

THE KEYSTONE PROFESSIONAL



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

SEPTEMBER 2002
www.apegm.mb.ca



Report of the Executive Director and Registrar

D.A. Ennis, P.Eng.

Most of the activities and issues before the Association are reported on elsewhere in this publication by the various committees and the Director of Admissions. This report is intended to cover matters not dealt with by them. Some were also discussed in my messages in the three previous issues of this publication.

Financial

As Treasurer I report that the Association continues to be in a sound financial position. The level of reserves is such that they could sustain the Association's operations for one year. The Auditor's Report and 2002 Financial Statements are available from the Association office. They will be distributed at the Annual General Meeting and are also posted on the Association's website. There has been a small increase in the membership. At June 30, 2002, there were 3783 members on the register (up from 3772 in 2001) with 2743 being residents of Manitoba. Of the 3783, 225 are professional geoscientists, of which 19 hold dual registrations. Additionally, there are 258 holders of Certificates of Authorization and another 610 persons enrolled as members-in-training.

With the numbers being relatively static and costs inevitably on the increase, the budget adopted by the Council for the membership year 2003 requires a dues increase. The payment in 2003, with GST included, will be \$248, up from \$242. One of the increases is for the secondary professional liability insurance program at a cost of \$10 per person.

Governance

As was reported in earlier issues of this publication, the Council is well along in the implementation of Policy Governance® for conducting the affairs of the Association. I am encouraged by the progress that has been made in this area. In that context, the number of meetings of the Council has been reduced from 11 to seven per year. The Governance Policies are posted on the Association's web site at www.apegm.mb.ca

National Secondary Professional Liability Insurance

This is a new program. There have been reports and notices regarding the program in the last three issues of this publication and in a recent mailing. Once again, I encourage members and members-in-training to familiarize themselves with the policy and its conditions and exclusions. Questions regarding the program are to be directed to the program hot line at 1-800-361-9080 where staff of the broker are available to answer questions from 8:00 a.m. to 4:00 p.m., Monday to Friday, central time. Do not direct your questions to the Association office.

Inter-Profession Liaison

The Association has memoranda of understanding and obligations under the Act, which provide for formal liaison with some other professions.

There are joint boards and committees established as part of those obligations, and for which I serve as the contact and staff support.

Certified Technicians and Technologists of Manitoba (CTTAM)

The Engineering, Geosciences and Applied Sciences Inter-Association Relations Joint Board is established by the Act for the purposes of developing and recommending processes for co-operation by the two associations in carrying out their respective areas of responsibility in the public interest, and for the resolution of issues or disputes respecting areas of practice. The Chair of the Board, Roy Schellenberg, was appointed by the Minister of Labour. The APEGM representatives on that Board are Michael Bulman, P. Eng., C.E.T., Len Chambers, P. Eng., C.E.T., Vic Thielmann, P. Eng., and Allan Silk, P. Eng. as the Council contact. The Board held three meetings in the past year.

Manitoba Association of Architects (MAA)

The Engineering and Geoscientific Professions Act and The Architects Act established the Engineering, Geosciences and Architecture Inter-Association Relations Joint Board. It too is intended for the purposes of developing and recommending processes for co-operation by the two associations in carrying out their respective

areas of responsibility in the public interest, and for the resolution of issues or disputes respecting areas of practice. The Chair, Tom Bleasdale, is also appointed by the Minister of Labour. The APEGM representatives have been Doug Stewart, P. Eng., Ken Drysdale, P. Eng., and Bill Thomas, P. Eng., with Council representation by Alf Poetker, P. Eng. The Board held six meetings in the past year.

Association of Manitoba Land Surveyors (AMLS)

APEGM entered into a Memorandum of Understanding with AMLS in 1998. It established a Joint Committee that has a very similar purpose and process as those established in Legislation with CTTAM and MAA. APEGM representatives on the Joint Committee are Don Mulder, P. Eng., Jim Thomson, P. Eng., and Darwin Kupskey, P. Eng. The Joint Committee does not have an independent Chair. That responsibility alternates between the Associations from meeting to meeting. The AMLS has been seeking changes to its governing legislation, and the Joint Committee also provides a forum for discussion as the legislation evolves. The Committee held two meetings in the past year.

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

83rd ANNUAL GENERAL MEETING

Fort Garry Hotel, Winnipeg
Friday, October 18 & Saturday, October 19, 2002

Details inside



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SEPTEMBER 2002

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P. Washchshyn, P.Eng.	CCPE Director
A.H. Bailes, P.Geo.	CCPG Director

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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 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.



Publications Mail Agreement Number 40062980

New Members Registered May, June & July 2002

R.B. Atkinson (AB)	R.B. Hulasare	C.A. Rempel (SK)
L. Beeching	A.E. Jordan	M.C. Rowbotham
W.A. Bullee (SK)	W.H. Karolat	P. Sandland (BC)
B.D. Charnish (ON)	S. Lai (BC)	R.N. Sarkar (SK)
K.L. Chouinard (ON)	D. Lourenco	J.L. Schinkel
C.A.H. Corman	L.F. Lukey (SK)	R.A. Selin (BC)
R.J. Cowan (SK)	N.N. Martinez	T.W. Shanks
N.F. Dimock (ON)	K.R. Merkley (ON)	F.W. Shewchuk (AB)
J.R. Elkind (SK)	P.M. Meyer (BC)	M.E. Simpson (BC)
D.R. Evans (NB)	G. Militano	R.D. Stark
S.A.M. Farag	N.J. Milliken	F.W. Sweet (BC)
T. Gaamangwe	A. Muhammad	W.T. Therriault (ON)
R.E.M. Graham (SK)	S.N. Mukhi	B.W. Wagner (AB)
T.A. Hakim (AB)	B.D. Munro (AB)	M.C. Walker (SK)
W.D. Hall (SK)	T.H. O'Rourke (ON)	P. Wang
T.W. Hart (BC)	J.R. Pehkonen	G.R. Wreford (AB)
D.M. Hladun (SK)	M. Peric (ON)	W.Y. Yuen
P.A. Hooge (SK)	B.J. Ransom	M.H. Zahedi

Members-In-Training Enrolled May, June & July 2002

I. Alguacil	A. Dune	C.W. Nation
D.E.S. Anderson	G.E. Eftoda	D.J. Nedohin-Macek
A. Basic-Bilic	L.T. Fernando	T.R. Nyabeze
D.E. Becker	M.A. Fournier	A.J. Reggin
Z. Bilic	D.D. Gagne	R.J. Rodd
J.M.J. Blais	N.G. Hosking	R.B. Shenouda
P.D. Bollman	S. Ingimundson-Campbell	N.S. Sidhu
M.W. Boonstra	T.F. Kelbert	P.S. Smerchanski
A.G. Bowen	J.A. Keller	M.N.T. Soliman
D.R.P. Buckingham	C. Liu	M.J. Tinholt
C.Y.A. Chan	T.L.T. Matechuk	J.P. Tremblay
S.P. Clark	M.M. McCandless	S.B. Watt
D.T.L. Colonval	L.M.K. Melvin	T. Young
V.L.T. Doan	S.M. Melvin	H. Zhu

Licences Issued May, June & July 2002

G.C. Brule (QC)	G.V. Nagel (MN)	R.F. Williamson (IA)
D.H. Charles (CA)	J.W. Sneed (NE)	

Reinstatements May, June & July 2002

D.D. Davidson (SK)	T.C.W. Ip (ON)
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Resignations June 30, 2002

R.B. Band	M.R. Humphries	E.D. Prefontaine	J.P. Sprentz
M.F. Blamire	R.C. Koltes	J.T.L. Pulak	A.J. Walker
T.D. Brauen	E.Z. Lajtai	A.E. Reschtke	L.C. Walters
J. Brittan	L.Y.W. Leung	K.R. Richards	J.R. Winfield
J.C. Herbert	Z.A. Marsic	R.F. Schmidt	S.A. Witzke
S.S. Hodge	K.L.H. Mills	W.F. Skibinski	
H.M. Huang	P.C.Y. Ng	G.T. Smith	

Members-in-Training Resignations June 30, 2002

D.E.L. Boulet	H.L. Martin	A.C.D. Poole	D.J. Rob
J. Jacob			

Certificates of Authorization Issued

Bullee Consulting Ltd.	Rempel Engineering
Cronnox Incorporated	Radian Communication Services (Canada) Limited
D.H. Charles Engineering, Inc.	Simplex Grinnell
Greenhouse Engineering, division of Alex Turkewitsch, P.Eng. Ltd.	T.A. Keith Engineering Ltd.
Hall Engineering Co. Ltd.	T.H. O'Rourke Structural Consultants Inc.
Inland Pipe Ltd.	TransGas Limited
Jacobs Canada (formerly Delta Hudson)	Walker Projects\Yolles Partnership
Key West Engineering Ltd.	
Power Engineers, Inc.	

APEGM Salary Survey – 2002

By: E.G. Parker, P.Eng.

Is your salary keeping up with member salaries in your discipline, your industry sector, or your graduating class? This year's employee salary looks at these and other issues in the report published through the APEGM web site. The 2002 salary survey report includes details on base salary and total income by APEGM point level for Engineers and Geoscientists and compares salary by industry sector and job function.

The annual employee salary survey for 2002 once again received an excellent response rate with completed surveys received from 25% of the members. The members reported an average increase of 4.6% in base salary for the year ending December 31, 2001. The base salary increase in the public sector was 4.5% while the base salary increase in the private sector was 4.7% this year. This compares to the average base salary increase of 5.1% reported for the year ending December 31, 2000. When analyzing the salary increases for Geoscientists and Engineers, approximately 20% of the Geoscientists and 50% of the Engineers reported salary increases greater than 3% in 2001.

In terms of dollars in 2001, the mean salary for starting positions was \$39,426, for technical positions



was \$56,626 and for project manager positions was \$73,826. Once again, the highest mean base salaries were reported for administrative and management functions. These functions, along with marketing and sales, also received the highest average bonuses and other forms of income. The highest mean income reported was \$104,544 for the administrative services function.

The mean income showed a positive trend based on year of graduation. The mean income rose fairly

constantly from around \$39,000 for graduates in 2001 to around \$63,000 for graduates in 1991. The mean income for graduates in the 70s and 80s was around \$85,000 and was shaped more by job function than by year of graduation. Graduates prior to 1970 reported a mean income of approximately \$100,000. For Geoscientists, the pattern was similar but the salary levels were 10 to 15% lower than their fellow engineering graduates.

The report also compares APEGM salaries to those in Ontario and Western Canada. While the data from the other provinces is from 1999 or 2000, we can see that Engineers and Geoscientists in Ontario, Alberta and B.C. have salaries averaging from 10 to 20 percent higher than the Manitoba salaries. The comparable salaries in Saskatchewan (1999) are lower for the starting positions and about 5% higher for more senior positions.

With respect to bonuses received in 2001, approximately 30% of respondents received bonuses last year. This is consistent with bonuses reported for the last three years. As well, the size of the bonus has averaged 15% of base salary over that same period.

Overall approximately 25% of respondents had reported a post graduate degree. There were 56% of Geoscientists reporting post graduate degrees compared to 23% of Engineers. The three most common degrees were Masters 18%, PH.D 4% and MBA 3%. The MBA degree has the most significant impact on salary and job responsibility as measured by the APEGM point-rating system.

Check out the final report at the APEGM web site for more details on salaries by gender, industry, company size and sector along with the verbatim comments provided by the members this year. ■

Wine, Cheese, and Hydrophilic Materials – Women's Action Committee Network

By: C.S. Roberts, MBA, P.Eng.

We all have attended engineering social functions where typical conversations meander from indicating one's current employer and projects to reminiscing about work in junior years. Of course, the more senior engineers wear down the ears of the junior engineers with their tales of "I remember walking thirty miles

uphill both ways through muddy gumbo, at 90 below, on that job site..."! As usual, this constituted most of the social discussions at the Networking Evening co-ordinated by the Women's Action Committee on June 13, 2002.

However, the main focus of the evening was an exciting program aimed at recruiting more students into the sciences and engineering. Colleen Flather and her team of students from the Access Program for Women in Science and Engineering entertained the group by skewering balloons, mixing up something called "GAK," and demonstrating the wonders of hydrophobic and hydrophilic materials, the latter being familiar territory for the moms in the crowd (as it is an important

component of diapers!). Not only were we impressed with the way they are able to make science "fun" but also in the way that this program has expanded and has become a leader in promoting science and engineering.

The Access Program for Women in Science and Engineering started in 1990 with only two university students doing science "Road Shows" for girls. It now employs 12 undergraduate engineering and science students as co-ordinators, plus a full-time manager and part-time assistant. The co-ordinators perform 1700 presentations annually. That makes it the largest science outreach program in Manitoba!

The program has been presented to boys and girls in 68% of

Manitoba schools, and in 98% of Manitoba school divisions. In addition, the co-ordinators provide presentations at science fairs, professional-development conferences for teachers, and career days. 2001 marked the launch of a new program, "Kid-Netic Energy," which comprises two-week-long engineering and science day-camps in communities outside of Winnipeg. The science camps encourage students to excel in design and invention through exploration of science principles.

The program and its managers have won a number of local and national awards. Future plans are to undertake research to measure the effectiveness of the program at recruiting students into science and engineering careers; to expand programs focussing on science teachers and develop programs for the Girl Guides; and to replace the current NSERC funding with a corporate sponsorship. ■

In Memoriam

The Association has received, with deep regret, notification of the death of the following member.

William Charles
(Chuck) Lee

Report of the Executive Director and Registrar

Continued from page 1

■ Manitoba Association of Landscape Architects (MALA)

Given the interface of members of that profession with some professional engineers and professional geoscientists involved in the development of land and water areas and in the preservation of the environment, APEGM entered into an MOU with MALA in 1998. It is focused on clarifying the similarities and differences in the professions and developing a process to, where appropriate, foster the involvement of the professions on projects. APEGM has been provided with a draft of title legislation developed by MALA. There were no meetings between APEGM and MALA in the past year.

