

THE KEYSTONE PROFESSIONAL

Winter 2007

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History of the
Networking Dinner

88th Annual General Meeting

Awards Dinner & Dance

The Proposed Fair Registration Practices Legislation –
What Does it Mean to APEGM?

Association of Professional Engineers and
Geoscientists of the Province of Manitoba
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THE KEYSTONE PROFESSIONAL

WINTER 2007

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Front cover photo by Barry Striemer, "Steinbach Windmill"
Pictured is a close up view of some of the wooden gears and beams of the windmill at Steinbach.

Barry Striemer is a Winnipeg based photographer concentrating on urban, landscape and nature photography in the digital format. Fine art prints are available of Barry's photographs and he can be contacted via E-mail at bstriemer@shaw.ca

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Tim Corkery, P. Geo.
President's
Message

ATTRACTING FUTURE MEMBERS

Having moved into the position of President, it is my pleasure to thank Robyn Taylor, Grant Koropatnick, and Angela Moore for making the transition so easy. Now however, I have to roll up my sleeves and get busy, and from the look of my day-timer I already am busy.

The first thing I want to do is thank the APEGM staff for redefining the Annual General Meeting. When you make a sweeping change to a totally new format, you are taking more than a bit of a chance, especially with a group that is known for its rather conservative nature.

From the positive comments I have received, the move to a one-day format for all AGM events has proven to be a great success! The three part format starting with a soft skill Professional Development Conference by Dr. Neil Fassina was the topic of conversation right through lunch.

The AGM Business Meeting went off without a hitch. I've ordered up a rerun for next year. Finally, the evening's Awards Dinner and Dance laid to rest the comment I'd heard from a sister

organization that "Engineers don't dance". Thanks again and I hope we can do the same next year.

It is rather difficult to come up with any sage comments for this Issue of the Keystone Professional after only a week or two acting as President. I do however carry some biases toward Geoscientists and because of that will stray in that direction.

Robyn noted in the Autumn Issue of the Keystone Professional the lack of students choosing Engineering and I can certainly report that it is at least as desperate in the Geosciences. I have a suggestion to offer. A suggestion should be made to each University Engineering and Geoscience Department throughout Canada that they try to be more proactive at recruiting first year students who are heading into the sciences.

If we got the word out that most of our a new grads have a chance at acquiring up to \$100K for a starting salary, and that virtually all of them will get a job right out of graduation, we might entice a few students into our professions.

If this seems like piracy, so be it. We are not on high school curricula, so we are not very visible, if even on the horizon, for students entering their first year of university.

Somehow we need to invade both year one and the high school job fairs, and make it known first, that we exist; second, we are a lucrative choice; and most importantly, we are a fabulous and satisfying career choice.

I look forward to my term as APEGM President over the next 12 months and hope that Council and the APEGM staff make significant headway, or better yet, can complete some of the initiatives in our strategic plan. With any luck I can introduce a couple of new initiatives during my term.

I look forward to serving you through APEGM this year and welcome your comments. As with most who volunteer, it is the guidance from the membership that makes the best advice. I can be reached by mail or fax via the APEGM office, or by e-mail at timothy.corkery@gov.mb.ca. ■

NOTICE

Notice to Members

Annual dues invoices have been mailed to all members and members-in-training. If you have not received yours please contact the APEGM office. Please submit the completed forms with payment by December 31, 2007.

Please note that the Declaration of Compliance must be signed annually. The APEGM office will be closing December 21, 2007, at 4:30 p.m. for the holiday season, and reopening on January 2, 2007, regular hours.

*Grant Koropatnick, P. Eng.
Executive Director & Registrar*

Engineering Philosophy 101

. . . we are, we are . . .

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

I recently received an e-mail from a member of the class of 2007. He simply states, "As a recent graduate, I am questioning more and more the benefits of registering with the association". Further on he writes, "I am seriously questioning whether I should continue, especially since the majority of fellow engineering graduates I work with, have decided not to".

The simplistic response would be to cite the legislated requirement to register in order to practice professional engineering, or for that matter, to call yourself an Engineer. But the very fact that the concern was expressed suggests that simply "enforcing" the Act isn't an acceptable response.

In many of the emerging areas of our technological world, and some of the established manufacturing fields, the skills and knowledge required to graduate from the Faculty of Engineering are very important, but the need to be licensed is not strictly required.

In order to become potential members of APEGM, applicants must first survive the rigors of undergraduate Engineering programs. During that process, they acquired a sense of belonging to a special group. They understand that their "college education" was somehow different from that experienced by others. The survivors have acquired the skills and knowledge that provide the base upon which Engineering careers can be founded. They realize that the skills and knowledge they possess can, and will, affect the future for themselves and others. But they also see that there are jobs available that do not require them to be registered.

So, if the requirement to be registered is neither a condition of employment nor a constraint on applying what was

learned at university, why bother? If registration only applies to some portion of the marketplace, and if you are not involved in that marketplace, why bother? What do I get when I am registered?

Upon registration each member is presented with a license and a seal. Many consider that the use of the seal is synonymous with practicing engineering. Conversely, some might conclude that if you do not use your seal you are not practicing engineering. In fact, Part 8, Sec. 26(1) of "our" Act states, "Every member shall be issued an electronic seal, a manual seal or both an electronic seal and a manual seal and the member shall validate or impress his or her seal, as prescribed by the By-laws, on every engineering or geoscientific estimate, specification, report, working drawing, plan, and other engineering document issued by the member". It is interesting to note that the By-laws (Sec. 11) simply refer to "how", not "when" the seal is to be used.

Keeping with the legal side of our lives, the Definitions section, Part 1 of "our" Act, states that the practice of professional engineering is ". . . any act of planning, designing, composing, measuring, evaluating, inspecting, advising, reporting, directing or supervising, or managing any of the foregoing, that requires the application of engineering principles and that concerns the safeguarding of life, health, property, economic interests, the public interest, or the environment".

Think about it. Each member of APEGM is given a seal. The purpose

of this seal is to provide a means of identifying who takes responsibility for the work in question. But the issue is one of responsibility, not physically using a seal. The definition of the practice of professional engineering speaks to taking responsibility for work over a broad range of activities, not physically using a seal.

And the Code of Ethics requires that professional engineers restrict their practice to areas in which they are competent. Doesn't this simply boil down to personal (professional?) responsibility that goes well beyond an employer's "need"?

In the 2007 Autumn Issue column

I spoke about the instructions given to me 41 years ago by the President of Beaver Lumber, Mr. Kennedy. Quoting ". . . he noted that I was an Engineer and that meant I had responsibilities beyond the economic interests of the company. He wanted me to exercise those

responsibilities". I think he was telling me why he thought I was registered.

Shortly after receiving the e-mail in question, I asked APEGM Past President Robyn Taylor for her opinion. She took some time to consider her response, but I believe she hit the nail on the head when she replied, in part, ". . . that causes me to wonder, notwithstanding the constraints that legislation can impose, if it is not most important to belong to the Association as a statement of who and what you are - a professional".

And that brings me full circle to the original concern about ". . . the benefits of registering with the association".

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“Being a Professional engineer does not define what I do, it defines who I am”



Grant Koropatnick, P.Eng.
Executive
Director's Message

IT WAS A NIGHT TO REMEMBER ... FOR THE MEMBERS!

I got the idea while attending the AGM of our sister association in Saskatchewan last May. There was a strong spirit of hospitality for the out-of-town guests (as you'd expect), but what caught my attention was the obvious welcome and appreciation shown to their members. Speaking to Saskatchewan Executive Director Dennis Paddock he quietly said "... you've gotta make sure your members enjoy themselves when they come to this event". So this became my goal for the APEGM 2007 Professional Development Conference, Annual General Meeting, and Awards Dinner.

HARD ACT TO FOLLOW

Last year in Thompson, MB, was a special time where everything was superb. We knew it would be a hard act to follow back in Winnipeg. Many members feared that the event would return to the annual endurance test of long speeches and bad jokes. Events & Communications Coordinator Angela Moore and myself began brainstorming ways we could ensure that members would have a good time. We began by looking at some of the myths associated with AGMs: they're boring; it's the same every year; the speeches are too long; the food is bad; and the entertainment is dull.

WORLD CLASS HOTEL

In order to destroy these myths, Angela began by booking the world class Fort Garry Hotel. You've got to have a great venue in order to set the stage for a great event. There is no finer atmosphere

anywhere than the grand splendor of the Fort Garry Hotel and the 7th Floor Crystal Ballroom!

Next, we surveyed the members through the "E-News" on a topic that would be relevant and timely. Members responded with a wave of emails back confirming the PD topic "Recruitment and Retention of Top Talent" and Dr. Neil Fassina from the Asper School of Business was the "odds-on" favorite to deliver this topic. The Professional Development Conference ended with a short 'n snappy Business Meeting, tasty lunch and door prizes!

Did you win one of those emergency cell phone chargers? How about the limited edition hand-held GPS unit? Or the sports binoculars with internal digital camera? It was a great Professional Development Conference and one-by-one the old myths were erased by excellent programming, efficient timing, and cool prizes!

ELDER STATESMEN HONOURED IN VIDEO

Members returned for the evening reception, awards presentations, dinner and dance. The event was sold out two weeks in advance and many were left calling-in trying to get tickets at the last minute.

In addition to awards given to members in various categories, three elder statesmen of our profession were honoured: Ernest

Robertson, Rudy Isaac, and Bob Foster. These men have served the profession with integrity, honour, and longitude, and it was heart-warming to see them on the big screen talking about their careers and hearing from colleagues. Thanks to media specialists Amber and Ian from indiZo Productions for their expert production of our awards presentations.

DANCE THE NIGHT AWAY!

A great day just kept getting better. The awards dinner was superb. I can't decide which was the best part. I really like dessert and it was both sweet and light. Everything from the wine, prime rib, dessert, and coffee was served in grand style and with culinary excellence.

Thanks to our wine sponsor, Nova 3 Engineering; dinner sponsor, Great-West Life Group Retirement Services; and the staff of the Fort Garry Hotel for an excellent meal. But the "icing-on-the-cake" was the world famous Ron Paley Dance Band!

Ron and his band of musicians and vocalists started us off with "What a Wonderful World" by Sachmo Armstrong and kept us dancing until midnight! Who says engineers don't dance?! Past President Doug Chapman and his wife kept pace with the students from UMES as I noticed that they were all on the dance floor (and singing along with the band) until the final note.

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“... you've gotta make sure your members enjoy themselves”

Party of the Century!

The Faculty of Engineering at the University of Manitoba Celebrates 100 Years of Engineering Excellence

A. Anderson Skrabek

On September 13 to 15, 2007, approximately 700 alumni, donors, and friends came out to help us celebrate 100 years of the Faculty of Engineering at the University of Manitoba.

The fun began on September 13, 2007, with industry tours hosted by Don Whitmore, P.Eng (B.Sc. C.E. 1959) and Malcolm Symonds, P.Eng (B.Sc. M.E. 1977). The current engineering students also hosted "The Engineering Student Experience: Then & Now" featuring guest speakers Les Wardrop, P.Eng (B.Sc. C.E. 1929) and Gerry Price, P.Eng (M.E. 1970).

That evening, close to 50 former Senior Sticks, UMES members, and guests got together for a special dinner for Senior Sticks. The Engineering Band (old and new) also made an appearance!

Friday, September 14, 2007, began early with a special talk, "Building Better Bridges", given as part of the SmartPark Speaker Series featuring Aftab Mufti, P.Eng (ISIS) and Doug Wardrop, P.Eng (B.Sc. C.E. 1980) at 8:00 a.m.

After 9:00 a.m., our guests began arriving at the Engineering & Information Technology Complex to register, go on tours led by Associate Deans and Department Heads, and to get their commemorative gift. A big thank you goes out to Mr. Robert A. Kennedy, (B.Sc.E.E. 1962) for generously providing the Centennial Clocks our guests received.

