were slow to start, and met only once. Our initial discussions focussed on educating the other members on each committee's activities. In addition, we discussed concerns, overlaps, and opportunities. The Board intends to identify and implement ways that the web page can be used for communication of member services, as well as image enhancement related to these committees (e.g., drawing attention to our "heroes").

An additional future initiative for the Board is to work with the Nominating Committee to identify a Chair and members of the Education Support Committee. This will eventually take some of the load off those on the Image Enhancement Committee by taking over some of the responsibilities of the old Public Awareness Committee. Some of my old colleagues from the former PA Committee, who focus on school outreach, might consider taking on this leadership role! ■

Academic Review Committee

D.G. Chapman, *Chair*



Members
K.M. Adam
S. Balakrishnan
E. Bridges
N Chow
I. Ferguson
D.S. Jayas
W.M. Kinsner
R.J. Partridge
R.W. Menzies
N. Rajapakse
H.M.H. Soliman
B. Stimpson
K.N. Tandon
D.M. Weiten
S.H. Rizkalla *(Liaison Councillor)*

The Academic Review Committee (ARC) assesses the academic credentials of all applicants for registration who are not graduates of programs accredited by the CCPE's Canadian Engineering Accreditation Board (CEAB). Its purpose is to ensure that everyone registered with the Association has attained a level of education at least equivalent to that obtained by graduates of CEAB-accredited programs.

The ARC uses the degrees, transcripts, syllabi and other information submitted by the applicants to determine whether, and which, technical examinations should be assigned. The examinations are selected from 11 syllabi prepared by the CCPE's Canadian Engineering Qualifications Board (CEQB). Joan McKinley, the Secretary to the ARC, arranges for the preparation of the examination papers and organizes the examination sessions. The ARC monitors the progress of candidates who have been assigned examinations, and evaluates their performance on these examinations, until the committee is satisfied that the applicant is academically qualified for registration. The ARC also establishes the date of academic qualification, which impacts on the acceptability of some of the work experience of the applicants. During the year, 18 applicants completed their assigned examinations and 16 of those were then considered academically qualified.

In the past year the ARC assessed 35 applicants, assigning a total of 66 examinations. The committee also considered five reassessments and four appeals on various grounds.

During the last year, the ARC also considered one applicant with an accredited degree who was not able to meet the admissions criterion for experience to have been obtained within ten years of receipt of the degree. The applicant was asked to pass two examinations before registration. Lastly, the ARC was asked by the Registration Committee for an opinion on an individual who became registered in another association without having completed the requirements assigned several years ago by the ARC.

The CEQB syllabi and associated recommendations for minimum standards for registration are reviewed and revised by CEQB on a regular basis. This year, 19 new or revised syllabi were adopted by the ARC and the committee is now reviewing and updating its procedures and policies to reflect both the recommendations from CCPE and the cumulative experience of the ARC members.

As well this year, the ARC welcomed two geoscientists, Drs. Nancy Chow and Ian Ferguson, to the Committee. They have worked to complete criteria and procedures related to the registration of geoscientists, and the ARC will soon begin evaluating geoscience applicants.

I want to thank the ARC members for their conscientious work dealing with difficult and unique situations. As a Committee, we learn from each case and attempt to use that information to improve our work. This process is not always easy. I also wish to recognize the dedicated and very supportive work of Joan McKinley, who handles the administrative work of the committee and the examination process. ■

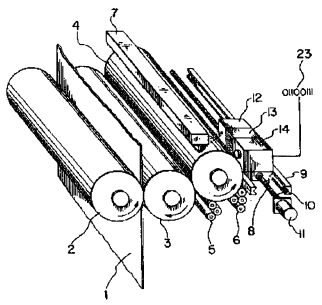
COMMITTEE REPORTS COMMITTEE REPORTS COMMITTEE REPORTS COMMITTEE REPORTS

Global Climate Change

By: B. Stimpson, P.Eng.