Certificate of Authorization

The Certificate of Authorization (C of A) is a provision under *The Engineering and Geoscientific Professions Act* (the Act) which provides for a corporation which employs professional engineers and/or professional geoscientists to practise and to enter into a contract to provide professional services in its own name. Its purpose is to provide for the regulation of corporate practice (or group practice) as distinct from the regulation of services provided in the traditional sense by an individual professional engineer or professional geoscientist to the entity, and to enable the Association

to hold the entity accountable for its practice.

One of the conditions of the C of A is a requirement for professional liability insurance coverage. Last year I reported that the availability of coverage and the costs of such insurance for companies operating in some sector was a problem and that the Association had approached the Manitoba Government for an Act amendment to allow for alternatives. The Legislature recently adopted such an amendment, and criteria and guidelines for acceptable alternatives to professional liability insurance will now be developed.

With regard to professional liability insurance, members who provide services directly on an individual basis, or who operate as a sole proprietorship, are reminded that if they do not have professional liability insurance coverage in the same amounts and on the same terms and conditions as are required for a C of A, the By-laws require that they must notify the client of the absence of such insurance and must, before proceeding, obtain written authorization from each client to provide the professional services being contracted.

Declaration of Compliance and Professional Development

There will be a proposal for a new by-law before the membership at the upcoming AGM. If it is ratified, members in the practising category will be asked make the following declaration at the time of the payment of the annual dues for the renewal of registration:

"I declare that I have maintained the level of education and training required to undertake the professional services that I currently provide, or intend to provide, to my employer and clients."

It is to be noted that the wording of the proposal is "asked" not "required" to declare, and that that it does not specify or provide for a sanction for failure to comply.

The issues of mandatory reporting of professional development activities and enforced compliance with a prescribed program have been before this Association before. In 1998, a by-law proposal to adopt a mandatory program was approved at the AGM for a letter ballot but was defeated in the ballot by a ratio of two to one. The feedback from those opposed to the proposed program was that as professionals they can be relied upon to fulfill their individual responsibilities to maintain the appropriate level of competence without a requirement to document and report. The declaration proposed would be an annual reminder of that responsibility.

For those members that would prefer to use a system in carrying out that responsibility, the Association has developed a Professional Development guideline. The guideline along with a sample form and planning example, is posted on the Association's web site. It can also serve as tool for keeping one's resume up to date. Another feature of the website is the "PD Network". It provides extensive information on professional devel-

opment opportunities and links to professional and technical organizations, institutions and course providers. Its "Upcoming Events" page typically provides information on 100 opportunities and the links to other organizations offer several hundred more.

With regard to the documentation of professional development activities, and as noted on other occasions, a number of the licensing jurisdictions, both in Canada and internationally, require evidence of compliance with a mandatory program. I suggest that, in this age of globalization and specialization, a well-documented record of one's accomplishments will become a valuable asset.

Software Engineering

Last year I reported that the dispute between the Canadian Council of Professional Engineers (CCPE) and the Association of Universities and Colleges of Canada (AUCC) over the use of the term "software engineering" in under-graduate university programs was unresolved and with indications of little prospect of resolution. It is worth noting that in the interim, the Canadian Engineering Accreditation Board (CEAB) has now accredited six degree programs in software engineering (in Faculties of Engineering) as satisfying the academic requirement for registration as a professional engineer in Canada.

Conclusion

Once again, the year has been one of challenges and changes in the operations of the Association. On the staffing side, Ken Buhr, P. Eng., Manager of Administration, retired and William Boyce was hired. Also hired was Shirley Bruce who replaces Elaine Ryan in Membership Administration and Accounting.

Over the years I have been continually and consistently impressed with the commitment and the selfless contributions of the volunteers, both elected and appointed, who serve this Association. In particular, we benefit from the participation of persons who are neither engineers nor geoscientists, but who willingly assist the Association in fulfilling its mandate. Last but not least, I recognize and thank the staff of the Association office for their dedication and hard work. As I have noted before, the "volunteer" component of their participation on behalf of your professions is not generally recognized. ■

MCSE is NOT an Engineer in Canada

People who hold Microsoft Certified Systems Engineer (MCSE) designations could face enforcement measures if they follow the recent advice of Microsoft Canada.

In July, Microsoft Canada announced it will continue to use the term "engineer" as part of the MCSE designation, changing a decision made just a year ago following discussions with the Canadian Council of Professional Engineers (CCPE).

"CCPE is extremely disappointed with Microsoft's announcement," said Marie Lemay, P.Eng., CEO of CCPE. "By reversing this decision and advising its certificate holders to use the full MCSE title, it has become clear that Microsoft

Canada is no longer interested in continuing to work with the engineering profession or in assisting its certificate holders in avoiding the associated enforcement issues."

In May 2001, Microsoft agreed to advise Canadian holders of the MCSE certification not to call themselves "engineers" or use the full title "Microsoft Certified System Engineer." It was a major step toward preventing Canadian holders of the MCSE certification from inadvertently breaking provincial and territorial laws, and was seen by the engineering profession as a sign of good corporate leadership.

It would appear that Microsoft Canada is bowing to the pressure of MCSE holders and the training and certification organizations who have

been capitalizing on the intrinsic value of the term "engineer" with little regard for potentially misleading the public.

According to published Microsoft information, to secure the MCSE designation an individual is required to complete seven examinations. Depending on a person's previous experience, preparatory training leading to successful completion of the examinations can range from several days to several months. This is far short of the four-year engineering degree required to become an engineer.

To protect the public, laws and regulations restricting the use of the titles "engineer" and "engineering"

Continued on page 23

CCPE CEO's Message

Changing Times, Promising Times

Every organization faces defining moments over the course of its lifetime. Those moments may be the result of external challenges, financial issues, or even changing demographics. Ultimately, the decisions an organization makes in response to the threats and opportunities presented by those events shape its future and become a turning point in its existence.

The Canadian Council of Professional Engineers (CCPE) and its member associations/ordre faced one of those defining moments in early 2002 when changes to Canada's evaluation criteria for skilled workers seeking landed immigrant status in this country led to a significant decline in CCPE's revenue base.

Our first response was to review CCPE's program and service mix, consider which programs and services could be delayed or eliminated to reduce costs, and raise the possibility of a membership fee increase with the associations/ordre. The intent was to allow CCPE to continue delivering its current programs and services, albeit at a somewhat reduced level. Although we sharpened our pencils and cut our projected operating expenses dramatically, it soon became clear that CCPE's members would have to consider an increase in assessment fees if we were to maintain our programs and services.

What ultimately occurred was that CCPE's revenue crunch became a catalyst for true change within our organization and an opportunity for us to better serve the needs of our member associations/ordre. Thanks to the cooperative efforts of association/ordre Presidents and Executive Directors, CCPE's Board of Directors and committee Chairs, and CCPE staff, a situation that could have seriously hurt CCPE has become a positive turning-point in the history of our organization.

The fact that we reached this turning-point is in many ways a testament to the commitment and dedication of the volunteers who serve CCPE and our member associations/ordre. Our Board and Finance Committee had the foresight to recognize that changes to the immigrant selection process could affect the revenues CCPE receives from its

Initial Assessment of Engineering Qualifications Program. We had set aside contingency reserve funds that will allow us to continue normal operations in the short term as we turn the corner and reshape our organization. Most importantly, our member associations/ordre worked with us to clearly identify the services and programs they valued, and helped us to emerge as a stronger and more focused organization.

That process began in April, when CCPE met with the Presidents and Executive Directors of the associations/ordre to review the current mix of programs and services we offer to the profession, and assess their importance. We also examined CCPE's overall mandate and the roles of our various committees. The goal was to determine what the associations/ordre would like CCPE to do and be on their behalf, taking into account the financial resources we had available.

Once this was done, CCPE drafted a new budget and strategic plan based on the input provided by the associations/ordre. The end result is a blueprint for a leaner organization, but one that is clearly focused on meeting the needs of its member associations/ordre.

I truly believe the collective solution we reached will result in greater efficiency and a clearer direction for CCPE, and enhance our value to the Canadian engineering profession. Will individual engineers notice any difference? I certainly hope so, but only for the better.

CCPE will continue to offer all of its established services; university accreditation, professional guidelines, statistical research, federal government relations initiatives, and insurance programs.

However, we will refocus our international work. Our efforts to facilitate greater mobility between Canada and the U.S. for qualified engineers will continue. This will include ongoing negotiations with Mexico and Texas on our NAFTA (North American Free Trade Agreement) Mutual Recognition Document (MRD). We will also continue developing a protocol for the implementation of the APEC



\$10,000

Engineering Scholarship

ENCON is a proud supporter of the continuing pursuit of knowledge and progress in the engineering profession. Working with engineers from across Canada, ENCON has been providing the industry with professional liability insurance since 1970.

As part of our ongoing partnership with CCPE, we are pleased to offer the \$10,000 ENCON Scholarship. Awarded annually to an engineer returning to university to further his or her career in civil engineering, ENCON scholarship winners help advance the profession, through continuing education and research.

Applicants must be accepted or registered in a university Faculty of Engineering.

Application deadline: April 1, 2003

For further information, contact the CCPE National Scholarship Program

Canadian Council of Professional Engineers
 1100 – 180 Elgin Street
 Ottawa, Ontario K2P 2K3
 Tel: (613) 232-2474
 Fax: (613) 230-5759
 e-mail: member.services@ccpe.ca
 Web site: <http://www.ccpe.ca>

ENCON Group Inc.
 Suite 700, 350 Albert Street
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 Fax: (613) 786-2001
 Web site: www.encon.ca



CANADIAN COUNCIL OF PROFESSIONAL ENGINEERS
 CONSEIL CANADIEN DES INGÉNIEURS



2002 APEGM Spring Golf Tournament

By: M.E. Baril, P.Eng.

This year's APEGM Spring Golf Tournament took place on Tuesday, June 11th, at Bridges Golf Course. As always, the tournament was a resounding success in regards to participation, with 35 teams and 140 golfers making the ultimate sacrifice by being absent from the office for _ of the day. As has been the trend the past few years, we managed to squeeze the tournament in between days of rain. The morning threatened rain, with quite a few golfers calling the APEGM office to inquire if the tournament was still a go, as the forecast was not favourable. Once again, Mother Nature favoured the Son's of Martha as the afternoon saw the break-up of the cloud cover, followed by warm sunshine.

After the golf, the festivities moved into the banquet hall. The Landon Cup (1st place) and Sullivan Cup (2nd place) trophies were awarded by current APEGM Vice-President, Lawrence Ferchoff. The first place team of Robert McBain, Brad McCormac, Charles Evancio (missing in the photo) and Rob Sachowski will surely be looking for the rare three-peat next year, having won in 2001 as well. The second place team of Dana Bell, Don Lecuyer, Chris Peck and Bob Coldwell is another yearly powerhouse having reached the podium in past tournaments as well. There will undoubtedly be discus-

sions over the winter about "rigged" teams amongst the committee members (kidding, there is no competitive nature in engineers). Once again this year the members attending the

golf tournament overwhelmingly supported the KidSport and MS Society's fundraising efforts.

The Sports Committee would also like to thank the companies, listed below, that supported our tournament by sponsoring a hole and/or donating prizes. Our apologies if we have missed anyone.



Above: First Place winners. Left: Second Place winners



DPIC Companies – Oldfield Kirby Esau Inc. Insurance Brokers; UMA Engineering Ltd.; Nelson River Construction Inc.; Azon Canada Inc.; Lewis Instruments Ltd.; Pauwels Canada Inc.; Armtec Ltd.; National Testing Laboratories; KGS Group; Cansel; Inland Pipe Limited; Vector Corrosion Technologies; Superior Truss Co. Ltd.; APEGM; Lafarge Canada Inc.; Golf Central; Wardrop Engineering Inc.; Earth Tech Canada; Acres International Limited; Concrete Restoration Services; Professor Golf Products, Inc.; Groundstar Systems (1987) Ltd.; Flanders Insurance Services Ltd.; EF Moon Construction ■

CCPE CEO's Report

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(Asia-Pacific Economic Cooperation) Engineer Register in Canada. We've already made exciting headway in both of these areas. As always, we will represent the Canadian engineering profession on the international front and monitor the trends affecting the engineering profession globally.

One of the major decisions we made was to stand down both the Canadian Engineering Resources Board and the Canadian Engineering International Board. By refocusing in both of these areas, committees of the CCPE Board of Directors will be able to lead this work, with strong staff support. This approach will reduce expenditures but allow CCPE to continue providing strong

research and international programs to the associations/ordre.

Even with CCPE's restructuring, a fee increase will be required for us to undertake the full mix of programs and services our member associations/ordre have asked us to provide on their behalf. A motion passed by CCPE's Board of Directors in May proposed that we request a fee increase from the associations/ordre of \$2.40 per each of their professional engineer members in both 2004 and 2005, and an additional \$2 increase in 2006. Two of our largest associations/ordre, Professional Engineers Ontario (PEO) and the Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA) have already agreed to the proposed increase. I am very pleased to report that the initial reac-

tion from our remaining member associations/ordre has also been favourable.

When all is said and done, the financial circumstances that initially seemed so detrimental have in fact brought our organization together and made us stronger.

As well as dealing with our fiscal situation, CCPE has also been closely monitoring the federal government's Innovation Strategy. The strategy is very important to individual engineers, as well as to the profession. We continue to be at the forefront of innovation in Canada, and circumstances could not be better than they are today for the engineering profession to play an even more important role. Technology is advancing by leaps and bounds, our economy is solid, and our governments, both provincial and federal,

are fully supporting what we engineers do best – innovation.

For our part, CCPE is assessing the two Innovation Strategy papers co-released in February by Industry Canada and Human Resources Development Canada. The papers outline factors that the government believes will drive economic growth and social development over the next decade, including the goals, milestones and targets that will improve innovation and skills and learning in Canada. CCPE's Government Relations Committee is studying both papers to determine where the engineering profession fits in this plan, and how best to position ourselves to ensure that the engineering role in innovation is given due recognition.