Our formal program began at 2:00 p.m. with greetings from Hon. John

Harvard, Lt. Governor of Manitoba; Hon. Jim Rondeau, Minister of Science, Technology, and Mines; and Mr. Steven Fletcher, MP for Charleswood-Assiniboia (B.Sc. G.E. 1995).

Our beautiful new Donor Wall acknowledging all of the generous gifts that made the EITC possible was unveiled in the atrium with the assistance of Ms. Debbie McCallum, Vice President Administration; Ms. Elaine Goldie, Vice President External; Dr. Mark Evans (EISI); Mr. Garry Bolton, P.Eng (B.Sc. M.E. 1970); Mr. Al Snyder, P.Eng (B.Sc. E.E. 1964); Mr. John Petersmeyer (Stantec Consulting); Mr. Phil Dompierre, Senior Stick 2007 – 2008; Mr. Jon Gonzales, Computer Science Student; and Dr. John Bate, Head of Computer Science.

The Dean of Engineering, Dr. Doug Ruth, P.Eng (B.Sc. M.E. 1970), kicked off the Centennial Celebrations by introducing the O.P.P. (Official Party Party). Members of the party included University of Manitoba President, Dr. Emőke Szathmáry; Honourary Chair of the Centennial Homecoming Committee Dr. Les Wardrop; 2006 - 2007 President of APEGM, Ms. Robyn Taylor, P.Eng (B.Sc. E.E. 1998); Vice President Manitoba Hydro, Mr. Al Snyder, P.Eng; EITC Campaign Co-Chairs, Mr. Garry Bolton, P.Eng, and Dr. Mark Evans; Mr. Robert A. Kennedy; Mr. Michael Dagg, (son of Frank Dagg, B.Sc. C.E. 1925); and our 2007 – 2008 Senior Stick, Mr. Phil Dompierre.

Following the formal festivities, the real party began with a rousing rendition of the Engineering Hymn

kicked off by the Engineering Band. Close to 700 guests enjoyed food, "engineering appropriate beverages", and live music. The new APEGM Room 229 featured several displays of the history of the Faculty of Engineering, the EITC was open for tours, and there was a lot of catching up going on with former classmates.

On Saturday a bunch of our grads joined the Dean at the Bison Football game (we won!) and wouldn't you know it . . . the Engineering Band made another appearance! They were also loud and proud at the University of Manitoba Alumni Dinner held that night at the Canad Inns Polo Park. Three hundred of the six hundred people in attendance were from the Faculty of Engineering!

Thanks to all our alumni, donors, and friends who came to help us celebrate. It truly was the Party of the Century! ■

In Memoriam

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

*George W. Argle
Arthur J. O'Donnell
John J. Winship*



M.G. (Ron) Britton, P.Eng.
Thoughts On
Design

. . . PRICE VS. COST

Most dictionaries list “price” and “cost” as synonyms, and in general use that is probably appropriate. But there is a subtle difference in their meaning if the Oxford University Press dictionary is to be believed. The noun “price” is “the amount of money expected, required, or given in payment for something”. The noun “cost” is “the effort or loss necessary to achieve something”. To me this infers that “price” is an immediate thing, like the number on the sales tag in a store. “Cost” on the other hand, has both past and future implications.

Regardless of the end product, design decisions affect the “price”. In effect, design defines the “costs” that accumulate as the process goes from concept through to delivery. This is the stage at which “bean counters” apply pressures to substitute lesser materials, remove functions, decrease flexibility, and any number of other compromises that will lower the production “costs” and ultimately either lower the “price” or increase the margin of profit.

The one-to-one “cost/price” relationship at this phase of a project has a very clear result. But as Engineers, we recognize that the compromises often have a “cost” that will be borne by the customer.

When I was growing up in southern Saskatchewan, a new company came on the scene offering swathers for sale at a significantly lower price than competition. I remember hearing people say that if you bought one of the new swathers

you would save enough money to buy a welder. They then added that this was a good thing because owning the new swather made it necessary to own a welder. At the time it seemed to be nothing more than talk.

As the years passed however, and the truth of the criticism became apparent, this experience became the basis of my understanding of the difference between “price” and “cost”. I guess I have always had a “user’s perspective”. Working from this “user’s perspective”, the “price” is a relatively simple number but it hides a multitude of “costs”.

Once the deal was struck, farmer A left the dealer’s lot towing a specific piece of equipment for which he had paid \$X. Farmer B, a neighbor, went to a different dealer and paid \$Y, a higher “price” because $\$Y > \X .

However, later that year (or the next), farmer A had a breakdown when a part of the lower “price” swather frame failed. The most obvious and definable breakdown “cost” was the time required to make the repair. Owning a welder reduced the amount of time lost. But hidden in that time were issues such as rain, or deterioration of crop quality, or maturity of weed seeds all with the potential to affect the value of the crop being harvested. The point is: the saving in “price” was rapidly lost as “costs” begin to accumulate.

Clearly most products we design have a “cost/price” implication. An energy

efficient building has a higher “price” than a code minimum building. But the owner/operator soon sees a “cost” difference because heating/cooling bills are lower. When they are new, roads that have a minimal amount of subgrade work look much like those with a properly designed and installed subgrade, but they quickly deteriorate and introduce a higher maintenance “cost”.

Material substitutions that save pennies per component at the manufacturing stage quickly turn into maintenance or recall “costs”. These outcomes are not surprising to those of us who work in the technical world of engineering, but they are not as obvious to those who bring a “purchase price” perspective to a project.

Physical examples of this “cost/price” relationship are relatively easy to defend. Service examples are not as clear. As professionals, our services have a “price” attached. In general that “price” is greater than the “price” associated with others who might be seen as alternatives.

In order to justify our “price” we need to make certain that our “cost” is less than the alternatives. In other words, we need to provide the sort of services that minimize future “costs”. And that assurance must be understood by both ourselves and our clients/employers.

It is not enough to simply hide behind legislation that provides us with a “protected” position. If we do not provide “cost” effective services, industry will find a way around the legislation. ■



The following are some items from the local press which may be of interest to APEGM membership.

LAVAL OVERPASS

A panel headed by Pierre Marc Johnson, inquiring into the collapse of the de la Concorde overpass near Montreal in September 2006, reported that there was a total lack of quality control in the construction of the overpass 35 years ago, and bad government inspection practices since then. Cold winters and the use of salt also wore away at the concrete. A questionable design, considered innovative at the time, shoddy construction and low-quality concrete were identified as factors. Steel reinforcements that would have held the overpass together were placed in wrong positions. Subsequent repairs and inspections were also botched, according to the inquiry. The head of the Quebec government engineers association blamed poor design and construction. The inquiry panel made 17 recommendations, including annual expenditures of \$500 million over ten years on bridge and overpass repairs in Quebec, which would bring 80 percent of the structures to good condition.

(Winnipeg Free Press, October 19, 2007)

FOREIGN-TRAINED ENGINEERS

A program at the University of Manitoba to train foreign qualified engineers for registration in the province, has been expanded from 12 to 40 candidates. The provincial government will give the university's engineering faculty \$1 million to expand the program over the next four years. The program consists of eight months of courses followed by four months of workplace experience. Associate Dean Ron Britton said that the funding will be used to hire six additional faculty members.

(Winnipeg Free Press, October 2, 2007)

AIRSHIPS

Global warming would make winter roads unusable, thus creating a demand for alternate means of transportation in the

north, according to Barry Prentice of the University of Manitoba. An all-weather road network would be prohibitively expensive to build and maintain. Conventional air transport is also very expensive. That leaves airships and hovercrafts as the two feasible possibilities. Of the two, airships appear to be the better choice.

(Winnipeg Free Press, October 23, 2007)

CONSTRUCTION INFLATION

The city of Winnipeg is facing a \$66 million shortfall in capital funding next year for road and bridge repairs, because of inflation due to a booming economy coupled with a world-wide shortage of materials and qualified personnel. The City will downsize, delay, or cancel several projects.

(Winnipeg Free Press, October 27, 2007)

POINTE DU BOIS

Manitoba Hydro announced in August that it will rebuild the Pointe du Bois generating station on the Winnipeg River, subject to environmental approval. The project will cost about \$800 million and is scheduled for completion by 2015. The capacity will go up to 120 megawatts (MW) from the current 78 MW. This will be the latest chapter in the outstanding history of this engineering heritage.

The power station was developed between 1909 and 1926 but delivered its first power in 1911. The first customer of the Pointe du Bois power was on Portage Avenue, at the exact same spot as the new Manitoba Hydro building. Built by the predecessor of Winnipeg Hydro, the generating station was the first hydroelectric station on the Winnipeg River and the second in Manitoba, after Old Pinawa (about 25 MW). The construction and operating technologies were marvels of the day, and still a testament to the skills and fortitude of engineers of a century ago.

(Winnipeg Free Press, August 4, 2007)

RIVERBANK EXPERIMENT

Geotechnical engineers from the University of Manitoba will investigate the performance of rock columns in preventing riverbank erosion. Eleven stone columns filled with crushed limestone will be sunk 8 metres deep into the bank of the Red River in St. Vital and subsequently monitored. According to James Blatz, Associate Head of Geotechnical Engineering at U of M and an APEGM councillor, such an experiment is not possible in the laboratory, and probably has not been done anywhere in Canada or the U.S. so far. The City of Winnipeg is one of the sponsors of the experiment. The city spends about a million dollars every year on riverbank maintenance.

(Winnipeg Free Press, October 15, 2007)

TRANSMISSION LINE ON WEST SIDE

In late September, Manitoba Hydro announced that it will build its new transmission line down the west side of the province, instead of the east side as originally contemplated. Known as BiPole III, the transmission line will cost over a billion dollars to build over ten years.

This announcement has sparked a huge debate in the province between engineers, politicians, environmentalists, First Nations and others. The Premier, the Leader of the Opposition, and our own James Blatz have all weighed in. Manitoba Hydro CEO, Bob Brennan, said the west side route will be 50 percent longer and cost \$400 million more than the alternate route on the east side. Environmentalists were opposed to the east side route because of concerns regarding the Boreal Forest which is a candidate for a UNESCO heritage site.

(Various reports in October 2007)

AWARD FOR MCW/AGE

Winnipeg engineering firm MCW/AGE Consulting Professional Engineers has won the prestigious award of excellence from the Association of Canadian Engineering Companies. The firm won the award for its energy-efficient design of the expansion of the Gimli Community Health Centre. The expansion almost doubled the floor area of the facility, but it uses 18 percent less natural gas and only 18 percent more electricity. Open-well geothermal heating is part of the design.

(Winnipeg Free Press, November 6, 2007) ■



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APEGM Welcomes New Members

S. Jurkowski, EIT

On October 23, 2007, APEGM formally welcomed the new members of the past year with a luncheon at the Niakwa Golf and Country Club. Executive Director Grant Koropatnick introduced the APEGM staff members in attendance and gave

a summary of the three ways new members join the association.

The first category mentioned were the "Mobility Members" – members of other Engineering and Geoscience Associations within Canada who have applied to work in Manitoba.

Mr. Koropatnick recognized the fact that not all members registered in Manitoba actually reside in Manitoba, and gave a special welcome to those who have moved their families to our province.

Next welcomed were the "New Graduates" – those who have completed the 48 months Member-in-Training program in Manitoba. Finally, Mr. Koropatnick welcomed the third group, "New Canadians" - foreign-trained members who had overcome many barriers to have their status recognized in Canada. Altogether, 286 new members joined the Association this year.

APEGM President Robyn Taylor presented Certificates of Registration to each new member in attendance. After each new member was called up, photographed receiving their certificate, and assembled for a group photo, the few remaining seated audience members congratulated the collective new membership with a round of applause. ■



New Members Luncheon group after receiving certificates

Professional Development & Networking Events

AGM PD Conference - Recruitment and Retention of Top Talent

Presentation By
Neil Fassina, Ph.D.