Page 15 of August's issue of *The Keystone Professional* raised some eyebrows. Entitled "Geoscientists Question Reality of Global Warming", it summarized the views of some geoscientists who question the supposition that human activities could cause warming of the earth's climate. The purpose in preparing the article was not to put forward a personal position. Indeed, my professional background and experience does not qualify me as an expert in this area. Rather, the objective was to inform and provoke the reader by presenting a contrary position on an issue which is presented by the media and our political leaders as one of the most important challenges facing humankind, and in particular to give our predominantly engineering readership some further insights into the role of geoscience in this vital debate. Other scientists, of course, hold to the view that global warming is due in part to human activities and consider the assertion that there is no supporting evidence as a "popular myth" (see www.ucsusa.org/warming/gw.myths.html).

My attention has also been drawn by an APEGM member to another valuable resource on the World Wide Web. The Pew Centre for Global Climate Change (www.pewclimate.org/about/), which was established in 1998, involves a group of leading companies who work with the Centre to educate and encourage for the reduced emissions of greenhouse gases. The Centre's reports particularly focus on environmental impacts, economics, and policy issues. ■



U.S. Patent # 5,713,287

One of hundreds of great ideas at Creo that made it from the drawing board to the market.

Are you an inventor? We turn ideas into products.

Remember why you chose a career in mechanical engineering? Chances are you were hoping to make a real difference... not prototypes that sit on a shelf collecting dust.

Imagine using lasers to write gigabytes of data onto printing plates the size of a whiteboard – 240 tiny spots at a time – with micron accuracy. At Creo, we develop and manufacture computer-to-plate (CTP) digital imaging systems. Printers around the world rely on our products every day to prepare plates just minutes before press time.

'Creo' means 'I create' and 'I believe'. We **create** and manufacture at all levels: from research, design and development to the production of fully automated systems as big as a city bus. Since 1983, our engineering teams have developed the world's first terabyte optical tape recorder, the world's first automated commercial CTP imaging system and numerous other award-winning systems and patented technologies.

Mechanical Engineers & Technologists

Our team requires a number of people with experience in the following areas:

- Machine design
- Pneumatics
- Fluid flow
- Applied robotics
- Solidworks CAD
- Mechanisms
- Precision mechanics
- Casting
- Vibration analysis
- Automation
- Sheet metal and plastics design

We **believe** in the potential of our industry and the talent of our people. With 1,400 employees – 400 dedicated to R&D – we're committed to driving the future of digital imaging. In fact, our company has been growing by 30% a year to meet increased demand.

Headquartered in Vancouver, Canada, Creo is built on a foundation of solid technology, economic thinking and a healthy measure of fun. Our unique work environment is based on self-management, focused teamwork, decentralized decision-making, profit-sharing and performance-based compensation. As a result, our personnel turnover rate is one of the lowest in the high-tech sector.

Like to know more?

CREO®

imagine. create. believe.

Creo Products Inc. 3700 Gilmore Way, Burnaby B.C. Canada V5G 4M1 phone (604) 451-2700 fax (604) 419-4758

Visit our web site: www.creo.com/employ.html or contact us by email: resume@creo.com

Group Term Life and Accident Insurance

LOW COST!



Because it's for them, you want the very best protection.

The CCPE Term Life Plan is life insurance designed to meet the high standards of professional engineers.

Life insurance can and should be evaluated like any engineering project — in terms of cost effectiveness, quality assurance and continuous improvement.

The CCPE Term Life Plan was designed to meet those requirements.

The Plan offers you exceptional coverage for just pennies a day — a very small price to pay for your peace of mind. In fact, you can choose up to $1 million in protection to secure your family's financial future.

The Plan is sponsored by the Canadian Council of Professional Engineers and underwritten by Manulife Financial — one of Canada's largest life insurance companies.

Join the more than 47,000 engineers who depend on this plan for their families' financial security. Visit our website dedicated to the Engineer's Plan to determine your needs, calculate your premiums or apply on-line.

To find out more, or to receive a free information kit call:

1 888 598-CCPE

or visit our website at **www.manulife.com/affinityccpe**

or e-mail us at: **am_service@manulife.com**

Sponsored by:

Canadian Council of Professional Engineers / Conseil canadien des ingénieurs

Underwritten by:

Manulife Financial

The Manufacturers Life Insurance Company