I look forward to updating you further in the coming months. ■



Letter to the Editor

In the article in the April 2002 Keystone Professional, Professor Doering puts his finger on the very essence of Winnipeg flood protection. That is, how much protection is enough? The International Joint Commission struggled with this question and concluded that the design flood “should be the highest that can be economically justified or, at a minimum,

the flood of record, the 1826 flood”. Selecting an appropriate flood protection level for Winnipeg, however, will not be an engineering or economic decision but a public policy decision. Perhaps it would be helpful to review some of the approaches that could be taken.

As an artifact of the former federal-provincial Flood Damage Reduction program, the regulatory flood in Canada is the 100-year flood or higher. In Manitoba the regulatory flood is the 100-year flood, or in the case of the Red River valley, the 1997 flood – roughly a 100-year flood. New structures built in the floodplain must be flood-proofed to provincial requirements. Structures in communities protected by an engineered dyke or other equivalent measure do not require flood proofing.

As a first case, a flood protection measure could be designed to protect against the regulatory flood. Examples are the Red River valley ring dykes constructed after the 1979 flood and upgraded after the 1997 flood. These dykes protect against the regulatory flood plus freeboard. In rare cases a flood protection measure may not protect even against the regulatory flood, the Carman Floodway being one example.

In a second case, a flood protection measure may protect against a flood higher than the regulatory flood. The dykes now under construction at Grand Forks and East Grand Forks will protect those cities against the 210-year flood while the regulatory flood remains as the 100-year flood. The approach taken in this case was to select the design flood as the one at which the benefit-cost ratio is 1.0. (Under favorable economic conditions, the US Army Corps of Engineers will design flood protection measures up to a “standard project flood” – roughly half a probable maximum flood.)

This was the concept for the original Red River Floodway. It was designed to accommodate what was felt to be the 160-year flood, roughly equivalent to the 1997 flood. (Determining a 100-year or other specified flood is fraught with problems.) The approach used was to select a capacity at which an additional dollar of expenditure did not produce an additional dollar of flood control benefit. Applying this same economic criterion under today’s level of urban development leads to a 500-year Floodway capacity identified in the studies conducted by KGS Group for the International Joint Commission.

A third approach is to use a design flood based on some physical constraint or circumstance and this was the approach adopted by KGS Group, and since expanded upon. At the pre-feasibility level of study there was evidence that Floodway expansion would be constrained to the 500-year flood on account of backwater north of the city. A 1000-year flood was also selected because this was a flood that could be reasonably expected to occur based on an examination of hydrological variables.

The subsequent work (which is still at a feasibility level of effort) carried out by a group of companies led by KGS Group concluded that the downstream constraint was not as severe as originally thought and that Floodway expansion to the 1000-year flood appeared quite feasible. Further, by operating the waters impounded upstream of the Floodway Inlet Structure as a reservoir, it was possible to provide some additional flood control. That is, capacities that could protect the city against the 700- year and 1200-year floods.

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CANADIAN COUNCIL OF PROFESSIONAL ENGINEERS
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Meloche Monnex

The Electronic Commerce and Information Act

By: W.T. Jackson, P.Eng.

The continuing growth of the Internet and Electronic Commerce has sparked interest in the latest developments with respect to electronic signatures. About 50 people attended a breakfast meeting sponsored by APEGM's Professional Development committee on May 15 at the Viscount Gort to hear the update from Lynn Romeo of the provincial Department of Justice.

Romeo said people and business owners still want to know if they can transact business, exchange electronic documents, and enter contracts on-line, and still be assured that their contracts are valid. The Manitoba government passed the

Electronic Commerce and Information, Consumer Protection Amendment and Manitoba Evidence Amendment Act on August 18, 2000. The Justice Department, according to Romeo, expects that Part II of the Act that deals with specific legislative and regulatory requirements will be proclaimed in the near future.

Lynn Romeo pointed out that there are four main principles underlying the Act. Firstly, the legislation is enabling only. It allows but does not require anyone to use or accept electronic communications. Secondly, the Act is technology neutral. It does not set out requirements for specific technology or for spe-

cific ways of complying with the rules. Thirdly, certain parts of the Act apply to other statutes and regulations on an opt-in basis. Fourthly, Electronic Commerce often involves transactions taking place across provincial and international borders. The need for harmonization of the law is therefore important.

Romeo provided some details about provisions respecting electronic signatures. She indicated that, where a document is being provided to a person other than a public body, the electronic signature is subject to the person's consent, and she gave an example. By assuming that a commercial lease must be signed by the landlord and the tenant, it would

be up to both parties to agree on whether electronic signatures on their lease would be acceptable. If an electronic signature is required on a document being provided to a public body (for example the Department of Highways), the electronic signature is subject to the department's information-technology requirements prescribed by regulation.

Romeo concluded her presentation with some details on amendments to the Manitoba Evidence Act. She said the amendments are intended to clarify the rules for accepting electronic documents, information, and signatures as evidence in the courts. ■

Engineers Without Borders – Student Chapter Seeks to Bridge Technology Gap in Third World Development

By: Christopher Evans

For the majority of people in the western world, our society is regarded as intelligent and technologically-advanced – a global community that has achieved many impressive social and industrial accomplishments. Ironically enough, at the same time people are casually aware of the horrible conditions that still exist in many areas of the world. These places are devoid of even basic forms of technology or industry and, for the people who dwell in these conditions, daily life is a struggle for survival. While poverty, disease, and famine are rampant in under-privileged communities, the underlying cause of these problems lies in a widening gap between the third world's level of development and the technological achievements of the first world. This technology gap is of increasing concern because it is the one factor that, above all others, traps these countries in their stagnant cycle of floundering development.

Engineers Without Borders (EWB) is a non-profit organization developed to directly address the problem of the technology gap. Founded two years ago, EWB's vision is to increase the quality of life in underdeveloped nations by providing practical engineering solutions to the problems these communities face. Rather than supplying aid and relief to impoverished areas, the

goal is to provide the people with the technology necessary to help them grow and develop beyond their daily struggle for survival. To achieve this goal, EWB relies on a vast untapped resource that is readily available throughout every province in Canada – the hearts and minds of willing engineering students.

EWB is already well-established across Canada. Currently there are 15 student chapters set up at Canadian Universities in a vast network that stretches from British Columbia to Nova Scotia. These chapters operate as independent groups under the guidance of the core entity, EWB Canada, which is based in Toronto. While each chapter has its own unique identity, the main goals of each student-operated group are the same; their primary purpose is to organize and facilitate research groups that will work collaboratively on scalable solutions to practical problems in the third world. The main considerations of scalable solution projects is to address a widespread need and to develop feasible solutions that can be implemented in a variety of different communities worldwide. For these projects to be successful, it is critical for student chapters to enlist the support of industry professionals to ensure that project solutions are practical and achievable.

This is my third year of mechan-

ical engineering at the University of Manitoba and I have a keen interest in third-world development challenges. EWB provides an ideal way for students to get involved in technical problems that exist in real-world settings, with implications that could potentially affect a wide range of communities globally. The organization offers practical design experience and encourages students to become more active in the engineering community, as well as involving local industries in EWB-related projects. At present an official student chapter does not exist at the University, but I am not alone in my interest for EWB. I belong to a large group of students who have taken notice of this organization, and many faculty members have already pledged their support once a student chapter is officially started. However, to be truly successful, a chapter must have support from the professional engineers involved in local industry.

There are numerous ways for industry professionals to become involved in EWB. One of the easiest and most effective routes is to simply enlist as a technical advisor. Advisors submit their name and field of expertise to a national database accessible to EWB students exclusively. In the event that a research project is conducted in a field of study, any professional in

that particular area of expertise may be contacted to provide support and suggestions. The next level of professional involvement is mentorship, which is equivalent to a more involved version of the technical advisor's duties. Mentors play a greater role on research teams, usually contributing three hours a week of their time to a project. On a national level, EWB requires technical overseers to review design projects submitted by students, and ensure that the solutions are feasible and worth the costs of implementation.

The importance of EWB is twofold; it seeks to increase the quality of life in third world and developing countries while enabling Canadian engineering students to apply their skills to real-world challenges. The promise that EWB holds for the University of Manitoba can be demonstrated by considering what it has already accomplished at other institutions. Currently, EWB is involved with one associate chapter in the development of an Information and Communication Van designed to bring internet access into remote third world communities. This is an invaluable project considering that the cost of internet access can be upwards of \$200 dollars a month in some areas. Other projects underway include the introduction of low-power lighting

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Letter to the Editor

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The selection of the 1:700 Floodway expansion concept therefore was not arbitrary, rather it was based on one engineering criterion and one economic one. Such a capacity, however, could still be deemed to be socially unacceptable. For that reason a larger capacity Floodway continued to be included in the recently completed study.

A full feasibility study will unquestionably deal with all the engineering and economic issues that must be examined in determining an appropriate level of Winnipeg flood protection. To that must be added the social and political considerations necessary for a successful project.

If we had perfect knowledge of future flood conditions it would be easy to carry out an engineering and economic assessment, and make the "correct" decision. In retrospect, the construction of the Red River Floodway, completed in 1968 and used for the first time in 1969 and many times since, was an inspired public policy decision. Consider the public comment, however, if it had been completed in 1968 and not used for many years. Those involved in the project would have been castigated as spendthrifts and every few years there would have been a picture in the paper of the 'white elephant'. Such is the dilemma of decision-making with respect to mitigating natural hazards.

Studies conducted thus far have shortened the list of feasible measures to protect Winnipeg against rare floods to two (Floodway expansion and the Ste. Agathe structure) and shown that both measures meet normal economic tests. Clearly there is a local, and perhaps even a national, consensus that additional flood protection for Winnipeg is warranted and that expanding the Floodway is the preferred option. The extent of that expansion still has to be determined taking into account input from those who benefit, those who are harmed, and those who will pay for the project. Even in an era of balanced government budgets, resources are not limitless and public pressures for expenditures on matters other than flood control must be considered.

Finally, there is one other consideration. In North America, governments have provided relatively low levels of flood protection at public expense but have given generously to those who are affected by flooding. Other countries provide much higher levels of protection but relatively modest government support to those affected by a flood. As we move towards the absolutely justifiable improvements to Winnipeg's flood defenses, we should also contemplate to what extent we wish to subsidize people's desire to live on floodplains.

APEGM members should take pride in the informed debate being led by Professors Doering, Booy and Kuiper. Our public policy decisions will be the better for it.

R. A. Halliday, P. Eng.

Engineers Without Borders

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in schoolhouses in Bangalore, India, and the implementation of a water purification and energy production plant in Molinos, Chile. These projects are all examples of how Canadian students alongside EWB have been able to bridge the technology gap and raise the quality of life in these areas. Through the joint efforts of students, professors, and

industry professionals, the Faculty of Engineering at the University of Manitoba can work towards empowering both students and inhabitants of the developing countries, in the hopes of one day bringing both worlds to a common ground.

For more information on volunteer projects offered by EWB, visit their website at www.ewb-isf.org, or email the University of Manitoba EWB students group at ewb_manitoba@hotmail.com. ■



Scholarship Competition 2003

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Director of Admissions' Report

S.M. Matile, P.Eng.

Admissions activity during the past year was dominated by changes to the Pre-Registration Program.

Since 1998, the Experience Review Committee has been looking at kinder, gentler sanctions for non-compliance with this Association's Pre-Registration Program. In November, the Admissions Policy Review Committee – a Task Force of Councillors appointed in November, 2000 to investigate the Association's entire registration process – presented a report to Council. The report was accepted by Council, and Executive Director Dave Ennis set about addressing the issues identified in the report. To date, his proposals have received mixed reviews from the Admissions Committees and staff, but the process continues.

In November, the Experience Review Committee, having wrestled with the ramifications of and the precedent set by Council in 1999 when it heard and ruled on an appeal by an EIT who had not complied with the Pre-Registration Program, came up with a policy whereby anyone who had not enrolled as an MIT immediately upon commencing employment would be able to claim up to 12 months' Pre-Enrollment experience (inclusive of any pre-graduation experience

they may have obtained). This, of course, has created a serious inequity in that MITs who enroll one year late are not penalized, but MITs who enroll on time but fail to report on time are penalized. Presumably, this will be addressed by the Executive Director as he changes admissions policy in response to the Admissions Policy Review Committee's report.

In November, also, the Experience Review Committee accepted a recommendation from the MIT Committee and broadened the professional service requirement of the Pre-Registration Program to include certain community service activities.

The MIT Committee also attempted, this year, to address the important matter of supervisor delinquency, by conducting a survey. Many changes had been made, including database changes that allowed us to generate lists of names of, and conduct regular follow-up with, overdue supervisors, and our recommending to MITs that they consult with their supervisors and submit their forms together. Despite this, there were, at the end of July, 199 supervisor reports overdue – 35 of them by more than one year. This means that fully one-third of our MITs had not received the feedback on their experience they deserved

from us. Given these terrible numbers, and based on the survey, we are looking at ways to improve the Supervisor reporting form – again.

In April, a special meeting was held to discuss the "accreditation" challenges of foreign-trained engineers. The meeting was conducted by Manitoba Education, Training, and Youth. It featured the Director of Settlement and Labour Market Services, who provided the government's perspective on immigration, and stressed the need to ensure that qualified immigrants are able to work in Manitoba in their areas of expertise. Immigrant engineers, Committee Chairs, Councillors, and representatives from industry, the University of Manitoba, and CCPE all participated in a facilitated workshop on how to better assess the competencies of immigrant engineers. This was, by all accounts, an extremely informative meeting.

In July, the Academic Review Committee finally revised its operating process to more closely align with CCPE's July, 2001 National Admissions Guideline and the way the rest of the country operates. Significant changes to the process include: the use of a prescription table, rather than a case-by-case analysis, for assigning examinations, with the candidates normally choosing the examinations they will write; drastically tightening up the examination schedule – from the current average of two per year to two per semi-annual session; allowing the Committee to waive the remaining confirmatory examinations based on good performance on the first two; and introducing an interview which may result in the waiving of examinations for anyone with ten years or more experience.