October 26, 2007

A. Erhardt, EIT

On the morning of the APEGM Annual General Meeting, Dr. Neil Fassina from the I.H. Asper School of Business came out to offer a seminar that hits home with many Manitoban companies today: the recruitment and retention of qualified individuals. Not only are there concerns with the steady flow of young talent to other provinces, but studies have shown that by the year 2010, one half of today's work force will be retiring.

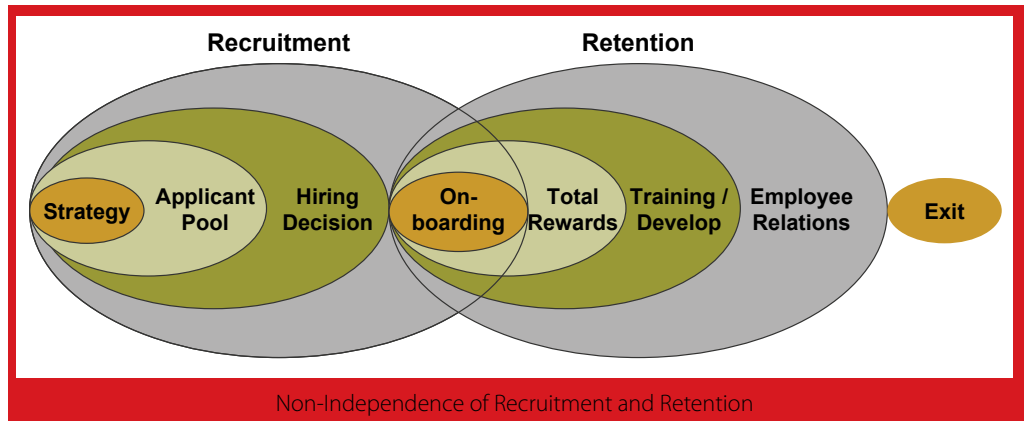
The definition of recruitment is the "generation of qualified applications to fill a position". The traditional approach to recruitment has been that when a worker has been lost or there is too heavy of a workload, that another worker was required. However, this siloed perspective is not the ideal solution. This approach makes several assumptions, including that the workload justifies a position and that the company's needs will not be changing or evolving over time.

When examining the recruitment process as a whole, it is important to remember that it does not end with a stack of applications on a desk. Dr.

Fassina offered up an overview of the entire recruitment process, from the initial company exposure to the integration and socialization of the new employee.

The concept of KSAO's are an important element of the recruitment

covered the retention of talent. The common misconception is that money is the ultimate solution to the problem. However, money is merely a short term motivator. There are several other reasons for turnover within a company, including family status, employee



process. KSAO is an acronym for Knowledge – Skills – Abilities – Other attributes. Companies need to recruit for KSAO's and not for workload. If a company goes after a body for a chair instead of the lost skills, the risk is having to re-recruit at a typical cost of 1½ times the annual salary of the

position. By going after KSAO's and looking at the big picture and not individual projects, a company can effectively locate talent not only for the present, but for the future.

The second part of the seminar

communications, and even the physical work environment. What Dr. Fassina stressed is that it is important to treat high performers like gold, as they could easily find work elsewhere due to their KSAO's.

Several retention strategies were introduced, including compensation, training and development, on boarding, and employee relations. It should be noted again; compensation is not only defined as salary, but includes benefits, vacation, flexible work schedules, and paid personal leave as examples.

To conclude the seminar, Dr. Fassina highlighted a chart which outlined the ongoing relationship between all of the phases of recruitment and retention to drive home the notion that the two processes are ongoing and very much interdependent. All in all, the seminar was very well received and tied in very closely with the theme of this year's Annual General Meeting: Building the Professions. ■

	Functional	Dysfunctional
Voluntary	<ul style="list-style-type: none"> •Low performers •Weak KSAOs •Low promotion potential •Low expertise 	<ul style="list-style-type: none"> •High performers •Strong KSAOs •High promotion potential •High expertise
Non-voluntary	<ul style="list-style-type: none"> •Termination •Poor •Performance •Discipline 	<ul style="list-style-type: none"> •Retirement? •Layoff •Site Closing •Redundancy

Distinguishing Good Retention from Bad

Frank Dagg Centennial Prize

On the occasion of his 100th birthday, Mr. Frank Dagg (B.Sc.C.E. 1929) has provided a gift of \$10,000 to the Faculty of Engineering at the University of Manitoba. The gift also marks the 100th anniversary of the Faculty of Engineering.

During his career as a civil engineer, Mr. Dagg relied on common sense and strong problem-solving skills as he worked on varied projects including hydro dams, wharfs for ocean ships, and aluminum smelters. His gift will be used to offer prizes to three graduates of the Faculty of Engineering who have demonstrated the value and importance of common sense in the working life of a professional engineer.

Three prizes of equal value will be awarded to graduates of the Faculty of Engineering who:

- have successfully completed all the requirements for a Bachelor of Engineering degree at the University of Manitoba;
- have a convocation date prior to December 2002;
- have achieved a minimum cumulative grade point average of at least 2.5 on all courses completed in the Faculty of Engineering;
- have at least five years experience as a practicing engineer;
- submit the best essay, in one of the three categories noted below, to demonstrate how he/she has made use of common sense in the application of his/her engineering skills.

One recipient will be identified from each of the following three categories:

- Civil Engineering, Geological Engineering, Biosystems Engineering
- Manufacturing Engineering, Mechanical Engineering, Industrial Engineering
- Electrical Engineering, Computer Engineering

For the purpose of this award, common sense is defined as knowledge that is acquired in the course of daily living that allows us to solve problems. Common sense is distinct from knowledge acquired from university courses, which provides a means to apply common sense in a professional manner.

The selection committee will be named by the Dean of the Faculty of Engineering and will include representation from the English Department of the Faculty of Arts, Media, APEGM, industry, and a current Engineering student.

Applicants must submit their curriculum vitae, proof of graduation (copy of degree or transcript is sufficient), and an essay (maximum 500 words), by January 1, 2008* to:

Frank Dagg Centennial Prize
c/o Faculty of Engineering
E2-290 EITC University of Manitoba
Winnipeg, MB R3T 5V6

Essays submitted for the prize competition may become part of the permanent collection of the University of Manitoba Libraries.

For more information, call (204) 474-9806 or visit
www.umanitoba.ca/engineering

*The Frank Dagg Centennial Prize Review Committee reserves the right to extend the deadline.

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Eligible for registration with the ASTTBC or APEGBC (an Engineer-in-Training with the appropriate skill-set may be considered), you ideally have 5 – 10 years in natural gas processing, transmission and/or gathering and strong computer skills. Other process engineering experience will be considered. Knowledge of mechanical and process codes/standards (CSA, API, ASME) along with a valid driver's licence are essential. Experience in the design or troubleshooting of amine process and sulphur recovery equipment/systems, as well as expertise using process simulation programs and control system process trending software would be desirable.

If you are interested in working with an industry leader offering competitive compensation/benefits, please forward your résumé (email preferred) to the address below.

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PO Box 30, Fort Nelson, BC V0C 1R0
Fax: 250.233.6263
Email: skgardiner@spectraenergy.com**

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IEEQ Program Continues to Engage Internationally-Educated Engineers with Industry

M.R. Friesen, P.Eng.

On the evening of October 24, 2007, approximately 100 attendees from engineering industry, government, and university joined this year's group of graduates from the Internationally Educated Engineering Qualifications Program (IEEQ) at the University of Manitoba. The evening was a celebration of the achievements of the IEEQ graduates on the completion of their programs, recognition of co-op employers, and acknowledgement of industry support and participation over the past five years.

IEEQ began in 2003 as an alternative pathway for internationally educated engineers – newcomers to Manitoba with engineering degrees obtained overseas – to meet partial requirements for licensure with APEGM. Funded initially on a pilot basis by the Province of Manitoba, IEEQ operated on a year-to-year basis with small cohorts of 10 - 12 internationally educated engineers participating annually.

Since 2003, the program has evolved to the extent that on October 1, 2007, the Hon. Diane McGifford, Minister of Advanced Education & Literacy, and Hon. Nancy Allan, Minister of Labour & Immigration, announced a permanent funding commitment to the University of Manitoba specifically for IEEQ. This announcement allows the pilot phase of IEEQ to end and a permanent IEEQ program to be launched. Among other ramp-up initiatives, the program will expand its capacity in coming years to 30 - 40 immigrants annually and will formalize the program into a Canadian university credential in the form of post-baccalaureate certificate or diploma.

APEGM continues to offer pathways for internationally educated engineers with non-Canadian credentials to meet licensure requirements in Manitoba, in the form of assigned Confirmatory Exams or a program of defined courses in lieu of exams. IEEQ is an additional option, which has been shown,

in many cases, to shorten the time required for licensure.

IEEQ is a one-year program in which participants complete senior-level engineering courses at the University of Manitoba to confirm technical backgrounds, followed by a four-month co-op work term in industry to gain Canadian engineering experience and references. IEEQ also maintains a strong focus on cultural orientation (the culture and ethics of the profession), social support for participants, professional networking, and English language support.



IEEQ depends on multiple partnerships, of which engineering industry's participation is indispensable. Since the program began, approximately 20 employers have provided over 30 co-op placements in the private and public sectors to IEEQ participants, involving up to 55 direct supervisors and workplace mentors. Many employers have used the co-op term as a four-month assessment of the individual's fit for long-term employment, and to date, over 80% of IEEQ graduates have continued in engineering employment with their co-op employers post-IEEQ.

Industry support has also been evident as individual engineers have participated in IEEQ as guest speakers and numerous companies have hosted industry tours for IEEQ participants.

As the program grows over the next few years, IEEQ will continue to welcome industry involvement in the co-op component and other ways. One near-term consideration is the establishment of an industry advisory body to meet periodically to give feedback that helps shape IEEQ to ensure its responsiveness to industry's needs.

As program capacity increases, employers are also encouraged to examine their workforce and identify internationally educated engineers who have not pursued licensure with APEGM and for whom IEEQ could facilitate the licensing process, to the benefit of the individual and the company.

Internationally educated engineers successfully completing IEEQ go on to register as EITs with APEGM, and after demonstrating four years' engineering experience (of which up to three years can be prior experience obtained outside of Canada), individuals can apply for registration as a P.Eng. To date, IEEQ has graduated 30 individuals, all of whom have gone on to EIT registration and to date, 11 of whom have achieved their P.Eng. license. Thirteen more individuals are currently enrolled in the program.

IEEQ is well-positioned relative to immigration, economic, and regulatory realities. In Manitoba, annual immigration has increased from 3,500 to 10,000 immigrants between the years 1999 and 2007, with a projected increase to 20,000 immigrants annually by the year 2017.

Nationally, immigrants made up 70% of labour force growth in the 1990s and are expected to make up 100% of labour force growth by the year 2011. Legislation recently introduced in the Manitoba Legislature will mandate all professional regulatory bodies to implement registration practices for foreign-trained applicants that are transparent, objective, impartial, and fair. This impending legislation increases the onus

on the profession to demonstrate how programs like IEEQ contribute to this mandate.

The IEEQ program has received several awards and has been recognized as a Best Practices initiative by several professional associations and sector groups. However, the success of IEEQ continues to be most evident in the career development of

its alumni who achieve licensure, professional engineering employment, and fuller integration into their communities.

For more information, please visit our website at umanitoba.ca/engineering/ieeq or contact Marcia_Friesen@UManitoba.ca. ■



IEEQ graduate Mitko Tomov with engineering dean Doug Ruth, fall 2007

IEEE GOLD: PROFESSIONAL DEVELOPMENT FOR THE DEVELOPING PROFESSIONAL

K. Zelickson, Chair, IEEE GOLD Winnipeg

S. Dueck, Past Chair, IEEE GOLD Winnipeg, Chair, IEEE Winnipeg Section

Do you know that young electrical/computer engineers in Winnipeg have their very own professional development organization? That this organization has been holding, on average, seven professional development seminars since 2003? Or that this organization is supported by the largest professional society in the world?