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CCPE Director's Report

P. Washchyshyn, P.Eng.

Much time and effort over the last year has been spent on discussion related to necessary increases in member dues to CCPE. Over the past number of years member dues remained unchanged while the CCPE received significant funds from the Federal Government for providing the initial assessment program for prospective immigrating engineers to Canada. With new legislation passed in 2001 this source of revenue will cease. To replace that source of revenue an increase in member dues from \$8.65 per year per member to \$17.30 per year per member was considered by the Board. This is not, in my opinion, a significant amount for any professional engineer to pay. The discussion and debate ensued because the relevance and value of CCPE to members is not clearly understood.

The following is my summary of activities undertaken by CCPE on behalf of its member organizations and professional engineers in general.

Accreditation

To support consistent and rigorous standards for engineering education and admission to the profession in Canada, CCPE establishes national criteria and procedures for the accreditation of undergraduate engineering programs in Canada and accredits programs that meet those criteria. The accreditation system monitoring helps CCPE member organizations to assess the academic qualifications of candidates applying for licensure.

National Guidelines And Standards

To help its members adopt and follow consistent regulatory procedures and practices that support full national mobility for professional engineers within Canada, the CCPE develops consensus-based national guidelines for the adoption and use of the associations. It supports the development and implementation of national examinations, evaluates engineering programs offered outside Canada, develops and publishes the CCPE examination syllabus, amongst other things. These programs and services help associations to fulfill their mandates to regulate the practice of engineering within their jurisdiction in the public interest.

Research

The CCPE has established an ongoing research program to help its members stay abreast of emerging issues as well as emerging areas of engineering and plan effectively for the future. These research reports include trends in annual engineering enrollment and degrees awarded; the nature of engineering work in Canada; rates of engineering licensure; engineering employment and demographic trends; the import and export of

engineering services. The results of the most recent surveys on engineering employment and activities in Canada will be released within the next few months.

International Mobility Agreements

The CCPE negotiates international agreements on behalf of its members. The agreements help CCPE's members to evaluate the professional qualifications of foreign trained engineers seeking licensure in Canada and Canadian engineers to take full advantage of the international opportunities created by free trade.

Relevance

To support the regulatory work of the associations and enhance the relevance, value and public recognition of the profession's regulatory system, right to title, and high practice standards, CCPE has developed a detailed report on relevance with five recommendations to enhance the relevance of the engineering licensure and regulation. These recommendations include:

- The establishment of sector based industry liaison councils;
- Creating a new postgraduate internship program that will enhance the value accorded to the P.Eng.;
- Fostering close relationships with University and Engineering Faculty and engaging their support to promote the P.Eng.;
- Developing an exciting description of engineering work, and;
- Streamlining the application process for licensure to allow multi-jurisdiction licensure through a single application.

Government Relations

CCPE has established an ongoing government relations program to proactively influence national policies, legislation and regulations that have the potential to affect the engineering profession or its ability to regulate the practice of engineering in the public interest. This is a new initiative in the last couple of years that has been very well received by the Federal Government.

Communications And Public Recognition

To increase the public profile and recognition of Canadian engineers and engineering as well as the engineering profession, CCPE has established a national communications program as well as a national awards program. We have been silent for much too long. The public awareness program is only scratching the surface with much work to come.

A National Promotion Campaign to raise awareness of the P.Eng. license among engineer-

ing students and the employers of engineers has been launched.

Member Services

On behalf of its members, the CCPE sponsors a wide range of cost effective insurance, retirement, investment and other products assigned to meet the needs of professional engineers. Most members are familiar with these and the new program officially started in May 2002 for secondary professional liability insurance for all members.

I believe most engineers would agree that the above is certainly worth the dues that we pay to the organization.

In February the Board of CCPE instigated the contingency plan established precisely for such a financial situation by drawing on reserves to fund the balance of the fiscal year 2002. Through discussions with the member organizations at meetings in April 2002 and at the AGM in May 2002, it was agreed that reserves would be drawn down to offset the revenue shortfall for the years 2002, 2003 and 2004 with assessments increasing in 2004 at \$2.40 per member, \$2.40 in 2005, \$2.00 in 2006. At 2005 the budget would be at approximately a break even position.

Through this exercise CCPE will hold the line on expenses over the next few years.

The new strategic plan was introduced in November 2001. It was debated and revised in light of the above described economic realities. The strategic plan was again discussed at the meeting of members in April and at the annual meeting in May. The new budgetary reality and strategic plan are in harmony.

We have a very dedicated and industrious staff at CCPE working in the best interest of Professional Engineers. As is the Association, CCPE is blessed with hard working volunteers committed to the mission and vision of our National body.

In summary, the engineering profession is facing many challenges. I think the most significant is to appear relevant to all engineers, EITs and potential members. To that end I solicit every professional engineer to be an ambassador of the profession for the benefit of the public we serve and the membership as a whole. ■

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.

Manitoba Canadian Council of Professional Geoscientists Director's Report

A.H. Bailes, P.Geo

The Canadian Council of Professional Geoscientists (CCPG) is an autonomous federation of the provincial and territorial professional associations. It exists solely to provide services to its member associations and does not license or certify individual geoscientists. It is designed to assist the member associations in fulfilling their common objectives of: 1) coordinating admission standards and other activities affecting Canadian professional geoscientists (particularly their mobility), 2) acting as a forum within which common issues are addressed and 3) representing Canadian professional geoscientists nationally and internationally. Each provincial and territorial professional association is represented on CCPG by an appointed director.

Geoscientists are currently regulated in 11 of the 13 Canadian provinces and territories. As of June 30, 2002 more than 6,000 geoscientists were licensed as Professional Geoscientists (P.Geo.), Professional Geologists (P.Geol.) or Professional Geophysicists (P.Geoph.) under combined engineering and geoscience legislation in Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland, Northwest Territories, Nunavut and Saskatchewan. Additionally, approximately 500 geoscientists have been licensed by the Ordre des géologues du Québec (OGQ) as géologues (gé) under legislation that came into force on August 23, 2001. The "in force" date for licensure of geoscientists in Ontario is Aug 30, 2002, with corporations operating in Ontario requiring a C of A after March 31, 2003. In Nova Scotia, the Geoscience Profession Act was passed by the legislature on May 28, 2002. It is estimated that 10,000 geoscientists will be registered in Canada within 2 to 3 years.

A CCPG Board of Directors Meeting held in Edmonton, Alberta, April 27, 2002, dealt with the following topics:

1) Foreign Qualified Persons (QPs) under National Instrument 43-101

Most of the difficult aspects of the Foreign QP issue were resolved at the previous CCPG Director's meeting in November 2001. Although some concern remains about who is a QP on a foreign property, this issue has largely been resolved by the decision by most Constituent Associations (CAs) that the "practice of geoscience" takes place in the jurisdiction where the mineral property is located. Thus, reports issued on properties located outside Canada are not the responsibility of the local CA's and the decision as to who may be a QP on a foreign property rightly belongs to the Canadian Securities Administrators (CSA). The Staff Liaison Group (SLG) asked CCPG to not offer any advice to CSA on who may be considered to be QPs as this might be misconstrued as certifying individuals or groups of individuals as qualified to practice in

Canada or equivalent to professionals licensed in Canada.

Some aspects of NI43-101 are being rewritten by the CSA to more accurately represent the intent of the instrument with regard to foreign QPs. It was not the intent of NI43-101 to require that QPs from foreign jurisdictions have identical licensing arrangements as those in Canada. The problem for CSA has been that, as presently written, NI43-101 stipulates that a QP must belong to a legally recognized licensing body (the Canadian model). For geoscientists such legally recognized entities, with few exceptions, only exist in Canada. CCPG and CCPE have taken the position that this is strictly a CSA issue and not the problem of the CA's in Canada.

2) Oil and Gas Securities Task Force

A draft report from the Oil and Gas Securities Task Force with a proposal for a National Instrument (NI51-101) was circulated to CAs early in 2002. Both APEGS and APEGGA have returned comments and concerns to the Oil and Gas Securities Task Force. Similar to NI43-101, NI51-101 proposes that reports to securities exchanges be signed off (sealed) by a qualified individual, referred to as a Qualified Evaluator (QE). The QE (likely a P.Geo, P.Eng or P. Geoph) will have similar credentials to a QP. Hopefully, the issue of how to identify foreign individuals to act as QEs will be dealt with based on experience gained under NI43-101. It is anticipated that under NI51-101 P.Eng's will form a significant proportion of QE's.

3) Inter-Association Mobility Agreement (IAMA) and Incidental Practice

The IAMA signed in Saint Andrews in June, 2001, appears to be having some start-up difficulties. Jurisdiction are handling transfers in different ways with time to process transfers ranging from a few days to several weeks. Those in which the transfers are most timely are handled by staff (e.g., NWT & Nunavut, APEGS and APEGN) whereas those that are processed slowest are handled by volunteer committees (e.g., APEGM, APEGGA, APEGBC). Transfers by APEGNS, APEGN, NWT and Nunavut are processed directly by Executive Directors/Registrars with transfers often processed in a day.

One of the issues stopping or slowing transfers is the absence of the PPE requirement for grandfathered geoscientists in some CA's (e.g., APEGM, APEGS). Although APEGS, APEGN and APEGNB do not check for fulfillment of the PPE requirement for geoscientists, APEGBC and APEGGA automatically screen geoscientists for completion of a PPE exam.

In addition, APGO is requiring files of all geo-

scientists requesting transfers be sent to them for review. This is causing considerable delays and, in some instances, is preventing transfers from taking place. APGO indicates that they are required by their legislation to examine documentation (in particular references) for acceptance into APGO. This is a problem because in some jurisdictions original documents are not kept once the individual has been accepted. The need to check original documents appears to contradict the intent of the IAMA.

At its November 2001 meeting CCPG Director's suggested that Incidental Practice (IP) should be given more consideration by the staff liaison group (SLG). At the May 2002 meeting the SLG pointed out that IP's require changes to the legislation governing the individual CA's and, thus, would require revisions to 12 pieces of legislation to achieve the same result as Multi Jurisdictional Registration.

4) Multi Jurisdictional Registration (MJR)

The SLG suggested that CCPG pursue Multi Jurisdictional Registration (National Registration/CanGeo) rather than IP's because it would not require any changes to the CA's legislation and could be achieved in a shorter time frame. One suggestion was that there be two categories of registration, one for the local CA and an additional category for those geoscientists wanting MJR. In order to achieve MJR the SLG suggested that the CA's would need to agree on:

- a set of Standards (Academic/Experience) that meet the minimum requirements of all member associations.
- agreement on the Professional Practice and Ethics (PPE) requirement.
- mechanisms for dealing with discipline and investigation of MJR geoscientists.
- rules to govern how expenses for discipline are allocated.
- standard requirements for continuing professional development.
- a mechanism for sharing MJR revenue (some CA's depend on out-of-jurisdiction registrations to fund their activities; e.g., 60% of revenue for NWT association comes from non-residents).
- consistent rules governing permission to consult (C of A insurance issue etc.)

A recommendation was made that since MJR is so important to geoscientists that funding be sought from HRDC for a task force to study this issue. Letters from all interested parties (various CA's, CCPG, CCPE, Geological Association of Canada (GAC), Canadian Geological Council (CGC), Canadian Sedimentary and Petroleum Geologists (CSPG), Prospectors and Developers Association of Canada (PDAC), Canadian Securities Administrators (CSA) etc.) to HRDC in support of this initiative would be important.

5) Status of International Cooperation Agreements

International Cooperation Agreements are an important first step towards international mobility.

Manitoba CCPG Director's Report

Continued from page 8

Such agreements allow the evaluation and recognition of foreign geoscience qualifications in Canada and conversely, lead to qualifications of Canadian geoscientists being recognized abroad thus securing Canadian practitioners' place in foreign markets. It is simply a matter of time, as countries around the world adopt various forms of geoscience licensure/certification, that foreign markets could be closed to Canadian practitioners if methods of reciprocal recognition of qualifications are not enacted.

The Canadian Geoscience Standards Board (CGSB) was asked at the meeting in November 2001 to turn its attention to Section D of its mandate which is "to ascertain the equivalency of accreditation programs in other countries, in order to recommend mutual recognition agreements with foreign bodies and to monitor the activities of those bodies with which mutual recognition agreements have been signed". Unfortunately the chairman of CGSB has resigned and this activity has not been undertaken.

CCPG has signed Cooperation Agreements with the American State Board of Geologists (ASBOG), the American Institute of Professional Geologists (AIPG) and the Institute of Geologists of Ireland (IGI). Drafts of Cooperation Agreements have been submitted to and favourably received by the Geological Society of London (GeolSoc), European Federation of Geologists (EFG), the Australian Institute of Geoscientists (AIG), and the Australasian Institute of Mining and Metallurgy (AusIMM). The current focus for developing cooperation agreements is with South Africa including the South African Council of Natural Scientific Professions (SACNASP), the South African Mineral Resource Committee (SAMREC) and the South African Institute of Mining and Metallurgy (SAIMM).

The proposal to create a new membership status, "International Affiliate", for CCPG was not ratified at the CCPG AGM. The primary purpose of this designation was to provide a reciprocal "membership" arrangement with ASBOG to facilitate acquisition of information from ASBOG and permit CCPG affiliates (CAs) to oversee ASBOG board exams for Canadian geologists. The latter is currently difficult, costly and time consuming for geoscientists wishing to register with ASBOG. The "International Affiliate" membership category, if passed, would have required changes to CA's by-laws and required the CA's to proctor the ASBOG board exams for their members.