This organization is called GOLD (Graduates of the Last Decade) and it is one of many sub-groups within an electrical/computer engineering non-profitable society called the Institute of Electrical and Electronics Engineers (IEEE).

The IEEE is active in the dissemination of technical knowledge from New York to Beijing and boasts a global membership base of over 360,000 members. Despite this enormous scope, the Winnipeg chapter of Winnipeg IEEE GOLD won a national

award and is generally recognized as one of the best GOLD groups in Canada. IEEE GOLD exists to help students and recent graduates in the transition from education to industry. GOLD addresses personal and professional needs of recent graduates (networking, career development and exploration, personal management) and provides young professionals with the opportunities to contribute to the engineering community and to develop their non-technical skills.

Our committee organizes a variety of technical and professional development events in order to develop skill sets like effective communication and leadership ability which quickly become valuable assets in industry. Some of our most recent events include: Air traffic control tower tour at Winnipeg Airport, Pauwels Canada's transformer manufacturing

facility tour, hands on soldering workshop at IDERS Inc., Fort Garry Brewery Industry tour, and "Preparation, Tools, and Tactics" seminar on job interviews.

Whether you are a student, recent graduate, or APEGM Member-in-Training, you can benefit from involvement with IEEE GOLD by attending any of our upcoming events or by volunteering with our committee. Volunteering with GOLD counts for APEGM professional development and volunteer points and will give you the opportunity to plan interesting events related to your industry, network with peers, and develop critical leadership skills that will help accelerate your new career!

For more information on our committee and on upcoming events please visit our website at www.ieee.org/winnipeggold. ■

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Council Reports

Thursday, September 13, 2007

A. Erhardt, EIT

It was a slow start to the meeting; when lunch had finished, Council was one councillor short of achieving quorum. As it so happened, UMES Vice Stick (External) Megan Lusty was in attendance to offer a brief presentation introducing the councillors to the latest UMES council, directorships, and event coordinators. She reviewed the planned events for the upcoming year, along with the services that UMES offers the engineering students, such as an agenda, year book, and a variety of merchandise. As well, she informed councillors that a large portion of APEGM funds that are given to UMES are used to cover the costs associated with sending students to a variety of conferences, such as WESST, NCWIE, DFES, and WEC.

As Ms. Lusty's presentation was coming to an end, one more councillor arrived, and the meeting was officially called to order at 1pm. The first item on the agenda was "ownership linkage" contact with Yellowquill College. A letter had been received from one of the school's coordinators with positive feedback. As President Robyn Taylor's term of office was coming to a close at the AGM, it was decided that Vice President Tim Corkery would follow up on the letter at the beginning of his term as APEGM president.

Council then discussed the University of Manitoba's accreditation review by the Canadian Engineering Accreditation Board from October 2006. The university has already acted upon the recommendations that were brought forward by CEAB and expect accreditation to be extended for a longer period when the time comes for their next review in 2009. One of the concerns that were brought forward by CEAB was that there were too many sessional instructors, which was negatively impacting the education experience. A motion was brought forward by Past President Digvir Jayas that CEAB should be asked to consider professional design engineers who are teaching at the university to be upgraded from their status as sessional instructors to that of full time instructors.

Continuing with ownership linkage issues, Councillor Don Himbeault had been selected to be a representative between APEGM council and the Manitoba Manufacturing Council as they try to implement a long term economic development plan for Manitoba manufacturers.

The consent agenda items were next up for council to review. These included approved applications from the Registration Committee, a review of the latest financial statement and auditor's report, and the MOU between APEGM and the CCPG regarding discipline and enforcement.

Vice President Corkery updated the council on the review of the Manual of Admissions sub-committee. Council agreed that the manual should be sent to the Registration Committee for feedback, as they are the ones who would be using it in the course of registering new members.

Council also discussed the City of Winnipeg Red Tape Commission Recommendation #9 regarding the certification of professionals. The concern of council is that the city is attempting to regulate professions that are already regulated. Given the rapidly nearing deadline for the recommendation to be implemented, this issue was one that will be kept on the front burner for council over the next few months.

After reviewing the list of outstanding items and the agenda for the December meeting, Engineers Canada Director David Ennis discussed a mutual recognition agreement with Engineers Australia, which would facilitate mobility between Australia and Canada. The only other arrangement that exists currently is with Hong Kong. It was decided that Mr. Ennis inform Engineers Canada (formerly CCPE) that APEGM is in favour of the mobility agreement.

Following a review of the monitoring reports, several "information only" items were highlighted:

- Membership is up from last year
- Request for chapter feedback on the idea of geographical representation on council
- The closing of the Pembina Chapter
- AGM planning update
- National Geoscience Knowledge Requirements Table
- Engineering and Technology Labour Market Study by Engineers Canada

Council performed the routine self-assessment of the meeting and a motion to adjourn was made at 3:15 pm. The next council meeting, following the AGM, is to be held on Thursday, December 6, 2007. ■

continued from page 4, Engineering Philosophy 101

APEGM is responsible for the practice of professional engineering and professional geoscience in Manitoba. As a member of APEGM, I share this responsibility with the rest of the membership. As a member, I subscribe to, and endeavor to live within, the Code of Ethics that is a part of the profession.

As a person, I believe that those who have the knowledge and understanding required to deliver engineering services in a professional manner are best qualified to contribute to the regulation of our profession. As a pragmatist, I believe that our process of regulation requires improvement, and if we don't belong to and contribute to our

profession, who will cause those improvements to happen?

Being a Professional Engineer does not define what I do, it defines who I am. That is my choice, with or without legislation. ■

Friday, October 26, 2007 - AGM

A. Erhardt, EIT

Outgoing President Robyn Taylor called the meeting to order at 11:30 a.m. following the Professional Development Conference on October 26, 2007. A moment of silence was observed for those members who had passed away in the past year. Following the reading of the Notice of the Meeting by Executive Director Grant Koropatnick, the agenda was approved and the meeting was underway!

Following a series of introductions for those in attendance, including the APEGM council and staff, committee chairs, and chapter representatives, along with the invited guests and other association representatives, Ms. Taylor delivered her report as the outgoing president.

She offered up thanks to the APEGM membership for first electing her to council, and to the council itself for their leadership and support. A special thanks was given to her co-workers and especially her husband for encouraging her to pursue her goals.

Ms. Taylor also reviewed some of the initiatives that council had dealt with over the past year, including strategic planning, ongoing professional development, and government relations.

Ms. Taylor again thanked everyone for the opportunity she had been given, and indicated that she looks forward to further serving the association as Past President.

Following the adoption of the minutes of the 2006 AGM, the new councillors elected for the 2007 - 2009 term were introduced. They include Alan Aftanas, P.Eng.; and Raymond Reichelt, P.Geo. Councillors re-elected for the 2007 - 2009 term are Bill Girling, P.Eng.; Don Himbeault, P.Eng.; and Bob Malenko, P.Eng.

The auditors' report and financial statements were approved with no concerns or comments brought forward from those in attendance. Again, BDO Dunwoody was appointed as the auditors for the upcoming year.

The budget and schedule of dues and fees which had been approved by council were also presented for information. They include a 9.5% increase for membership dues from last year.

At this stage, the floor was opened to requests for nominations for the available positions on the Nominating Committee. The following people allowed their name to stand for nomination: Doug Chapman, Allan Silk, and Doina Priscu.

Continuing on a near record pace, the reports of the association committees were touched upon and once again, no questions were brought forward. As well, no resolutions were received by the required deadline, requiring no presentations.

Ms. Taylor acknowledged the retiring councillors at this time. They included Digvir Jayas, P.Eng., and Avery Ascher. The ceremonial passing of the Scott Gavel from Ms. Taylor to the incoming President Tim Corkery, the association's first professional geoscientist president, was next on the agenda. Mr. Corkery was handed the gavel and opened it, revealing a scroll upon which all of the past president's signatures have been collected.

After adding his name to the scroll, Mr. Corkery offered up a few words to the attendees. It was after much debate and soul searching that Mr. Corkery allowed his name to stand for election as Vice President.

After providing some personal history, he commented that his first experiences with APEGM were with the AGM Planning Committee and on the Professional Development Day Committee; two committees that no longer exist. Mr. Corkery commented that he hopes that it doesn't reflect poorly on himself!

He continued by mentioning that engineers, like doctors, lawyers, and several other professions, have the privilege to be self regulated. He indicated that he was proud to join a team of dedicated volunteers that work with the Executive Director and APEGM staff to make sure that APEGM is working for both its members, and the public as a whole.

Following some closing announcements, the meeting was adjourned.

An excellent lunch was provided with great a great networking opportunity and several door prizes being awarded to those in attendance. ■

continued from page 5, Executive Director's Message

Did you attend all or some of the events at our Annual General Meeting in October? There were no boring speeches, we enjoyed great meals, with fabulous entertainment – the AGM, PD Conference and Awards ceremony was one of the best ever!

I hope you enjoyed yourself. It was my goal, with the APEGM council and staff, to ensure that you had a good time. If you missed it this year, the 2008 AGM will be back at the Fort Garry Hotel and yes . . . the Ron Paley Dance Band will perform again next year. It will be another great night to remember . . . for the members.

As always, I appreciate your feedback. Please send me an email on anything you read in the Keystone Professional magazine or on any topic you wish to comment on: apegm@apegm.mb.ca. ■



The Riel Reliability Improvement Initiative

Q. Menec, P.Eng.

The Riel Reliability Improvement Initiative is being undertaken to improve the reliability of Manitoba Hydro's existing transmission system.

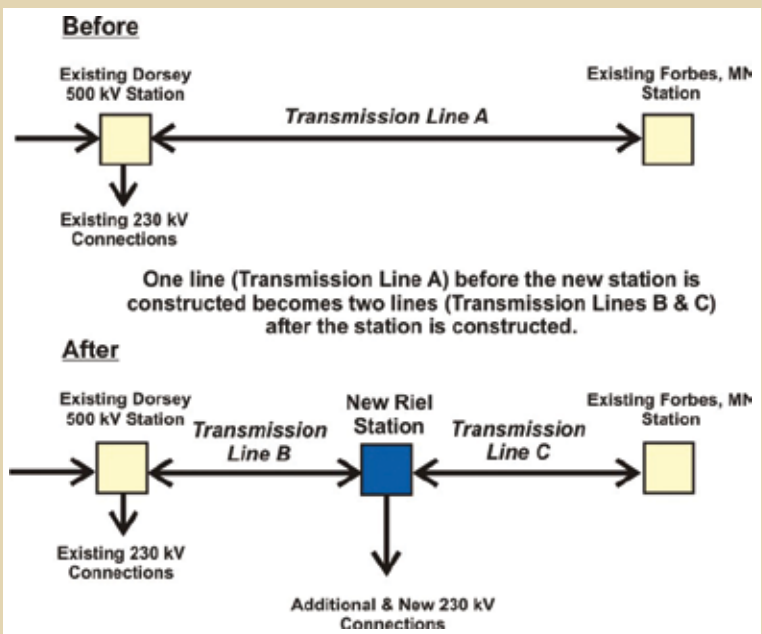
The project will improve the reliability of the transmission system serving Winnipeg and southern Manitoba by modifying the existing high voltage international transmission line running from Dorsey Converter Station north of Winnipeg to Minnesota.

Modifications include cutting and re-terminating the line, and establishing a new terminal at the Riel site. This process, called "sectionalizing", will result in a new, alternative injection point for putting power into the transmission system which serves Winnipeg and southern Manitoba.

Approximately 75% of Manitoba's generating capacity is delivered to Southern Manitoba to Dorsey Station via two HVDC transmission lines: Bipoles I

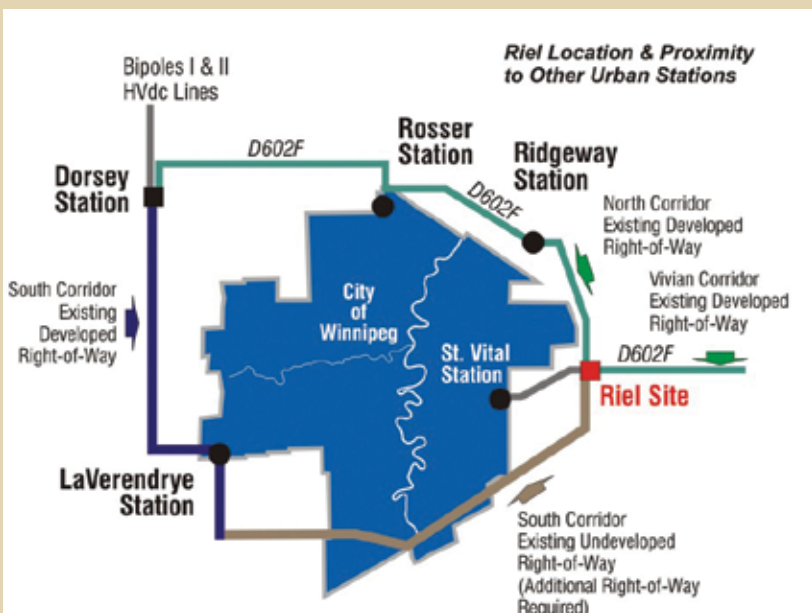
and II. Reliability studies concluded that it was necessary to reduce the dependence on Dorsey and the HVDC corridor. As an example, extreme winds in 1996 damaged both Bipoles I and II. Had the damage occurred further south, it could have severely limited sources of major alternative energy resulting in blackouts and supply restrictions.

The flexibility created by having an alternative connection between stations and lines is essential to the reliability of



sectionalization also enhances security by protecting Manitoba Hydro's ability to import power.

The new Riel terminal station will be located immediately east of the Red River Floodway, in the Rural Municipality of Springfield. A public consultation process is currently in progress and an environmental impact statement will be prepared and submitted to government regulators. Once the necessary environmental approvals have been obtained, construction on the Riel Reliability Improvement Project will be underway. The station is anticipated to be in-service by 2014. As part of the public consultation process, an open house was held on October 2, 2007, to share information with the public and give interested parties the opportunity to review the information and discuss interests and concerns with representatives from Manitoba Hydro. ■



History of the Networking Dinner

R. Minhaz, EIT

Every year around January or February, APEGM arranges the APEGM Networking Dinner to enable professionals to share their experiences and provide guidance to engineering and geoscience students.

These professionals convey information to students about the engineering and geoscience professions, provide networking opportunities for employment, and maintain close relations between APEGM and the University of Manitoba Engineering and Geoscience faculties and more recently, the University of Brandon Geoscience faculty.

One might wonder about the history of this Networking Dinner, such as when it started, or which group was in charge of the event at its beginning.

THE HISTORY

It is very hard to say exactly when it started, but APEGM's Past Executive Director Dave Ennis' earliest recollection is attending one in the mid-1970s, and he expects that it might have been going on well before that. In recalling the organizer of the dinner, Dave is not certain about the one which occurred in the 1970s, but in the 1980s, it was organized by technical societies, such as the Canadian Society of Civil Engineers, Mechanical Engineers, and so on, in conjunction with the match-up student technical society.

Though the common objective of arranging the dinner was to facilitate networking and employment for students, there was some sense of competition among some of the societies and they would likely focus on their topics. The professors from the department that was the designated contact with the technical society were involved in the organization of the event.

One of the difficulties was that there was a bank account for the event that had to be transferred from one group to next

each year. In the early 1990s, APEGM became involved and arranged the dinner jointly with the technical societies. In the second half of the 1990s, APEGM convinced the technical societies that APEGM will handle the money and finally took over the overall responsibility.

One of the earlier traditions involved the sponsoring professional picking the student up at his or her residence, buying him or her a drink, and offering to return him or her back to their residence. Students' interest to congregate and do their own thing, plus the sheer volume of work involved in organizing the match-ups were some of the reasons for the deviation from tradition.

The typical event agenda, in the beginning, included a speech from the technical society and perhaps from the faculty representative. Then it moved to the Dean of Engineering, the APEGM President, sponsoring technical society, and finally speech from guest speaker. The speech from technical society dropped off from agenda after APEGM took over the event.

The Networking Dinner used to be only for engineering professionals and students. From 2004 on, professionals and students from geoscience were welcomed to the event. On the average, 150 professionals and students have attended in the past five years and

APEGM is looking forward to repeating that success in arranging the 2008 event.

The 2008 Networking Dinner will be held at the Canad Inn Fort Garry on January 31, 2008. All professionals from every discipline are encouraged to come out for a fun evening of networking with other professionals, personal and corporate professional development, and employment opportunities for students from both engineering and geoscience, while maintaining the tradition that was started long ago.

More information can be found in the brochure enclosed in this issue of the Keystone Professional or on the APEGM website: www.apegm.mb.ca. ■



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Mahatma Gandhi

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88th Annual General Meeting Awards Dinner & Dance

It was a night to behold as the 2007 APEGM Awards Dinner was held at the Fort Garry Hotel. The event had been sold out for some time, and for those who missed it, it was a smashing success.

While people mingled and talked over cocktails, fifth year engineering student Francesco Zurzolo provided an elegant feel to the night with his skillful piano playing. As people began to get settled, Executive Director Grant Koropatnick went over the plan for the evening and after commenting on the success of the day's events so far, introduced Hon. Christine Melnick, Minister

of Water Stewardship, who welcomed the attendees and thanked the association for its continued efforts.

With that, outgoing president Robyn Taylor took the stage, offering up some kind words, thanking both the membership and council for giving her the opportunity to serve as president for the past year. Following a brief presentation, the night's award winners were introduced.

All of the winners were very gracious and thankful to the association for being recognized for their achievement, and

specifically singled out those near and dear to them in their families for being so supportive to their volunteering efforts and career goals.

Following an exceptional prime rib dinner, the evening was turned over to Winnipeg's hottest dance band, The Ron Paley Band. As the lights dimmed and the music started up, a steady flow of people made their way to the dance floor to dance the night away to the timely classics that flowed out from the stage. Classic after classic kept the dance floor full, and helped provide a wonderful close to a night of celebration. ■

EARLY ACHIEVEMENT AWARD



Richard R. D. Brodeur, P.Eng.

Richard Brodeur was born, raised, and educated in Manitoba. He graduated from the University of Manitoba on the Dean's Honour roll with a degree in Electrical

Engineering in 1997. Richard specialized in controls and microprocessor interfacing.

In 1999 Richard joined Celco Controls as an Engineer-In-Training. He quickly demonstrated his astute business sense and recognition of the market potential in the automation field. Within a

year he was offered a partnership in the company and within two years he bought out one of the partners to become a managing partner.

Following his registration, Richard began the engineering division of Celco Controls providing electrical engineering and automation design to industrial companies and multidisciplinary engineering firms. Since 2000 he has been primarily responsible for the company's expansion to 25 employees with five registered engineers.

Richard has also given considerable time to APEGM and the engineering profession. He has served on the Experience Review Committee for a number of years and, more prominently, he served on an Ad-Hoc committee to develop clarification regarding

engineering approval on automation systems such as controls for water treatment plants and high voltage systems. Richard also provided support to APEGM on a number of enforcement activities in the automation field and represented APEGM in meetings with the Assistant Deputy Minister of Labour during discussions regarding changes to the Electricians Act.

Richard Brodeur is indeed a highly accomplished engineer and business owner who has given considerably to the profession during the early years of his career. As such, the Association is pleased to recognize his achievements and service by awarding him the Early Achievement Award for 2007.

PROFESSIONAL-IN-TRAINING AWARD



Jules J. D. Gareau, EIT

Mr. Jules Gareau was born in Winnipeg and grew up in Woodlands, Manitoba. Jules received his Bachelor of Science in Electrical Engineering at

the University of Manitoba in 2006, graduating on the Dean's Honour list. Jules was a student of the Engineering Access Program (ENGAP) and while attending the U of M, Jules received the Lynne and Dorothy Windsor Scholarship in Engineering, the Manitoba Hydro Aboriginal Education Funding Program Engineering Bursary, the Nexen Aboriginal Education Award, the U of M Student Union Bursary, and numerous ENGAP awards.

Jules has also achieved his Engineering Electronics Technology Diploma at Red River College and Certificate in Management at the University of Manitoba.

Jules joined Manitoba Hydro's Engineer-in-Training (EIT) program in April 2006 and completed placements in System Planning and Distribution Planning before accepting a permanent position

as a Planning Engineer in the Planning & Protection Section of the Distribution Engineering - Winnipeg Department.

Jules became enrolled with APEGM as an EIT in January 2007 and has an outstanding record of service to the engineering profession and the community. Jules has promoted engineering by serving as a volunteer co-ordinator for the

Provincial Engineering and Geoscience Week Committee and by participating in an information session for students of Oxford House on engineering as a career. Jules also participated on the Vantis and Hy-Line Credit Union Board of Directors, which included chairing the Marketing and Nominating committees, and sitting on the Nominating, Finance, Marketing, Governance & Ethics, and Personnel committees.

Jules is also a member of the Canadian Institute of Management and the Institute of Electrical and Electronics Engineers.

In his early career in engineering, Jules has already shown outstanding professional dedication and community service. It is a pleasure to present the 2007 Professional-in-Training Award to Jules Gareau.



Kristina E. Anderson, P.Geo.

Ms. Kristina Elizabeth Anderson was born in Smith Falls, Ontario. Kristina graduated from the University of Waterloo in the spring of 2003 with a B.Sc. in Earth Sciences. She

became enrolled with APEGM as a Geoscientist-In-Training (GIT) in September 2004.

Kristina worked for McIntosh and Perry Consulting Ltd near Ottawa for the remainder of 2003 where she administered the Tay Valley Township Septic Re-inspection Program. Kristina researched grants

and resources available to the program through the Ontario Federation of Agriculture, Ottawa Septic System Office, Rideau Valley Conservation Authority, and Mississippi Valley Conservation Authority, as well as carrying out the inspections.

Kristina moved to Winnipeg in the spring of 2004 after accepting a job with Manitoba Water Stewardship and has worked for Manitoba Water Stewardship for the past three years.

Kristina returned to school part-time in the fall of 2005 in Natural Resource Management at the University of Manitoba and hopes to graduate with a Masters' degree in the fall of 2008. Kristina recently returned from a week-long seminar on Free Market Environmentalism at the Property and Environment Research Center at the University of Montana.

In her spare time, Kristina volunteers with the Winnipeg Folk Festival along with being a member of APEGM's Member-in-Training (MIT) Committee, Women's Action Committee, and Professional Development Committee activities. She is also a member of Canadian Coalition of Women in Engineering, Science, Trades and Technology and involved in helping organizers of conferences on "Producing Influential Leaders", and Kristina is a member of International Association of Hydrogeologists – Canadian National Chapter.

Kristina is an example of outstanding professional dedication and community service in her early career. It is a pleasure to present the 2007 Professional-in-Training Award to Kristina Elizabeth Anderson.

HONORARY LIFE MEMBERSHIP



R. R. (Bob) Foster, P.Eng.

Bob Foster became registered with the Association on April 19, 1967, and has been a member continuously for 40 years. Bob graduated from the University of Manitoba with

a B.Sc. degree in Civil Engineering in May 1965. He also received a Master of City Planning from the University of Manitoba in 1971, and a B.A. in Sociology, from the University of Winnipeg in 1986.

Bob was a member of Council and was President in 1984. He served on the Executive Finance

Committee, the Social/AGM Committee, the Public Relations committee, the Bulletin Committee (now the Communications Committee), the CCPE Affairs Committee, the Committee to Review Committees, the Admissions Review Board, the Nominating Committee, the Awards Committee, the Public Relations sub-committee re the Engineering Museum, and the Task Force on Sustainable Development. This makes a total of 34 Committee years of service.