6) Miscellaneous Issues

- **CCPG Gold Medal Award:** CCPG is developing criteria for selection of an outstanding geoscientist to receive a Gold Medal Award. In addition to the selection criteria and structure of the awards committee, CCPG is looking for an appropriate venue at which to present this award.
- **CGC Career Brochure:** CCPG is supporting an initiative by the Canadian Geoscience

Council (CGC) to develop careers information for geoscientists. Most of the information is likely to be placed on a website with a condensed version printed as an 8 1/2 by 11 inch folded brochure. A CGC census will help to define career paths for geoscientists. A census by CCPE is currently underway and will survey 160,000 licensed engineers and geoscientists

- **National Geoscience Week:** A proposal to initiate a National Geoscience Week was not supported as it was felt that such an undertaking was beyond the scope of CCPG and would not be feasible.
- **Restructuring of CCPG:** The undertakings of CCPG are beyond the ability of CCPG executive to undertake alone. To relieve the burden on CCPG executive, many of the duties of the executive will devolved to geoscientists with

CCPG director's assigned responsibilities to lead or direct committees and ad hoc task forces.

- **Loss of Revenue for CCPG:** Similar to CCPE, CCPG has lost considerable revenue that was generated by reviewing foreign credentials for HRDC. CCPG currently has the ability to absorb this loss for fiscal year 2002 but without additional revenue in 2003 CCPG will be unable to undertake many of the tasks it currently handles. A number of the CAs indicated that they would consider ways to offset these losses (paying all of certain travel expenses etc.) but require a request from CCPG to take to their councils.

Further information, including links to all member associations of CCPG, is available on the CCPG web site at www.ccpg.ca. ■

Director of Admissions' Report

Continued from page 10

The process for evaluating the academic credentials of geoscientist applicants has been clarified and finalized. The Geoscientist Issues Task Force, which had a concern that Canadian geoscience graduates were being treated differently from Canadian engineering graduates (and they are, because there is no accreditation of and therefore no standard among geoscience programs), will be pleased to learn that Canadian geoscience graduates will be subjected to a lower assessment fee than applicants with geoscience degrees from outside Canada.

And while we're on the subject of geoscientists, the "grandparenting" of the academic qualifications of graduates of the Honours Geology program at the University of Manitoba and the Four-Year Specialist program at the University of Brandon continues until December 31, 2002. After that date, all geoscience applicants not registered elsewhere will be required to apply for the assessment of their academic credentials.

The debate over the Association's treatment of geoscience relative to engineering applicants under the Mobility Agreements continues, I understand, at the Council level. Most Associations are using the "notwithstanding" clause in the geoscience agreement to require the Professional Practice Examination of those applicants who were not required during "grandparenting" by their home Associations to write it. Our Council appears reluctant to do so.

Between July 1, 2001 and June 30, 2002, this Association received 360 applications. Of these, 67 were referred initially to the Academic Review Committee for the assessment of the applicants' academic credentials, and the remainder went directly to the Registration Committee. The Registration Committee registered six professional geoscientists under the "transfer" provision of the "grandparenting" criteria, enrolled or re-enrolled 143 Engineers-in-Training (EITs), enrolled three Geoscientists-in-Training (GITs), registered 101 engineers under the Inter-Association Mobility Agreement, reinstated 18 engineers, registered 63 EITs as professional engineers, registered one GIT as a professional

geoscientist, and issued 22 temporary licences to practise engineering in Manitoba to non-resident Canadian and U.S. Engineers.

As we reached the end of the fiscal year, we still had not commenced with the updating of the operations manuals for the Experience Review Committee, or the development of an operations manual for the Registration Committee. Hopefully, this coming year...!

We are extremely fortunate in having an excellent Admissions staff at APEGM. Lorraine Dupas, our Admissions Co-ordinator, does an outstanding job with the Member-in-Training and Experience Review aspects of admissions; Jenn Reykdal, our Registration Co-ordinator, expertly manages the applications for registration, enrollment, licensure, and Certificates of Authorization; and Joan McKinley, our Administrative Officer, continues to provide excellent service to our Academic Review Committee and examination candidates. Thank you all, ladies, for your dedication, hard work, and professionalism. ■



After four years as APEGM's Manager of Administration, Ken Buhr, P.Eng., has retired from the workforce. Good luck and best wishes, Ken and Lou-Anne, in the next chapter of your lives.

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Legislation Committee

D.N. Spangelo, Chair

Members

W.M. Burbidge
D.G. Ford
R.M. Gordon
J.S. Hicks
R.A. Johnson
S.A. Mailey
J.E. Reimer
P.V. Remillard
L.R. Ferchoff (*Liaison Councillor*)



The purpose of the Legislation Committee is to propose changes to *The Engineering and Geoscientific Professions Act*, the By-laws and Code of Ethics for purpose, consistency and clarity. The Committee also reviews other legislation that may affect the practice of engineering in the Province of Manitoba. The Committee is responsible to Council through the Issues Awareness Board.

Over the past year the Legislation Committee has not been involved, as it has been in the last few years, with high-profile issues such as the adoption of Certificate of Authorization (C of A) By-Laws or major Act changes. However, the Committee has been busy reviewing the Act and By-Laws to address a number of lesser but still important on-going issues.

Salary Research Committee

E.G. Parker, Chair

Members

W. Czynjy
J.W.P. Lengyel
A.M. Mian
I. Mikawoz
S. Quigley
W.B. Todd
Statistical Analysis:
Jean-Louis Gratton



To satisfy our objective of providing salary information for use by the public and Association members, the Salary Research Committee conducted its annual employee salary survey this spring. The results are posted at the APEGM Web site at www.apegm.mb.ca.

This year it was decided that we would not continue with our annual employer survey. The past few years had seen a decline in participation of employers and the employer response received was no longer representative of the engineering employment in the province. In addition, employers who had responded have continued to experience difficulty in relating their own individual job

The Act's initial requirements for professional liability insurance coverage, required by the C of A, has been amended recently by the Legislature. The amended Act now allows for more flexible and appropriate insurance coverage for entities that are not eligible for traditional professional liability coverage.

The Committee has also reviewed the By-laws with respect to Council's adoption of Policy Governance. Amendments for this and a number of other issues will be presented for consideration at this year's AGM. Some of the By-Law amendments to be considered include:

- simplified requirements for signing of documents in regards to C of A
- enhancing of deferred-dues options
- eliminating the requirements for writing the Professional Practice Exam by some re-registrants, depending on special circumstances
- numerous house-keeping issues

I would like to thank all Legislation Committee members, both existing and past, as well as Dave Ennis and other APEGM staff for their contributions and efforts over the last year.

I would also like to extend a personal thanks to Jim Hicks who has "retired" from the Committee after 25 years! Your expertise has been greatly appreciated over the years!

I hope as many members as possible continue to review our By-Law proposals and vote as they wish at the AGM and/or through the mail-in voting process! ■

evaluation process to the standard job classification system used by APEGM and the other Engineering Associations.

Last year we had adopted the job classification guideline of the Association of Professional Engineers and Geoscientists of Saskatchewan. The new guideline maintained the same point system but uses generic wording and includes job references for both engineer and geoscientist work activity. This year we had modified the questionnaire to reflect work roles of both engineers and geoscientists. This has enabled us to complete analysis by industry sector and job function separately.

For the employee survey, we once again received an excellent response with completed surveys received from 25% of the members. The members reported an average increase of 4.6% in base salary for the year ending December 31, 2001. The base salary increase in the public sector was 4.5% while the base salary increase in the private sector was 4.7% this year. This compares to the average base salary increase of 5.1% reported for the year ending December 31, 2000.

Thank you to the members who completed our survey and to those who provided their comments. Finally, many thanks to the committee members for their efforts this year and to Dave Ennis and Joan McKinley for their continued support. ■

Emerging Issues Committee

D.R. Strang, Chair

Members

I.T. Blakely
A.S. Chadha
R.J. Hamlin
R. Ludwick
M. Paryniuk
E.A. Speers
J.B. Thorsteinsson
J.R. Gunning,
(*Recording secretary*)



The purpose of the Emerging Issues Committee is to facilitate awareness within the Council through the Issues Awareness Board of emerging issues germane to the practices of engineering and geoscience or that could impact the mandate of the Association.

The Committee reports to Council through the Issues Awareness Board. The Committee met eight times during the past year.

We have investigated a number of topics for detailed consideration. Through brainstorming sessions, we have identified a number of candidate topics and have undertaken a rational strategy for prioritizing the topics through the use of a decision matrix. Six priority topics have been identified, as follows.

- Genetic engineering – is it?
- Under-Investment in Infrastructure
- Biosolids processing
- Improving health care through technology and innovation
- Technology to reduce greenhouse gases
- Electronic Seal

For some of the issues (notably, the issue of the use of the electronic seal), the Committee has been compiling extensive background information. We have also made a report to APEGM Council relating to the technology of hydrogen fuel cells.

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 and other APEGM staff for all their support during the year. ■

Letter to the Editor

I have to write to express my delight in reading the June, 2002, "Thoughts on Design" article by Ron Britton, P.Eng. Ron has described in simple and effective terms a distinction that is important for us all to understand. Well done Ron.

M.J. Ferguson, P.Eng.

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Registration Committee

K.J.T. Kjartanson, Chair

Members

- D.G. Osman, (*Vice-Chair*)
- D.A. Brown
- D.P. Dudek
- C.R. Galeschuk
- T.W. Gouldsborough
- C.S. Roberts
- A.H. Permut, (*Liaison Councillor*)
- T. Sellen, (*Lay Member*)



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 the 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 the Council.

The Registration Committee was, once again, very busy during 2001-2002. In this period, the Committee held 12 regular meetings and four special meetings and heard two appeals. Insofar as statistics are concerned, during this past year:

146 EITs/GITs were enrolled, 101 members were registered under the Mobility Agreement, six members (geoscientists) were registered by transfer (one of these was a dual registration), 64 members (including one geoscientist) were registered for the first time, 22 temporary licences were issued for practice, 18 reinstatements were approved, two reversions (from retired membership) were approved, and 26 Academic Review Committee recommendations were verified. Three applications were reviewed and not approved by the Committee for a variety of reasons.

One of the two appeals heard related to a decision of the Registration Committee. Based on new information submitted, the appeal was granted. The second appeal heard was against a decision of the Experience Review Committee. The appeal was granted with conditions to be met by the appellant. In addition, the Council heard one appeal against a decision of the Registration Committee respecting an appeal against an Experience Review Committee decision. The Council denied the appeal.

During the past year, the Committee has continued to work closely with the Admissions Board, the Academic Review Committee, the Experience Review Committee, the staff, and the Council to ensure that registration procedures are appropriate. Where necessary, recommendations have been made to the Admissions Board, the Executive Director or the 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.

In addition to its baseline work, the Registration Committee also reviewed and made recommendations respecting several registration-related issues. Four Special Meetings of the Registration Committee have been held to discuss issues related to the transfer of geoscientists into the Association, Temporary Licensure of applicants, and the reinstatement of former members back into the Association. The transfer issue was dealt with by a change to the Manual of Admissions while the other two items are still under discussion. While these three issues have taken a lot of time, the Committee also reviewed and made recommendations respecting the citizenship/legal-right-to-work issue and will be dealing with the "Report of the Admissions Policy Review Committee" of the Council and recommendations prepared by the Executive Director in response to the Report. Various other miscellaneous tasks were also undertaken.

The Committee membership has changed over the past year. Carey Galeschuk and Doug Brown were new additions to the Committee at the beginning of the period. Carol Roberts was welcomed back to the Committee after an absence for educational reasons. Unfortunately, Carey Galeschuk had to resign from the Committee for personal reasons at the end of the period and has been replaced by Don Dudek as the geoscientist representative. Thanks for your hard work, Carey, and welcome, Don. The Chair has appreciated the ongoing enthusiasm and dedication of all the Committee members over the past year. The Committee wishes to recognize and thank Shirley Matile, P.Eng., Jennifer Reykdal, and Dave Ennis, P.Eng., for their ongoing support and assistance which has, once again, proven to be invaluable. ■

Awards Committee

J.M. Symonds, Chair

Members

- I. Djatiutomo
- J.R.C. Doering
- J. Graham
- D.H. Grant
- B.W. Gulay
- E.E. Lach
- L.S.W. Larkin
- G.A. Morris
- J.R. Pickell
- N.B. Ulyatt
- P. Washchshyn



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 (APEGM) Annual General Meeting Awards Dinner was held on Saturday, 13 October, 2001. At that event, two Life Memberships and one Outstanding Service Award were presented. The Life Memberships went to Easton Lexier and Glen Morris, and the Service Award went to Ron Britton.

An Evening of Recognition was held on 5 March 2002. There were four awards presented at this event. The first was the Merit Award to Ron Britton from the University of Manitoba for his outstanding scholarly achievements, including the direct advancement of the profession of engineering in Manitoba. The Leadership Award was presented to Madhav Sinha for his pioneering contributions in the development of quality control science and engineering disciplines, and related educational and promotional activities. The Early Achievement Award was given to Roger Rempel for significant contributions as an environmental consultant to society and the engineering profession. The final award was the Certificate of Engineering Achievement which went to the City of Winnipeg Water and Waste Department, CH2M Hill Canada Limited, and UMA Engineering Limited for the "Rehabilitation of the Greater Winnipeg Water District's Shoal Lake Aqueduct".

This year we were particularly fortunate to have two successful Manitoba submissions for the CCPE Awards. Bill McDonald received the Meritorious Award for Community Service and Jim Graham won the Medal for Distinction in Engineering Education.

The above recipients are very deserving of

their awards for their considerable contribution to Manitoba society and the APEGM. The public's image of the engineers of Manitoba and Canada has been greatly enhanced by these individuals.

The Association will continue to recognize outstanding contributions to the profession and community later this year in conjunction with the 2002 Annual General Meeting. While the recipients have been named, they have not gone through the entire review process and, therefore, it would be premature to announce the winners.

The Awards Committee continues to have a very good slate of candidates for these awards but we are always looking for nominations from the membership. 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 the APEGM or CCPE has to recognize the efforts and achievements of its members. It is important the membership continue to contribute to the process.