In 1987, Bob received the Association's Outstanding Service Award. Bob was commended by Council in recognition of the work he had done in connection with the Engineering Diorama at the Manitoba Museum of Man and Nature to mark the Centennial of Engineering in Manitoba in 1987.

Bob started his career with Wardrop Engineering Inc. in 1966 – progressing from Design Engineer to Manager of Civil Engineering, Planning and Environmental Services, to Vice President. Then, in 1997 Bob became Director responsible for engineering, environment and project management activities with the Winnipeg Airports Authorities. In 1999 he started working for Acres International Ltd., and in 2002 Bob became self-employed and pursued assignments on an individual basis.

Honorary Life Membership is granted to Bob Foster in recognition of the service he has provided to the Association and to the profession in Manitoba.



Rudy C. Isaak, P.Eng.

Rudy Isaak became registered with the Association on July 12, 1961, and has been a member continuously for 46 years. Rudy graduated from the University of Manitoba with a

B.Sc. degree in Civil Engineering in May 1959.

Rudy was a member of Council and was President in 1981. He served on the Social Committee, the Bulletin/Publication Committee, the Nominating Committee, the Executive/Finance Committee, the Awards Committee, the Consulting Engineers Committee, and the Practice & Ethics/Investigation Committee. This makes a total of 31 Committee years of service. Rudy also received the Association's Outstanding Service Award in 1993.

Rudy started his career with the University of Manitoba Testing Laboratory in 1960. In 1962

he started working for Templeton Engineering Company and over the next 17 years progressed through the ranks from Senior Design Engineer, Project Engineer Manager, Calgary Office, to Partner. In 1979 Rudy joined I. D. Engineering Canada Inc. and became a Principal of the company. In 1993, Rudy became self-employed and pursued assignments on an individual basis.

Rudy is also a Fellow of the Canadian Society of Civil Engineers. He was President of the Association of Consulting Engineers of Manitoba in 1993 and



President of the University of Manitoba Engineering Alumni Association in 1976.

Over the years Rudy has contributed uncountable hours of volunteer service to the Manitoba

Museum of Man and Nature, United Way of Winnipeg, Winnipeg Winter Club, St. Matthew's Church, and Cathedral Church of the Redeemer, University of Manitoba Alumni Association; and the Victoria Beach Community Club.

Honorary Life Membership is granted to Rudy Isaak in recognition of the service he has provided to the Association and to the profession in Canada.

OUTSTANDING SERVICE AWARD



Allan D. Silk, P.Eng.

Allan Silk became registered with this Association on April 11, 1988. He has been a registered professional member for 19 years. Allan graduated from the University of

Manitoba with a B.Sc. in Computer Engineering in May 1985. He also holds a Diploma in Computer Technology from Red River Community College, dated June 1982. Allan was elected to the University of Manitoba Computer Engineering

Curriculum Committee in 1983.

Allan has been a member of APEGM's Council for five years (2001 – 2006) and was elected President for the year 2005. He has been a member of the Executive/Finance Committee, the Admissions Board, the Experience Review Committee, the Nominating Committee, the Past President's Committee, and the CTTAM-APEGM Joint Board. This totals 38 Committee years of service.

After graduation in 1985 Allan worked for Cirlog Corporation in Winnipeg as a Design Engineer. He then worked for the Microelectronics Centre of Manitoba as a Design Engineer/Project Leader before starting his career with Manitoba Hydro in

1988 where he has worked for the past 22 years.

Allan's professional affiliations include: Member of the Midwest Independent Systems Operators (MISO), Mid-Continent Area Power Pool (MAPP); and Manitoba Hydro Professional Engineers Association. Allan has also spent many volunteer hours at St. Georges Anglican Church.

The Association is extremely grateful to Allan Silk for the service he has rendered over the years, especially for his involvement with inter-provincial mobility and the relationship between APEGM and Manitoba Architects Association, and feels he is a most deserving recipient of the Outstanding Service Award.

CERTIFICATE OF ACHIEVEMENT



NEW FLYER

New Flyer began manufacturing buses in 1930. Since then, they have grown to be one of the leading bus manufacturers in North America. Their headquarters are in Winnipeg but have additional production facilities in St. Cloud and Crookston, Minnesota. New Flyer is the technological leader in the heavy-duty transit market with innovative firsts such as low floor buses, programmable control electrical systems, and articulated high / low floor buses.

In addition to these innovative designs and solutions, New Flyer offers the broadest product

New Flyer Industries Limited for Hybrid Transit Solutions

line in the industry, coupled with drive systems powered by clean diesel, liquid natural gas, compressed natural gas, and electricity (trolleys). In addition, the company's quality and reliable products are supported by an industry-leading, comprehensive parts and service network.

In particular, however, New Flyer has done a great amount of pioneering work in integrating and testing alternative fuel and hybrid drive systems for the North American transit industry. These advanced and environmentally friendly buses represent a significant portion of the company's bus orders, which indicates commercial acceptance of alternative fuels and hybrid transit applications.

New Flyer began developing green transportation solutions in the mid-1990's and delivered it's first hybrid vehicle in 1998. The company is committed to continuous innovation resulting in a leadership position in hybrid and alternative fuel vehicles. New Flyer has more hybrid vehicles on the road accumulating more revenue miles than all other North American bus manufacturers combined.

The Association is pleased to recognize New Flyer Industries Ltd. for its achievements of being the leader in advanced transportation systems in North America and feels it is a worthy recipient of the Certificate of Achievement.

LEADERSHIP AWARD



MaryAnn Mihychuk, P.Geo.

MaryAnn Mihychuk, P.Geo., was born in Vita, Manitoba. She obtained her B.Sc. (Hons.) degree from the University of Winnipeg, and her M.Sc. in Geological Sciences

from Brock University in St. Catherines, Ontario. MaryAnn worked as a geologist from 1977 to 1992 in Newfoundland, Ontario, and Manitoba.

Ms. Mihychuk served as an elected school trustee, Board Chair for the Winnipeg School Division #1, MLA for St. James, Chair of the Manitoba NDP Caucus, and Official Opposition Critic for Manitoba Energy and Mines and Manitoba Hydro. Premier

Gary Doer appointed MaryAnn as Minister of Industry, Trade and Mines in October 1999. During her tenure as Minister she brought in a new regulatory framework in legislation which industry views as the best in the world as reported by the 2007 Fraser Institute Survey of Mining Companies. She was re-elected in 2003 and named Minister of Intergovernmental Affairs and Trade.

Ms. Mihychuk resigned from cabinet and the legislature in May 2004 to run for the position of Mayor for City of Winnipeg. After her unsuccessful bid, she setup Mihychuk Consulting to provide professional advice to business and First Nations.

In September 2005, a Manitoba court decision led to an injunction which affected the building construction industry and the participation of professional engineers in the design and certification of buildings. MaryAnn was retained by APEGM to coordinate a campaign reflecting the

engineer's position. She worked to build a coalition of other associations and groups. The campaign was successful, and legislation was passed in November 2005 that satisfied the engineers' concerns.

Ms. Mihychuk accepted the position of Director, Regulatory Affairs, Prospectors and Developers Association of Canada in January 2006. She is a nationally recognized speaker on the topic of mineral exploration and regulatory reform. She has organized a grass-root, member-based campaign

that resulted in the renewal of the federal super-flow through 15% tax credit. She has also accepted the position of Chair of the National Resource Industry Association.

In recognition of her outstanding leadership and use of political experience for the benefit of engineering and geoscientist professions in Manitoba and a healthier mineral sector in Canada as a whole, the Association is pleased to present the Leadership Award to MaryAnn Mihychuk.

MERIT AWARD

Ernest E. Robertson, P.Eng.



Ernest Robertson attended the Royal Military College, Kingston, 1935; University of Toronto, graduating in Civil Engineering in 1939; the University of Western Ontario in

Business Administration, 1946; and the University of Manitoba for a Masters in Business Administration in 1970. He became a registered member of the Association of Professional Engineers of Manitoba, March 4, 1957.

Ernest's military service began at the military college, following which he served in the Royal Air Force in England before the onset of World War II and then, during the war, the Royal Navy Fleet Air Arm, the Royal Canadian Naval Fleet Air Service, and as a member of the Canadian Naval Staff from 1944 to 1945. Ernest retired from the military with the rank of Commander, Engineering, in September 1945.

Following his military service Ernest was hired by the Foundation Company of Canada in various engineering and management roles. He was senior planner and manager of Transportation and Bases for the eastern sector of the Dewline during planning and construction. His last position was as assistant to the president of the Foundation Company of Canada.

Subsequently, Ernest brought the application of Belgian prestressed concrete technology for application in Canada in 1956. As a part owner, director and manager of research and development for Winnipeg Supply and Fuel, he developed the Selkirk Silica Company into Canada's major supplier of silica. Ernest introduced the U.S. technology of chemical soil stabilization into Canada using calcium oxide and calcium hydroxide, now widely used in "gumbo" soil areas for road construction.

Ernest took out basic patents on condensing heat recuperators in Canada, the U.S.A. and the U.K. and arranged the first Canadian installation at Canada Packers' St. Boniface Plant in 1982 using European technology.

Before issues of recycling and sustainability came to the forefront and the attention of many, Ernest Robertson instigated the formation of the Canadian Lime Institute in 1960, the Biomass Energy Institute in 1971 and the Solar Energy Society of Canada in 1974.

Ernest is a Fellow of the Institute of Energy of the U.K., a member of the American section of the International Solar Energy Society, the International Association of Hydrogen Energy, and the American Soil Conservation Society. His efforts have resulted in many symposia across Canada on solar, biomass energy, power alcohol and agricultural methane studies, and many other issues. Fellow engineers and scientists have benefited from his many published articles and his generous personal guidance.

The Association is pleased to recognize Ernest Robertson, P.Eng., M.B.A. for his accomplishments and for his many contributions and influence in the area of solar research, renewable energy and industrial development and feels he is a most deserving recipient of the Merit Award.



Editors Note

So, what do you think?

It has now been one full year for the *Keystone Professional* to be published under its new format, including going to quarterly issues. Tell us what you think. Write to commfeedback@apegm.mb.ca. Your comments may be used in upcoming issues under Letters to the Editor.



Do you enjoy photography?

Submit your photos of Manitoba and engineering related projects along with a brief written description to be considered for the cover art of an upcoming issue of the *Keystone Professional*. Submissions can be made to commfeedback@apegm.mb.ca.

The Proposed Fair Registration Practices Legislation – What Does it Mean to APEGM?

A. Kempas, P.Eng.

THE CHALLENGE

A recent article in the Keystone Professional examined the impending shortage of engineering and geoscience professionals in Manitoba. Governments at all levels are taking proactive steps to ensure they have the manpower necessary to maintain the workforce and thereby maintain economic growth.

Since registrations in Manitoba's engineering faculties are stagnant, one source of engineering talent is through immigration. Stories abound about qualified professionals driving cabs or working in convenience stores because their credentials weren't recognized. To help our economy and help foreign-trained professionals achieve their full potential, Minister of Labour and Immigration Nancy Allen announced recently the reintroduction of The Fair Registration Practices in the Regulated Professions Act into the Manitoba legislature.

Since we are one of a number of self-governing professions impacted by The Fair Registration Practices Act, does this mean we will lose control over who enters the profession?

THE FAIR REGISTRATION PRACTICES ACT

The proposed practices under the Act are the result of broad consultation

with regulatory bodies, industry, and employers. Its aim is to expedite the registration process and put qualified professionals into suitable jobs in the minimum time, while maintaining professional standards. To achieve this goal the proposed legislation lays out these principles:

"The proposed act would require regulatory bodies to adopt fair, transparent, objective, and impartial registration practices including providing clear and understandable information to applicants about:

- registration processes including how long they take and related fees;
- requirements for registration including assessment criteria used and a statement identifying requirements that could be met through alternate means;
- document requirements to support an application; and
- other supports available to applicants.