I would like to thank Joan McKinley, Dave Ennis, and all the Awards Committee members for their significant efforts over the last year. It has been a pleasure working with you. ■

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Academic Review Committee

B. Stimpson, Chair

Members

K.M. Adam
S. Balakrishnan
E. Bridges
D.G. Chapman
N Chow
I. Ferguson
D.S. Jayas
W.M. Kinsner
R.J. Partridge
D. Polyzois
R.W. Menzies
H.M.H. Soliman



The Academic Review Committee (ARC) assesses the academic qualifications of all applicants for registration who have not graduated with Bachelor's Degrees from engineering programs accredited by the Canadian Engineering Accreditation Board (CEAB) or geoscience programs recognized by APEGM. One or more exams may be assigned such that everyone registered as a Professional Engineer or a Professional Geoscientist with the Association has a minimum level of academic qualification equivalent to that obtained by graduates of CEAB-accredited programs (for engineering applicants) or to a comprehensive four-year Honours or Specialist geoscience program (for

geoscience applicants).

Each applicant's degree(s), transcript(s), syllabi and other submitted information are assessed by a sub-Committee and the number and subject matter of examinations to be taken, if any, recommended to ARC for discussion and approval. For engineering applicants, the examinations are selected from 17 syllabi prepared by the Canadian Engineering Qualifications Board (CEQB), another committee of the CCPE. 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, evaluates their performance on these examinations, and assigns additional examinations, if necessary, 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, 15 applicants completed their assigned examinations and were then considered academically qualified.

In the past year the ARC assessed 67 applicants (64 engineering applicants and three geoscience applicants) and assigned a total of 214 examinations. The committee also considered 13 appeals on various grounds.

This year, under the leadership of Doug Chapman, P.Eng., the Procedures Manual for ARC has undergone a complete re-write. The

to promote communication between professional geoscientists, professional engineers, related groups and the general public."

An open forum was held at the Manitoba Mines and Minerals Convention in 2001 and another will be planned for November 2002. From this open forum, several matters pertaining to the Certificate of Authorization, insurance, assessment, professional registration, and use of the seal were addressed. These issues were answered and posted in The Keystone Professional.

GITF has been part of the consultation process into the formation of the Environmental Task Force, education standards, administration, and mobility. One of the most explored issues of the year was the ability of geoscience students registering with APEGM to become GIT's. There are some hurdles to overcome in this regard, but we are confident that a viable solution will arise. Any new venture or process is one of evolution and not quick change, consequently we must learn to be patient.

I would like to thank all the Geoscience Issues Task Force members and all who have been involved in the process of registering Professional Geoscientists. A special thanks is extended to Dave Ennis for his constant support of Geoscience registration.

We look forward to another successful year and to serving our role within APEGM. ■

major impact will be to align the treatment of candidates, notably the number of examinations assigned (if required), with the new CCPE Guideline on Admission to the Practice of Engineering in Canada. The new manual also incorporates procedures for the academic evaluation of applicants for licensing as Professional Geoscientists.

The evaluation of academic credentials is a challenging task. It is not simply formulaic, otherwise the work could be carried out by a computer. Judgement is also involved, and recommendations are scrutinized thoroughly by other members of the Committee during meetings. I wish, therefore, to express my gratitude to ARC members for their conscientious work. In addition, none of us would have been able to carry out our assignments without the dedication and advice of David Ennis, P.Eng., Executive Director and Registrar, Shirley Matile, P.Eng., Director of Admissions, and Joan McKinley, Administrative Officer, who handled the large amount of administrative work of the committee and of the examination process. ■

Communications Committee

A.N. Kempan, Chair

Members

M. Baril
J.A. Blatz
V.L. Dutton
D.H. Inglis
J.W.P. Lengyel
A. A. Poulin
S.B. Williamson



This report will conclude my three-year stint as Chair of the Communications Committee. I think it's time to pass the torch to new, eager hands. James Blatz will be taking over the position and I ask all of you to give him your full support and co-operation.

This year has seen the normal turnover of Communications Committee members. Fortunately for us, there are always more ambitious, capable people to take their places. One of the gratifying things about this position is to see how often our newer members come up with good ideas and better ways of doing things.

I think we had a good year and that we all enjoyed putting together The Keystone Professional. With the exception of some internecine warfare about our biennial humor item and right-justification, things went very smoothly. And we must not forget the tireless work of Lorraine Dupas who is always there to take minutes and co-ordinate the writing, editing, and formatting of The Keystone Professional. Thanks to Lorraine and the Committee for their time and effort. ■

Geoscience Issues Task Force

C.R. Galeschuk, Chair

Members

A. Aubut
K. Costello
J. Hayles
R.A.S. Reichelt
K. Tait
G. Young
D.V. Ziehlke



As we proceed into the second year of the Geoscience Issues Task Force (GITF) we continue to deal with issues that relate to the geoscience community and professional registration. We have remained as a source of information and feedback to the administration of Professional Geoscience registration within APEGM.

The GITF members represent a broad cross-section of the geoscience community across Manitoba. The task force continues to welcome feedback from all individuals. GITF has adopted the following objective as its mandate and purpose:

"To facilitate awareness of geoscience issues and

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Practice Standards Committee

F.L. Nicholson, Chair

Members

- M.S. Anderson
- K.G. Bolton
- A.G. Degner
- I.R. Dewar
- E. Ferbers
- M.J. Frye
- J.G. Hayles
- 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



- Guidelines for Technical Review of Engineering and Geoscientific Work of Others

Updates to Current Standards:

- Guide to the Engagement of the Consulting Professional Engineer
- Guide to the Ethical Use of the Seal

In order to ensure that all members of our Association had an opportunity to review the documents before they were finalized and formed the basis of good practice in Manitoba, the Practice Standards Committee has made several documents available for comment. The availability of The Guideline on Commissioning was announced in the February edition of *Keystone Professional* and an invitation to review the Duty to Report Guideline was announced in the April Edition.

In the near future two more guidelines will be available for comment; Guidelines for the Development of Mechanical and Electrical Systems in Buildings and Guidelines for Technical Review of Engineering and Geoscientific Work of Others. As others are completed, they will be presented to the membership for review.

A special joint committee of APEGM and the CEM is developing the Guideline for the Engagement of the Consulting Professional Engineer. Included will be guidelines covering the selection and engagement of engineers and a suggested fee structure. It is expected that the draft document will be ready for review by the membership later this year. ■

The Practice Standards Committee has met twice over the past year to develop Practice Standards in the following areas:

New Standards:

- Professional Practice Guidelines
- Guidelines for the Development of Mechanical and Electrical Systems in Buildings
- General Review of Construction
- Guideline on Commissioning
- Guideline on Duty to Report

Meetings Committee

D.A. Ennis, Chair

Members

- M.T. Corkery
- M.J. Coyne
- S. Kass
- R.R. McKibbin
- K.J. Puckall
- H. Yogendran
- D.P. Zilinski



The Committee is very appreciative of the work of the Task Force chaired by Joe Begin, which arranged the professional development sessions held on October 12th. Nearly 100 people attended the sessions and the feedback was positive. This year's Task Force, now chaired by Ken Buhr, and comprised of Hilmi Turanli, Bob Bruce, Tim Corkery, Ganpat Lohda, Ninel Gonzales, Paul Newsham and Ramesh Gupta are arranging another session for October 18th, 2002 as part of this year's Annual Meeting.

The 2002 Annual General Meeting will be held at the Fort Garry Hotel on Broadway Avenue in Winnipeg on October 18, 2001. This year, as in prior years, members from the Chapters at Thompson and Flin Flon/The Pas (Kelsey) will be connected to the business meeting through video-conference facilities. The conference program is available through the AGM web page. The speaker at the Annual Meeting luncheon on October 18th will be Dr. Henry Petroski, Professor of Civil Engineering and Professor of History at Duke University. He is the author of nine books, one being "To Engineer Is Human: The Role of Failure in Successful Design".

The Committee appreciates and acknowledges the contributions of Joan McKinley and Ken Buhr to its operations. ■

Over the period from September 2001 to July 2002, the Committee has met five times.

During this time it has arranged and facilitated:

- the 2001 Annual General Meeting and Professional Development Conference on October 12 and 13, 2001;
- a reception for the presentation of Awards and Certificates of Registration to new members on March 5, 2002, during National Engineering Week.
- made arrangements for the 2002 Annual General Meeting.

I would like to thank the members of the Committee for their support. Furthermore, the aid provided by Dave Ennis and the APEGM staff has made the work of the Committee much more effective and is appreciated.

Sports and Social Committee Report

M.E. Baril, Chair

Members

- C.J. Berkis, (Vice Chair)
- B.R. Coreau, (Scribe)
- J.F. Lavergne
- M.C. Rowbotham



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:

- Annual fall golf tournament at Kingswood Golf & Country Club on September 13, 2001. Unfortunately the tournament was cancelled due to lack of interest.
- Annual spring golf tournament at Bridges Golf Course on June 11, 2002, using a Texas Scramble format. Thank you to all the participants and the organizations that sponsored holes and donated prizes. Your continued support is greatly appreciated. The spring tournament was once again a huge success.

The annual fall golf tournament for 2002 was not organized due to last year's lack of interest, and the smaller than normal turnout at the 2000 fall tournament. We will be reviewing the fall tournament at upcoming meetings this next year, in addition to the possibility of reviving the curling bonspiel. The venue for the 2003 spring tournament has yet to be finalized, but it will once again be scheduled for the 2nd or 3rd week of June. Please feel free to contact any member of the Committee to voice comments/concerns about the current activities, or to discuss possible new activities. Contact with the Committee can be arranged through the APEGM office.

The Committee would like to thank Craig Perrett, P.Eng., for his numerous years on the Committee. Craig retired from the Committee this past year. We are currently looking for a couple of new members who can attend four or five lunch meetings per year. Anyone interested in joining our Committee can forward their name to the APEGM office.

The Chair would like to thank all the Committee members, as well as the staff of the APEGM office, who are inevitably forced to aid the committee in some capacity each year. ■

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Investigation Committee

I. H. McKay, Chair

Members

A. E. Ball
M. G. Britton
D. E. Cross
M. B. Gibson, (Non-member Representative)
T. H. Gillman
D. G. Hodgkinson
R. P. Hoemsen
S. I. Kulbaski
E. I. Lexier
W. M. A. McDonald
J. B. Smith
R. C. Somerville
J. A. Terris
S. L. Ursel



The ESDC held five meetings in the current 2001/2002 term. Some of the issues examined by the ESDC during this term were as follows:

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 Engineering and Geoscientific Professions Act and are supplemented by the Association's By-Law 15 and the Code of Ethics for the Practice of

Professional Engineering & Professional Geoscience.

Over the last year the Committee held nine meetings. In addition, numerous sub-committee meetings were held to review the various complaints, concerns and questions received. A total of 26 files were reviewed, of which 19 were carried over from the previous year, six were new complaints and concerns, and one was a question of professional conduct received from a few members employed by a municipal authority.

Of these files, 11 are ongoing and 12 were dismissed. Of those that were dismissed, three were appealed to the Council under Section 36(1) of the Act.

The ongoing files included one that returned to the Committee following a member's successful appeal to the Manitoba Court of Appeal of a decision of the Discipline Committee. The Court had noted that its decision had not precluded re-prosecution.

The complaints that were not dismissed were dealt with under Section 35(1) of the Act which provides that with the written consent of the investigated person, the Committee can formulate a charge, register a conviction and impose any penalty that the Discipline Committee could have imposed. Under that process, one reprimand was issued and the member was assessed the out-of-pocket costs of the investigation. The Committee completed the monitoring of the inspection of one member's professional practice for one year, at the member's expense, a process that had been agreed to and commenced during the previous

year. No complaints were referred to the Discipline Committee.

A Practice Note was drafted by the Committee in response to the question relating to appropriate professional conduct received from the members employed by a municipal authority.

Of the complaints/questions considered:

- 12 resulted from situations where an engineer was concerned with the practice or conduct of another member;
- 13 resulted from concerns of various agencies and individuals on the conduct of engineers, including four which involved design and/or inspection of both single and multiple family residential properties;
- one was a question relating to professional conduct.

The Committee is continuing to explore the independent mediation process provided for through the 2001 By-law change. The thought being that in some cases this process might be more expedient than a formal investigation, especially in the case of complaints arising from disputes between members.

The Committee is also reviewing guidelines for use when it is deemed that a member's professional practice should be subject to inspection.

Heather Milne tendered her resignation in the fall of 2001. The Committee thanks Ms Milne for her dedicated service as a non-member representative on the Committee, and welcomes Mary-Ann Gibson who began service on the Committee early in 2002. The Committee also thanks Jack McDougall, a former non-member representative of the Committee who returned to serve pro tem following Ms Milne's resignation.

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

Environment and Sustainable Development Committee (ESDC)

J. Van Dusen, Chair

Members

C.E. Anderson
K.A. Buhr
J.D. Ewing (Vice Chair)
P. Janzen
R.M. Lemoine
D.M. McCartney
D.G. Osman
G. Rempel



The ESDC held five meetings in the current 2001/2002 term. Some of the issues examined by the ESDC during this term were as follows:

- Specialist Certification in contaminated site investigations was reviewed given the requirements in other jurisdictions (British Columbia and Ontario). At this time, there does not appear to be any intent by the provincial government to require such certification in Manitoba.

- The declaration of road salt as "toxic" under the federal Canadian Environmental Protection Act was reviewed.
- Initial discussions were held on Saskatchewan's Environmental Guidelines for Professional Engineers and Geoscientists and whether Manitoba would benefit from a similar guideline.

Activities undertaken by members of the ESDC included:

- C. Anderson attended two workshops held by Manitoba Conservation on potential amendments to the Manitoba Environment Act.
- K. Buhr attended the Manitoba Conservation workshop on Manitoba's Strategic Plan for water.
- G. Rempel continued as a member of the Canadian Council of Professional Engineers (CCPE) Environment Committee, regularly reported to the ESDC on the CCPE Environment Committee activities, and provided feedback to the CCPE Environment Committee from the ESDC.