Regulatory bodies would also be required to have written reasons for decisions within reasonable time frames, internal appeal processes, and access to records, as well as trained assessors and decision-makers." (Manitoba government news release, April 18, 2007)

A key provision under the Act would be the appointment of a Fairness Commissioner who would work with regulators to give them information and advice on implementing the Act. The commissioner would also review registration practices for compliance and recommend improvements to the Act.

Instead of usurping the power of regulatory bodies, The Act builds on existing policies and programs and doesn't appear to conflict with the principles of professional self-regulation.

(Note: The act is, at the time of writing, before the legislature and not yet law.)

APEGM'S ROLE IN THE QUALIFICATIONS PROCESS

Executive Director Grant Koropatnick thinks APEGM is ready for the proposed Fair Registration Practices Act because the Association has been assessing and registering foreign-trained applicants for decades. A foreign-trained engineer or geoscientist can walk into our office and receive an information package, after which he or she can book an interview to start off the registration process.

The major requirements for registration are academic qualifications and acceptable

engineering work experience. One of the initial steps is an Assessment of Academic Credentials conducted by APEGM committees and staff. If the applicant is assigned five or fewer confirmatory exams, he or she may enter a special, year-long program at the University of Manitoba to upgrade their technical and language skills.

The Internationally Educated Engineering Qualifications (IEEQ) program provides a complete menu of academic courses, cultural and language training, and paid work experience, all designed to prepare

the foreign-trained professional for the workplace. The pilot IEEQ program was so successful that the Manitoba government announced a 4-year, \$1 M dollar funding extension for the program which will allow up to 40 participants per year into the IEEQ program. Support for foreign-trained professionals is not limited to institutions; Councillor Bob Malenko has personally mentored IEEQ participants.

Along with the academic credential process and APEGM's work with IEEQ, Executive Director Koropatnick

points to APEGM's web presence as a source of information for prospective engineers and geoscientists. Key documents are available on-line for anyone to browse. With all the resources available to applicants, the Association is well-positioned to meet the requirements of the Fair Registration Practices Act when it comes into force. Read the text of Bill 19 online. Visit the link: <http://web2.gov.mb.ca/bills/sess/b019e.php> ■

Internationally Educated Engineers: Licensed, Mobile, Employable

R. Ingood, Engineers Canada

Of the thousands of immigrants arriving in Canada annually, many identify themselves as engineers. In 2001, of the 44 percent of skilled workers who identified an intended occupation at the time of immigration, 63 percent indicated engineering.

These international engineering graduates may be seasoned engineering professionals, recent engineering graduates, or have worked in jobs that would be considered technologist, technician, architect, or scientist positions in Canada. Regardless of which group they fall into, some arrive in Canada expecting to begin work as engineers but are unable to find engineering employment.

The Canadian engineering profession has updated its licensing system to help the international engineering graduates integrate into the workforce and profession without

compromising public safety or lowering professional standards.

At the provincial/territorial level, examples include a new way of assessing academic qualifications in Saskatchewan that eliminated their backlog of applicants and a new method of assessing experience in New Brunswick that reduced applicants' waiting time.

In Manitoba, applicants with 10 or more years of progressively responsible engineering experience can be interviewed with a view to having some or all confirmatory examinations waived, while in Ontario, new Canadians who apply for licensing within six months of their landing date, can do so at no cost.

At the national level, Engineers Canada is leading the establishment of an accurate, current database of recognized international degrees and institutions to be used consistently by the provincial and territorial

licensing bodies. It is expected that the database will reduce duplication of effort, resulting in a reduced processing time for international engineering graduates' applications.

Canadian companies make hiring decisions every day. Each is looking for the best minds in the country to help build their businesses, expand knowledge, and solve problems. That person may be an engineer, licensed in Canada but trained internationally.

Licensed international engineering graduates are assessed to the same standards as each of Canada's 160,000 professional engineers, and they are mobile, able to work in any part of the country. Employers can hire these professionals with confidence, knowing that having a P.Eng. (or ing.) licence means that the Canadian engineering system has validated their academic qualifications, experience, and character. ■

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Team Manitoba: Pioneer in UAV

A. Bugera, Student Member

The Team Manitoba Unmanned Aerial Vehicle (UAV) Group is a multidisciplinary student group at the University of Manitoba which attends a yearly competition organized by the Association for Unmanned Vehicle Systems International (AUVSI).

The objective of the Student Unmanned Air System (UAS) Competition (held in Lexington Park, MD) is to design an air vehicle and associated payload which is capable of autonomous navigation and target surveillance. Teams are given forty minutes in which to complete the entire mission and provide the judges with a list of targets including their latitude, longitude, colour, and a description. Most of the targets are alphanumeric

The members of the team are mainly drawn from Electrical and Computer Engineering, Mechanical Engineering, and Computer Science with the odd member joining from other areas. Former members of the team also provide valuable input on design, management, and fundraising. For the past two years, the team has also had the benefit of design and construction guidance from model aircraft enthusiast Donald Hatch who has

volunteered to be the team's safety pilot at flight tests and the competition.

Students gain experience with more than technical design by providing a report and oral presentation to the judges. Through their fundraising activities and by attending industry events, students build

a network of contacts which proves beneficial to their career.

The Team Manitoba UAV Group will continue to represent the University of Manitoba at the upcoming competition which will take place from June 18 - 22, 2008. Sponsorship and financial support from both industries and individuals are vital for such a project where Team Manitoba is the pioneer among



The UAV preparing for takeoff.
Credit: Andrew Bugera

the Canadian universities. Potential sponsors are invited to contact the University of Manitoba, Faculty of Engineering Dean's Office. ■



The UAV on the final leg of landing.
Credit: Andrew Bugera

characters except for an "emergent target" (which tests a team's ability to change their planned mission) which, in the most recent competition, was a simulated terrorist.

Team Manitoba has attended the Student UAS Competition for the past three years and is a strong contender with awards for "Best Flight" and first place in 2006 over schools such as MIT and Cornell. The 2007 entry received an award for "Best Journal Paper" and fourth place.



Team Manitoba with their "Best Journal Paper" award at the 2007 AUVSI Student UAS Competition Awards Dinner. (From left Andrew Oliver, Donald Hatch, Andrew Bugera, Rashed Minhaz, Ashley Keep) Credit: Andrew Oliver

Andrew Bugera is the Chair of the Team Manitoba UAV Group and a fourth year student of Computer Engineering at the University of Manitoba. Andrew can be contacted at A_Bugera@umanitoba.ca.

Meet your new President

A. Erhardt, EIT

With the traditional passing of the Scott gavel at the Annual General Meeting, Tim Corkery P.Geo. became the first geoscientist elected as President of the APEGM Council.

Born and raised in southern Ontario, Tim was married while completing his undergraduate degree in geology at the McMaster University. After moving to Winnipeg in 1972, he completed his master's degree at the University of Manitoba in 1977. Since that time, Tim and his wife Liz have expanded their family to include four children and one grandchild, with another on the way!

Tim has been working as a geologist with the Government of Manitoba's Department of Industry, Trade, and Mines for over 30 years, most recently managing the Compilation

and Partnerships Section, as well as the Mineral Deposit Section. Over the years, Tim has authored and co-authored numerous publications including two issues of the Geological Highway map of Manitoba, and has been involved with several external geoscience associations, including the Geological Association of Canada and the Canadian Geoscience Education network.

Joining the association in 2000 along with the initial rush of geoscientist members, Tim has been volunteering with APEGM since 2003. Continuing to volunteer on a variety of association committees, he has strived to communicate the importance of both geoscience and geoscientists to the public. Tim was elected to Council in 2005 and one of his main goals has



New President, M. Timothy Corkery, P.Geo.

been to pursue the formation of inter-jurisdictional mobility agreements for both engineers and geoscientists.

So far, Tim has been impressed with how supportive the Council and the executive director have been to the past presidents, and is looking forward to the challenges and experiences that this new roll will present to him over the next year. Please join us in welcoming Tim Corkery to the position of President of the APEGM Council. ■

Meet your new Councillor

A. Kempas, P.Eng.



New Councillor, Raymond Reichelt, P.Geo.

Ray Reichelt, like many P. Geos, has seen much of this country. Born in Nova Scotia to a military family, he lived in Truro, Montreal, Shilo, and Ottawa during his early years. When Ray's dad retired from the military he changed careers

and became a preacher. The Reichelt family moved from Ottawa to Moose Creek, a small town in eastern Ontario, and then on to Battleford, SK, where Ray finished high school.

Ray graduated from the University of Saskatchewan in 1979 with a B. Sc. in geology. He carried on the family military tradition by serving in the reserves with the North Saskatchewan Regiment. His professional work with the Saskatchewan Research Council and the Saskatchewan Mining Development Corp took him to northern Saskatchewan on various geological projects.

After a short stint surveying and designing irrigation systems, Ray went into the petroleum industry doing "mud logging", a combination of geology and drilling fluid gas analysis. He traveled all through Canada and spent a year in Mexico through that line of work.

The 1986 downturn in the petroleum industry forced Ray to look for new employment. His parents were living in Portage la Prairie at the time, so he joined them there and he worked on short-term projects in Yukon, Ontario, and the Queen Charlotte Islands. His greatest find was the woman who became his wife in 1989.

Marriage demanded a more settled existence, so Ray went into the consulting business doing environmental geology and hydrogeology for Dillon Consulting Ltd., Stantec Consulting Ltd., KGS Group, and Geokwan Engineering Ltd.

Most of his work was in Manitoba, but he also had projects in Ontario, Saskatchewan, Alberta, and the

Northwest Territories. In 2006, Ray became an Environment Officer with the Manitoba government. A side benefit of his new job was not having to commute to Winnipeg every day.

Ray became involved with APEGM in 1998, serving on the Grandfathering and Experience Review Committees.

The Reichelt family, wife Margaret

McNutt, and children Luke, Amy, and Samuel, still live in Portage la Prairie, their home since 1986. Ray enjoys reading science, history, politics, and economics as indoor diversions. Outdoor pursuits include camping and the occasional deer hunt. True to his origins as a preacher's son, he's a regular at First Presbyterian Church in Portage la Prairie. ■



New Councillor, Alan Aftanas, P.Eng.

Meet your new
Councillor
J. Etcheverry, EIT

As a member of the APEGM Council, Alan has a number of issues he would like to see addressed. He believes that the responsibility of engineers with respect to climate change and global warming should be addressed. Alan would also like to see improvements in the licensing process of international applicants:

"I believe there is room for improvement in the process for licensing of International applicants. In my office, I work with a number of very experienced and qualified senior engineers who have recently immigrated from England, Scotland, Germany, Mexico, China, and India. The fact that some of these candidates are applying to PEO in Ontario, tells me that there may be something wrong with the licensing process here in Manitoba."

Additionally, Alan is concerned that the engineering profession is not held in the same regard as other professional fields. He believes that to maintain the status of the profession, APEGM needs to continue its strong level self-governance and may want to consider elevating its licensing standards.

Alan looks forward to addressing these, along with APEGM's other primary issues at his first Council meeting in December. ■

Mr. Aftanas is a senior mechanical engineer with Earth Tech Canada and is the newest engineering member of the APEGM Council. Alan obtained a Diploma in Mechanical Systems Drafting at Red River College in 1979 and then earned his B.Sc. in mechanical engineering from the University of Manitoba in 1984.

After short stints with Schlumberger of Canada and MCW Consultants, Alan found a niche with The Seagram Company, designing and overseeing a number of major projects in their Gimli plant. For the last ten years, Alan has been with Earth Tech in Winnipeg, working on various projects throughout Winnipeg and Manitoba.