The role of the ESDC is to monitor environmental and sustainable development issues and report to the Issues Awareness Board and APEGM membership, as appropriate. Comments and issues from the APEGM membership are always welcome. ■

Practice Guidelines

The Practice Standards Committee has two guidelines available for comment prior to their publication. They are entitled:

- Technical Review of the Work of Other Members; and
- Provision of Mechanical and Electrical Engineering Services for Buildings.

Members who wish to review them and/or comment are asked to contact the Association office (preferably by email, apegm@apegm.mb.ca) for a copy. Comments will be received up until October 31, 2002. ■

COMMITTEE REPORTS

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Discipline Committee

R.E. Scouten, Chair

Members

- G.L. Greasley
- R.A. Kane
- D.M. Kilgour
- B.R. King
- A.M. Lohse
- J. Lyons
- P.J. Mignacca
- G.A. Morris
- D.G. Osman
- D.N. Spangelo



There were no cases referred to the Discipline Committee this year. All complaints were heard and dealt with by the Investigation Committee under section 35(1) of the Act or, in the case of an appeal, by the Council under section 36(1) of the Act.

The Discipline Committee was, however, asked by the Investigation Committee to provide a member to review a penalty that was proposed for one investigated member under section 35(1)(f) of the Act.

When a charge of unskilled practice or professional misconduct is brought forward by the Investigation Committee to the Discipline Committee, a panel made up of Committee members hears the case. It operates much in the manner of a court of law including having certain court powers such as the right to subpoena witnesses and documents. The case is presented by the Investigation Committee and its legal counsel and is defended by the accused member and his or her legal counsel. Decisions and orders imposed by the panel may be appeal to the Council.

Our profession continues to be self-governed under *The Engineering and Geoscientific Professions Act*. This legislated privilege is well-guarded by the Council and its committees, the administration, and the members at large. ■

Women's Action Committee

B.A.K. Danielson, Chair

Members

- R. Dyck
- C. Flather
- C. Gedder
- P. Kreitz
- L. Lazareck
- L. McFarlane
- M. O'Laughlin
- J. St-Laurent
- E. Swatek



The Women's Action Committee was pleased to welcome several new members over the past year: Colleen Flather, Roberta Dyck, Paula Kreitz, Jennifer St. Laurent, and Lisa Lazareck. We are grateful for their contributions and welcome their fresh perspectives. Robin Hutchinson left the committee in the spring of 2002 – thanks, Robin, for your help during your term with the Committee.

Our main initiative over the past year was the re-establishment of networking meetings aimed primarily at the female membership of the Association (although these meetings are open to ALL members). In March, we were pleased to have Dr. Elizabeth Cannon present some of the findings from her research during her term as the NSERC/Petro-Canada Chair for Women in Science and Engineering. Dr. Cannon's NSERC Chair position came to an end in June and we look forward to the appointment of a new Chair for another five-year term. In June, Colleen Flather gave us an excellent overview of the WISE Access Program at the University of Manitoba, the largest science outreach program in Manitoba. (Article on page 3.) Colleen is the Director of this program which operates out of the U of M. Our plan is to continue with these events three times per year (likely September,

January, and April) so watch the APEGM website for details. If you'd like to make a presentation or have any ideas for our networking events, please contact any of the Committee members via the APEGM office.

Our plan for the coming year is to investigate the possibility of establishing a local mentoring program. The U of M has been participating in MentorNet free of charge for the past two years, however, the grace period expires this fall and the cost will be quite substantial to continue with this program. The MentorNet program is extensive, involving over 120 colleges/universities (mainly U.S.), some (U.S.) corporations, and (U.S.) government departments. The Committee feels that an e-mail mentoring program would be worthwhile in Manitoba, and will be looking for leadership from other organizations (e.g. CCPE) or at the possibility of partnering with an established program for this initiative.

The Committee continues to maintain a position as a Board member of CCWEST (Canadian Coalition of Women in Engineering, Science, and Technology) – this is one of the avenues that we use to keep informed of activities at the national level. The CCPE Women in Engineering Committee (WIEC) has been busy during the past year working on many of the initiatives identified in the Women in Engineering policy implementation plan. The CCPE held 10 focus groups in five Canadian cities (unfortunately, Winnipeg was not one of them) early in the year to identify significant issues for women in engineering. Networking, mentoring, and flexible work options were identified as three areas among those discussed at the focus groups where improvements may enhance the careers of women engineers. So, hopefully, we're on the right track with our activities in these areas.

Thanks to all committee members for their effort and contribution over the past year as well as to the APEGM staff for their involvement in the activities of the Women's Action Committee. ■

Experience Review Committee

J.D.G. McInnis, Chair

Members

- J.B.P. Blahey
- J.A. Blatz
- C.R. Bouskill
- K.A. Dickson
- D.S. Jayas
- I.J. Montufar
- H.N. Procyshyn
- R.A.S. Reichelt, (Vice-Chair)
- G. Schaub
- C.L. Stewart
- V.S. Walkes



reports from Members-in-Training (MITs) and their supervisors (a total of 805 files were reviewed between July, 2001 and June, 2002), the Committee was hard at work looking at the Pre-Registration Program and trying to make it even better. The main challenge was to ensure that MITs commit to the mandatory enrollment requirement of the program; specifically, how to reward those who take this commitment seriously, and how to deal with MITs who don't. The program is at a crossroads, and the ERC, along with Council and Administration, will resolve this issue over the next few months.

In the last year, the ERC made two notable changes to the program. The first is the allowance of up to 12 months of pre-enrollment experience (see the December 2001 *Keystone Professional* for details). The other change has been to accept the recommendation of the MIT Subcommittee to allow volunteer work other than engineering-related activity to count towards the professional service requirement (also detailed in the

December, 2001 issue of the *Keystone*).

The Experience Review Committee has also seen a large change in membership. Five members resigned this year, having devoted a remarkable total of 31 years of volunteer service to the committee. Many thanks to Don Anderson, P.Eng., Michael DeWiele, P.Eng., Allan Silk, P.Eng., Peter Stanus, P.Eng. and Chris Torpey, P.Eng. for their tremendous service. The Committee also gained four new members. Welcome to Kevin Dickson, P.Eng., Howard Procyshyn, P.Eng., James Blatz, P.Eng., and Brian Blahey, P.Eng.

The Committee members worked extremely hard in making all of this happen and I would like to congratulate them all on a job well done and thank them for their exemplary volunteer effort. I would also like to thank Shirley Matile, P.Eng., Dave Ennis, P.Eng., and Lorraine Dupas for all their assistance during the past year. Without the professional and committed efforts of all these individuals, the Committee would not have been able to achieve the results it did. ■

The Experience Review Committee (ERC) had another interesting year. Along with the regular work we do reviewing progress

COMMITTEE REPORTS

Professional Development Committee

D.B. McKibbin, Chair

Members

S. Anand
R. J. Bruce
V. L. Dutton
W. T. Jackson
G. S. Lohda
B. W. Purdy
T. S. Rumbal
D. R. Swatek
H. M. Turanli

During the past year the PD Committee has continued its traditional seminar series, most one hour sessions to introduce or update members on a wide variety of technical, business and general knowledge topics.

- **Protecting Winnipeg from the Big One, Flood Protection Options for Winnipeg**, Larry Whitney, P.Eng., Manager, Water Planning and Development Deputy director, Water Resources, MB
- **Genetic Engineering – Where is the Engineering in it?**, Dr. Digvir Jayas, P. Eng., Associate Vice-President (Research) University of Manitoba.
- **Managing Business Evolution**, a full-day management seminar, presented with the assistance of Robert Warren of the Asper School of Business at the University of Manitoba.

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- **Software Engineering**, Dr. W. Kinsner, P. Eng., Professor and Associate Head, Department of Electrical and Computer Engineering, University of Manitoba.
- **Status of Planning for Future Hydroelectric Developments in Manitoba**, John W. Markowsky, MBA, P. Eng., Manager, Major Project Planning, Power Supply Business Unit, Manitoba Hydro.
- **Design and Manufacturing of Transformers**, Jim Neilson, P. Eng., Manager of Operations, Pauwels Canada Inc.
- **An Introduction to Micro Machining and Nanotechnology, and the Nano-Machining Laboratory at the University of Manitoba**, Dr. Cyrus Shafai, Assistant Professor, Department of Electrical and Computer Engineering, University of Manitoba.
- **Alternate Energy Power Options in MB**, Tom S. Molinski, P.Eng., Supply Side Engineer, Resource planning and Market Analysis Department
- **Project Management through the eyes of the Project Management Institute**, Les Howard. PMP and Ron Amann, PMP
- **Precast – Prestressed Concrete Construction**, Karl Truderung, P.Eng. Kowalchuck Consulting Engineers Ltd.
- **Video Conferencing – The Manitoba Telehealth Network**, Bill Evans of EB Systems Ltd.
- **The Electronic Commerce and Information Act**, Lynne Romeo, General counsel, Civil

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Legal Services (SOA), Dept. of Justice. (Repeated by popular demand.)

- **Tour of the Industrial Technology Centre Virtual Reality Centre**, Trevor Cornell, P.Eng.
- **Sharpening Your Written Communication Skills**, two day seminar, Ron Blicq, Senior Consultant, RGI International, Canada and Lisa Moretto, Senior Consultant, RGI International, USA
- **Overview of Industry and Technology Initiatives**, Industry Canada.
- Represented APEGM at the **MBOA seminar** on a Continuing Competence panel discussion relative to certification of building inspectors.
- **Provencher Bridge Site Tour**, hosted by Wardrop.

September's schedule is:

- 16 Sept, 02 – **Risk Reliability and Vulnerability**, Professor David Blockley of the University of Bristol, Bristol, England.
- 18 Sept, 02 – **Construction Surety Bonds**, John Madison of Aon Reed Stenhouse.
- 25 Sept, 02 – **Thermal Generation at Manitoba Hydro**, R. Raban, P. Eng., Division Manager, Engineering service Division, Power Supply, MB Hydro.

Sincere thanks for all staff assistance, and particularly to assigned staff person Ken Buhr, P. Eng.

Seminar suggestions are always welcome. Please refer to the APEGM Professional Development Guideline for assistance in managing your personal PD program. ■

Public Awareness Committee

W. Jackson, Chair

Members

R. Bernhardt
T. Bowden
J. Boyko
S. Qureshi
R. Rempel
M. Rheault
H. Roche
J. Rooney
M. Samuda Poitras,
(Vice-Chair)



The Public Awareness Committee had another busy year which included an initiative to improve the image and visibility of the Association in particular and of engineers and geoscientists in general. This initiative is consistent with the Committee's objective to ensure support for APEGM's legislated mandate and to encourage individuals to consider engineering and geoscience as a profession. The Committee is responsible for organizing National Engineering Week, participating in and

sponsoring similar events organized by other associations or interest groups, and placing newspaper advertisements.

The Committee decided last year to turn over the responsibility of organizing National Engineering Week to a sub-committee, and that was accomplished very successfully under the direction of sub-committee Chair, University of Manitoba Professor Brian Stimpson. The event was staged for the second straight year at St. Vital Centre with more displays, more participation, and additional media coverage. Brian's committee was able to arrange live television coverage that included interviews with Committee members and participation in a "competition" with politicians and celebrities. The main events included the traditional Spaghetti Bridge competition and Concrete for Kids.

The Committee has made progress in the past year towards establishing a strategic initiative for promoting the profession. Motivated by the Council's Policy Governance model, the Public Awareness Committee held a special "brainstorming session" to work towards the APEGM target for the committee described as "*Common Public Understanding and Expectations regarding the competencies and ethics of Engineers and Geoscientists*". As a result of the session, two subcommittees were struck to develop one

specific strategy aimed at students and teachers and a second strategy aimed at the business community.

The Committee is continuing its commitment to the Manitoba Schools Science Symposium. A monetary grant is provided to offset the costs of the committee and by providing Special awards for engineering-related projects. The winning projects were selected by APEGM members, who also volunteered as judges.

In the area of membership, Kristin Morand left the Committee to pursue other interests and she is to be congratulated for her contributions, in particular her dedicated efforts at the Manitoba Schools Science Symposium. Michelle Rheault is taking a leave-of-absence from the Committee to pursue a Masters degree in Business Administration, and the Committee wishes her well. Jeff Boyko joined the Committee this past year. Personally, I would like to thank Monica Samuda Poitras for all her efforts in assisting me as the Vice-chair.

The Committee thanks the large number of Association members, both P.Eng. and EIT, who had a hand in ensuring the success of the Committee's initiatives during the past year. The Committee also thanks Dave Ennis, Shirley Matile and Lorraine Dupas at the Association's office for their invaluable help and support. ■

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The Kelsey Chapter Report

J. Cooper, Chair

Chapter Executive:

- K. Lau, Past Chair
- K. Costello, Vice Chair
- P. Rowbotham, Secretary/ Treasurer
- R. Conner, Member-at-Large
- N. Ilich, Member-at-Large
- S. Peter, Member-at-Large

The Kelsey Chapter of APEGM and APEGS is a local representation of the two professional organizations within the area of The Pas, Flin Flon, Snow Lake, and Creighton Saskatchewan totaling approximately 100 members. Members and Lay Associates meet monthly in Flin Flon, The Pas, or Cranberry Portage, with occasional meetings in Snow Lake for related presentations and discussions. The Chapter continues to thrive despite the distance and long drives our members endure to attend meetings. Our members are involved with many different organizations, committees and associations. Active Kelsey Chapter members Don Harfield and Kelly Gilmore serve the APEGM in the capacity of councillors.

In September, the Chapter hosted the annual Presidents' Visit in Cranberry Portage, with attendance by the Executive Directors from both APEGM and APEGS as well as the President of

Westman Chapter Report

Stacy McBride, Chair

Chapter Executive:

- Dave Ford, Vice-Chair
- Kris Kotyk, Secretary
- Trevor Veitch, Treasurer
- Kevin Croteau, Member-at-Large
- Don McKibbin, Member-at-Large
- Lillian Turabian, Member-at-Large
- Javier Vidal, Member-at-Large

This Chapter supports approximately 80 members scattered throughout the south-west corner of the province. Executive has experienced extensive turnover in the last couple of years but has continued to provide support and

APEGS. The Chapter also took part in a bi-annual career symposium sponsored by the local school divisions with an information booth at the event.

In October, Chapter members in Flin Flon were able to take part in the AGM via videoconferencing. Once again the arrangements were successful and greatly appreciated by those in attendance in Flin Flon.

The Nor-Man Regional Health Authority gave a presentation during our November meeting in The Pas. A host of interesting engineering and health issues were discussed regarding long-term plans for the region. An informal meeting was held in Flin Flon during February, allowing Chapter members to discuss various engineering

a common meeting ground for Geoscientists, Engineers and Members-In-Training.

In response to the increased needs of the Members-In-Training, executive has increased support by way of liasing between community and Members-in-Training and also by liasing between Admissions and Members-in-Training.

The Westman Chapter would like to thank the guest speakers and attendees at the dinners and now-popular lunch meetings held throughout the year. Special thanks to Shirley Matile and her crew for their time and efforts as well.

Congratulations to the Westman Chapter executive for their efforts and a note to others that new recruits are always welcome. Executive will endeavour to promote the Association and serve the membership faithfully. ■

and geoscience issues. These general discussions brought forward many issues for further discussion at future meetings and allowed feed-back regarding the direction of the Chapter.

During our April meeting, the Chapter enjoyed a presentation by Ducks Unlimited in The Pas. Our membership enjoyed the presentation, as did members of the public. Vice-Chair Karen Costello represented the Chapter at the APEGS AGM held in Regina during May.

Our annual golf tournament was rescheduled to August this year. Typically, the event is held in June, and is a favourite amongst members who are avid golfers. ■

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AeroDesign 2002

By: J. M. Symonds, P.Eng.

The AeroDesign project is one of the annual Collegiate Design Series competitions sponsored by Society of Automotive Engineers (SAE) International. Competition for 2002 was held in Palmdale, California, and hosted by Lockheed-Martin. This project challenges engineering students to design and build a radio-controlled aircraft capable of lifting the maximum possible payload weight. Competition rules make several limitations on the design. The aircraft must use a specified engine, must take off within 200ft, and land within 400ft. The planform area (the shadow cast by the aircraft) is limited to 1200in.². Competition scoring is based on several aspects. Points are given for payload carried, as well as for the accuracy of the payload prediction, a written

design report, plans, and an oral presentation.

While externally similar to previous entries, virtually all aspects of the 2002 aircraft were re-designed. A re-designed spar was used to take better advantage of the material properties of wood. It made the wing structure stiffer, stronger, and lighter. A new landing-gear system was built with reduced rolling resistance, improved energy absorption, and modular replacement. An improved fuselage design permitted easier tooling, improved composite layup, better control-line routings, and improved weight distribution. Both electron-beam and autoclave curing processes were used to make the fuselage parts and wingtip fences from carbon-fibre composites. Redesigned horizontal and vertical stabilizers were of a lighter-weight construction.



2002 AeroDesign Team

In flight testing and prequalification the aircraft performed impeccably – the takeoff roll was short, handling was excellent, and the airplane required no trim for straight & level flight, even when loaded.

Our written report for the competition was substantially improved and we passed the technical examination with flying colours.

Unfortunately, high winds and a stuck throttle-linkage produced a high-speed instability in the stabilizers causing the aircraft to crash at competition. The aircraft was air-borne with 25.5lbs (3lbs more than 2001), but no legal landings were made.

Council Report

Wednesday, June 19, 2002

By: J.A. Blatz, P.Eng.

COUNCIL DISCUSSES BUDGET MATTERS

The June 19th meeting of Council was called to order promptly at 12:30 p.m. with a welcome from President Moe Barakat. Last-minute changes to the agenda were made to reflect late-breaking items for consideration and the meeting moved forward.

The first items on the agenda comprised the monitoring report of the Executive Director on his proposed changes to the admission policies based on recommendations from the Admission Policy Review Committee (APRC). The changes have been proposed to address concerns outlined in the APRC document which indicated that current penalties for non-compliance with the mandatory MIT program are too harsh. The Executive Director outlined that the proposal for changes is in its early stages. He will be reporting back to Council with further recommendations at the September meeting after other committees involved have had an opportunity to participate in discussions about the proposed changes.

The "declaration of compliance" proposal was then brought forward. The proposal basically requires that all registered members declare that they have maintained a level of competence consistent with the required skills that they deem appropriate in their specific field. If approved, the voluntary declaration will require practising members to indicate with their signatures on their registration renewal forms that they have maintained the competence to provide the services that are required for their current practice, presumably by actively undertaking adequate professional development activities. The proposal is to be implemented in 2003.

The Council then moved on to the consent agenda. The first item on the

consent agenda was the budget including the schedule of member fees and dues. Council noted that the fees will be increased slightly in 2003 from \$242 to \$248 for practising members. One aspect of the budget that raised some discussion was the amount charged for academic assessment of geoscience degrees. The cost for this process can be considerable since there is no existing body (equivalent to CEAB) to independently verify the academic qualifications of any specific University Geoscience program for registration requirements. More information on the issue is being gathered.

The Council then shifted onto items for decision, where the majority of the meeting time was dedicated. A report on the discussions held at the annual CCPE meeting (held this year in St. John's) was presented. By-Law changes proposed for the upcoming Annual General Meeting (AGM) followed. The President outlined the process for changing By-Laws and what was required for the changes that will be tabled at the upcoming meeting. The Executive Director asked for two councillors to be authorized to approve the proposed By-Law changes so that they could be mailed to the membership sufficiently in advance of the 2002 AGM with a report to be provided to the Council for the September 11 meeting. Following a few other decision items, the meeting moved into the information items.

The Council went over the coaching report which provided an assessment of the Council's application of the new governance procedures. President Barakat re-iterated how the new process has been allowing the Council to focus on the ends and not the detailed processes that are being handled at the committee levels. Councillors then discussed how the report could be best utilized by all to ensure that the governance model is being applied properly and effectively.

Councillor Poetker reported on the meeting of the Joint Board of Architects and Engineers. He explained that the direction of the meetings is not to get By-Laws and codes changed but to develop a memorandum of agreement to be enforced by the two associations. It was clear that much has been accomplished by the Joint Board but there is more work to be done before any formal agreements will be reached.

The meeting adjourned after some final discussion items. ■



UNIVERSITY
OF MANITOBA

Department of Civil Engineering Tenure-Track Faculty Positions

The Department of Civil Engineering invites applications for a tenure-track, Assistant Professor position in Transportation Engineering and a tenure-track, Assistant Professor position in Geoenvironmental Engineering, with starting dates of 1 January 2003 or as soon as possible thereafter. For both positions, the successful candidate: 1) must hold a Ph.D. degree in the relevant area, i.e., transportation or environmental engineering (preference will be given to candidates with a first degree in Civil Engineering); 2) be eligible for registration with the Association of Professional Engineers and Geoscientists of Manitoba; 3) will be expected to teach at the undergraduate and graduate levels, supervise graduate students, and develop a strong externally funded research program; and 4) must possess excellent communication and leadership skills, and be committed to working in a team environment.

Transportation Engineering: The successful candidate shall have experience in two or more of the following areas: road safety engineering; transportation information systems and data linking; applications of intelligent transportation systems; and freight transportation. Candidates whose research is applicable to the prairie region will be given preference. Please refer to position **AHC341** in all correspondence.

Geoenvironmental Engineering: The successful candidate shall have experience in the remediation of soil and/or water contaminated by municipal, industrial, or agricultural waste products. The successful candidate should have demonstrated strengths in the areas of chemical, biological, microbiological, and physical processes for remediating contaminated soil, sediments, and water. Please refer to position **ABA359** in all correspondence.

The Department (www.umanitoba.ca/civil) has twenty-one faculty members, eleven support staff and approximately two hundred undergraduates. Over \$2.3 million is attracted annually in research funding and eighty students are enrolled in graduate studies. Well-equipped facilities are available for research. The Department hosts the administrative headquarters for ISIS Canada, a Network Centre of Excellence in Intelligent Sensing for Innovative Structures (www.isiscanada.com). The University of Manitoba is the oldest university in Western Canada. Winnipeg (www.city.winnipeg.mb.ca) is a mature city known for its high standard of living, affordable housing, rich cultural scene, and proximity to outstanding wilderness areas that offer outdoor activities in all seasons.

The University of Manitoba encourages applications from qualified women and men, including members of visible minorities, Aboriginal peoples, and persons with disabilities. All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority. Applicants should forward a detailed curriculum vitae, a statement describing teaching and research interests, and names and addresses (fax/email included) of three referees to Dr. J. Doering, P.Eng., Head, Department of Civil Engineering, University of Manitoba, Winnipeg, Manitoba, Canada R3T 5V6 (email: Jay_Doering@UManitoba.ca). Applications should be received by 1 November 2002, but will continue to be accepted after this date until the positions are filled.

THOUGHTS ON

Design

...and just who is responsible?

By: M.G.(Ron) Britton, P.Eng.

As I contemplated the passing of an old family friend, I recalled a conversation we had about 20 years ago. I was visiting my home town and Frank and I were discussing the "local" baseball team. He commented that only three or four of the players lived in the district – the rest came from surrounding towns that no longer had teams. The conversation drifted from baseball to the local rink and the difficulty they were having keeping it open. We agreed that it was a situation that was all too common in the rural areas of western Canada.

And then he shocked me by saying, "you realize this is all your fault".

My shock must have been obvious because he quickly followed up by noting that the "you" he was referring to was my profession – not me, personally. We left it there but the comment kept haunting me.

Two or three years later, on another visit home, we were sitting in the shade, enjoying some of the end product of the previous year's barley crop, when I reminded him of his comment, and asked him to explain what he meant. He thought a moment and then provided me with his observation of the link between engineering design and the declining number of prairie baseball teams.

At that time Frank and his son were farming the land he and my dad had farmed, plus the land that had supported four other families when I was growing up. They were able to do this because of the improvements in farm equipment that were the direct result of engineering design. Wider, bigger, faster, more efficient equipment let the two of them farm more land with less effort. So, the up side was that they farmed more land but didn't work as hard. The down side was that there were four fewer families associated with that particular land base. And the same story could be repeated for every farmer who was still functioning in the district.

Simply put, my home town was now about 33% of what it had been. 67% fewer ball players. 67% fewer students. 67% fewer grocers. It explained much of what I saw when I looked around me.

He acknowledged that engineers had simply responded to a demand for better equipment, and had responded very well. He agreed that the creation of this equipment allowed him to survive in spite of the fact that grain prices were about the same as when I had last helped him harvest. He assigned no fault to the profession, but he saw a clear

linkage between our "success" and rural de-population.

In the intervening years, we revisited the issue as we watched the "local" ball team continue to play where I once played. I was never able to advance a plausible argument that de-linked engineering design from rural depopulation. My discussions with Frank clarified my thinking on the responsibilities our profession bears for the designs we create. His insight provided me with the understanding necessary to explore Billy Koen's concept of "best change". "Best" depends on the perspective we bring to a question. The new machinery was "best" for Frank and his son. It was not "best" for rural population retention.

MCSE NOT an Engineer in Canada

Continued from page 4

and limiting the practice of engineering solely to licensed professional engineers have been put in place by all of Canada's provincial and territorial governments. The engineering licensing bodies are obligated by their legislative mandate to enforce against inappropriate use of the terms "engineer" and "engineering."

Microsoft's earlier decision was assisting the MCSE holders so they did not mistakenly use the title engineer or otherwise hold themselves

out as qualified to practise engineering which would require the engineering profession's licensing bodies to take action against them.

Ms. Lemay said it would have been prudent for Microsoft Canada to have listened to other groups, beyond those with a vested interest, to determine what title should be used to avoid confusion and prevent MCSE titleholders from encountering enforcement from the engineering licensing bodies. "It is pretty obvious that the certificate holders would see value in the use of the title 'engineer,'" she said. "But engineering is a profession and with that

We engineers have the skills required to bring new and better "things" into existence. The world we live in today is the direct result of the successful application of those skills. Electricity, cars, computers, airplanes, artificial hips, sky scrapers, cities and farm machinery all exist because of engineering design. Our profession has caused profound change and each change has had both positive and negative impacts. On balance, in my view, the changes have been positive – others may disagree.

Because the application of our capabilities allows the changes to occur, we must accept both the credit and the blame. Next time you find yourself pushed toward an "expedient" solution, think about the disappearance of the small towns of western Canada. We do have a responsibility.

Not all engineering educators go to university and have numerous degrees. ■

comes an obligation to protect the public. It is important for the public to know that the term 'engineer' refers to a person with a university engineering education and engineering experience who follows a professional code of ethics, not someone with just a few months of IT training."

"Microsoft's advice to their certificate holders in May 2001 was well placed then and it continues to be today, despite their recent announcement," Ms. Lemay said. "MCSE certificate holders would be well served to continue heeding this advice." ■

AeroDesign 2002

Continued from page 21

We continue to work on the next generation of AeroDesign aircraft. This year a prototype carbon-fibre spar was tested for possible use in future aircraft. For 2003 there will

be a significant change to the rules, removing the limitation on planform area and replacing it with a 72" limitation on wingspan. This substantially alters the focus of our development efforts but, by refocusing on our design process and building upon our existing pool of

aircraft construction experience, we will endeavour to yet again produce a top-notch competitive aircraft.

This year's competition team consisted of the following members: Matthew Joyce – *Team Leader*
Andrea Kraj
Jonathan Dohie
Grant Johnson – *UMSAE President*
Don Hatch – *Pilot*
Malcolm Symonds – *Faculty Advisor*

Thanks to our sponsors for providing the funding, materials, and facilities required to build the aircraft. It is the support of industry that makes the project possible and encourages the development of the next generation of engineers for Manitoba. Your contributions are appreciated. ■



AeroDesign 2002 Aircraft at Competition

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