Alan enjoys downhill skiing and spending time at the cottage with his wife and kids. In his spare time, he drives hard to the corners at the local hockey rink, enjoys a good Canadian or Scotch whiskey, and can appreciate a good piece of art.

Fun Facts
Taken From Past Council Minutes

- In 1933, 45 members were removed for nonpayment of dues and the total membership as of December 31 was 196.

As of December 31, 2006, the total membership was 5088 and 41 members were removed in 2006 for nonpayment of dues.

The odds have improved a bit.

Provided by APEGM Heritage Committee

Engineers are Taken for Granted

R. Jones, P.Eng., and B. Klymochko, P.Eng.

Engineers create an infrastructure of essentials that are often taken for granted in our lives. Everyday, people use their water supply systems; waste management facilities; electricity; telecommunications facilities; transportation systems such as roads, railways, airports, and harbours; and entertainment devices without giving these items a second thought. Engineers are taken for granted, so we need to point out to people what engineering is all about.

Take the case history of water distribution in Flin Flon, MB, which was brought to the attention of the Heritage Committee by an APEGM member. This system was engineered over 60 years ago and is unique because sewer and water distribution/collection is done above ground. Not a small engineering feat, given our -400C winters. In recent years,

many of the sewer and water sections have been rerouted underground.

Just think, without this innovative engineering accomplishment, the town of Flin Flon would not have thrived. Today, a population of nearly 6,000 people support mining operations which in 2006 extracted and processed 2.3 million tons of copper and zinc ore. The link between

engineering and our economy is direct and clear.

The Heritage Committee needs the help of APEGM members to capture Manitoba's Engineering and Geoscience

achievements. We want to document and recognize those who have been involved in implementing engineering solutions to the many challenges faced in the development of Manitoba and abroad. The Heritage Committee



City of Flin Flon, MB

would like to begin this daunting task by specifically identifying the most outstanding and innovative projects, and those individuals who have contributed significantly to Engineering and Geoscience here in Manitoba and abroad. These members and their work deserve to be better known.

Please take ten minutes to access the questionnaire found on the APEGM website: <http://www.apegm.mb.ca/heritage>. For security reasons, there will be a minor inconvenience of creating a username and getting a password through email in order to log on. ■



Season's Greetings
From the APEGM Staff

The Brown Sheet

Annual Networking Dinner

APEGM's Annual Networking Dinner is held to help encourage student engineers and geoscientists to become more involved in their profession before graduation.

The dinner features a delicious meal, presentation by MaryAnn Mihychuk, P.Geo., and activities to encourage interaction between the students and professionals.

The Networking Dinner is a great way to promote yourself and your company and support the future of engineering and geoscience in Manitoba.

Sponsorship opportunities are available through the APEGM office. Please contact Angela Moore at 478-3727 for more information.

Date: January 31, 2008

Time: 6:00 p.m. - 9:30 p.m.

Cost:

\$65.00 Registration

\$250.00 Table Sponsor

Location: Canad Inns Fort Garry, 1824 Pembina Hwy., Winnipeg, MB

The Future of Mean Sea Level (MSL) and the Height Modernization Initiative in Canada

In Canada, the official height reference system of elevations is the Canadian Geodetic Vertical Datum of 1928, which was established by classical surveying techniques. It represents mean sea level (MSL), as determined early in the 20th century.

This datum is realized by a national network of benchmarks that were established over a 97-year period and are the only link to MSL for the majority of users. This network has prohibitively high maintenance costs, significant distortions and is not easily compatible with technologies such as GPS. Currently this infrastructure is in a state of deterioration and requires significant funding at all levels of government to repair and maintain.

This presentation will describe:

- the future of mean sea level (MSL) as the vertical reference surface in Canada and,
- the current height modernization initiative to replace MSL as the national vertical reference system in 2010 and,
- how the new datum will improve the height system for users

Presented by David Richards, Manager of the Manitoba Spatial Reference System Program for Manitoba Conservation.

Date: February 6, 2008

Time: 7:00 a.m. - 8:30 a.m.

Cost:

\$10.00 Pre-registration

\$15.00 Walk-ups

\$6.00 Student Members

Location: Victoria Inn, 1808 Wellington Ave., Winnipeg, MB

APEGM Women's Action Committee Wine and Cheese Evening

La Boutique Del Vino and Piazza de Nardi will be the hosts for the Evening. Three types of wines and different cheese options will be tasted during a short presentation on how to match them and enjoy both while chatting and having good time.

This event is open to all members of APEGM and guests. Registration is required, however, space is limited.

Please contact Angela Moore at 478-3727 for more information and registration.

Date: February 7, 2008

Time: 7:00 p.m. - 9:30 p.m.

Cost:

\$20.00 Registration

No Walk Ups Allowed

Location: La Grotta, 1360 Taylor Ave., Winnipeg, MB

□ APEGM Business Management Seminar "Beyond Just Do It"

Featuring: David Zinger, M.Ed., has taught leadership and coaching in organizations ranging from the Manitoba Provincial Government to the Winnipeg Police Services. He is an active coach and mentor.

This seminar will focus on how to achieve results through relationships by effective and efficient engagement in coaching, mentoring, and crucial conversations.

The major topics for the day will include:

- Going beyond listing to leveraging and living your strengths.
- Commonalities and differences in leadership, coaching, and mentoring.
- Your circle of leadership: key attributes and approaches of coaches and mentors.
- Careful listening: Your essential skill for coaching, mentoring, and leadership.
- Managing your coaching and mentoring transitions.
- How to leverage mental, physical, emotional, spiritual, and organizational energy.
- Fostering High Quality Interactions (HQIs) for maximum organizational energy.
- A Crucial Conversations Primer - How to get results and build relationships when the stakes are high, with differing opinions, and strong emotions.
- Developing mutual purpose in coaching and leadership.

Register before January 18, 2008, and be entered for the Early-Bird Draw to be given away at the seminar. For more information, contact Angela Moore at 478-3727.

Date: February 25, 2008

Time: 8:00 a.m. - 4:30 p.m.

Cost:

\$150.00 Pre-registration
before January 18, 2008

\$200.00 Registration
from January 19, 2008
- February 8, 2008

Payment in advance is
required.

Location: The Niakwa Golf
& Country Club, 620 Niakwa
Rd., Winnipeg, MB

**Seating is
Limited -
Register Early!**

□ 54th Annual MWWA Conference & Trade Show

The 54th Manitoba Water and Wastewater Association Annual Conference.

Please send all registration inquiries to Iva Last, Executive Director, MWWA, (204) 239-6868 or fax: (204) 239-6872

Host Hotel: Canad Inn (use Group Block No. 101195), additional accommodations available at the Super 8 and Days Inn.

Visit the conference web site at www.mwwa.net/Conference/Conf2008.htm for more information.

Date: February 24 - 27,
2008

Time: 8:00 a.m. - 5:00 p.m.

Cost:

\$145.00 Pre-registration
\$165.00 Registration

Location: Canad Inns,
2401 Saskatchewan
Avenue W., Portage la
Prairie, MB

□ Special IMAX Presentation

This Special IMAX Presentation is in conjunction with the Provincial Engineering and Geoscience Week activities.

Tickets are only \$5.00 per person. Seats are limited so get your tickets today! Includes free indoor parking.

Reserve your tickets at the APEGM Office by calling Angela Moore at 478-3727.

Feature Film: To Be Announced

Date: March 2, 2008

Time: 5:00 p.m.

Cost:

\$5.00 per ticket

Location: IMAX Theatre,
Level 3 - Portage Place
Mall, 393 Portage Ave.,
Winnipeg, MB

New Members Registered August, September & October 2007

R.P. Aiello (AB)	M.B. De Baets	R.A. Hiltz (NS)	M.P. Mulligan	K.W. Rosiak (QC)	T.J. Varty (ON)
C.A. Alexander (AB)	P. Dhillon	J.J. Hutt (SK)	B. Nesbit	W.F. Rossouw (ON)	G.J. Vivian (NT)
P.J. Allan	N.G. Domenico	A.C. James	W.L. O'Toole (AB)	C.R. Roy (QC)	J.D. Wiens
S.M.R. Almeida	A.B. Dorey (AB)	P.D. Keller (ON)	S. Okdeh (IL)	R.K. Russell	A.F. Wiggins
S.K. Arcot (ON)	I.N.M. Faragalli (ON)	M. Klaassen (AB)	R.C. Okonkwo	Y.R. Sanchak	D.C.J. Zaborniak
M.D. Belanger (QC)	L. Farley (QC)	D. Lam	R.B.T. Owen	H.S. Sawhney	J.Z. Zemajtis (IL)
P. Bounadere (QC)	R.A. Foth	S.I.R. Latif	J. Oyarzun (AB)	A. Sedlak (ON)	H. Zhao (ON)
M.A. Bryan (ON)	M.P. Galas (ON)	B.C.W. Leung (ON)	A.N. Passalis	S.S. Sidhu	J. Zhu
L.C. Bunn	H.K. Ghamry	V. Ljubibratic (ON)	J.A. Place	D.J. Smith (AB)	
L.D. Calder (AB)	P.P. Gloux	I.S. Mace (AB)	P. Raymond (QC)	M.O. Smith	
C.O. Chubb	J.-L. Gratton	A.E. Magditsch (ON)	V.K. Reddy M.	T.L. Thistle	
A.D. Cleugh (ON)	B.M. Guyot	K.D. Malkoske	D.E. Richards (AB)	S.M. Toh (BC)	
R.E. Daye (AB)	D.A. Hebert (QC)	M.A. Mihalchuk	K.L. Robbins	K.J. Vargas (AB)	

Licensees Enrolled August, September & October 2007

E.J. Karkalik R.L. Pund (IN)

Members-In-Training Enrolled August, September & October 2007

I.H. Abdul Hamid	M. Cwikla	B.J. Hartmann	G. Mediwake	J.R. Salangad	S.R. Woodrow
M.B. Baxter	T.A.H. Dell	K.F.C. Hon	G.M. Nazimuddin	R.M. Sherlock	F. Yazdani
E. Beshada	J.J. Dumas	M.D. Hormann	K.J. Onofrychuk	M. Sobotova	Q. Zhang
A.G. Bilesky	W.R. Edmunds	E. Jalayeri	A.P. Percheron	R.E. Soriano	L. Zhu
A.S. Bogdanovic	S.K. Fransen	B. Kordi	I.W. Quach	O.T. Tran	
C.A. Bowser	J.P. Friesen	D.A. Kozarsky	W. Quan	C.M. Vitt	
R.C. Cairo	W. Fung	M.B. Laylabadi	P.T. Redhead	Y. Wang	
P. Calic	M.M. Gamage Don	B.J.P. Maryniuk (BC)	K.E. Rink	J.S.W. Wiebe	
B.J. Clevon	S. Hafeez	G.S. McNamara	S.F. Romanuik	K.N. Wilson	

Reinstatements August, September & October 2007

M.E. Antonio (AB) F.A. Baker (ON) B.L. McIntosh B.F. Parsons (AB) J.R. Stecyk
A.D. Asmundsson (SK) R.O. Boyko J.W. McKay (AB) E.S. Schraml (AB)

Certificates of Authorization August, September & October 2007

ABB Inc. D'Aronco, Pineau, Hebert, Varin Inc. Lawrence, Flemming & Associates Ltd.
ADM Systems Engineering Ltd. Ekistics Mechanical Consulting (2005) Ltd. Les Consultants Gemec Inc.
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Cades Structures Inc. FU ASSOCIATES LTD. Prophase Engineering Inc.
Comcor Environmental Limited Halsall Associates Limited Red Associates Engineering Ltd.
CTL Group Laurel Ridge Consulting Inc. WorleyParsons HGE

DATE: THURSDAY, JUNE 12, 2008 @ 12:00 P.M. BBQ LUNCH WILL BE SERVED AT THE CLUBHOUSE STARTING @ 11:00 A.M.

PLACE: THE LINKS AT QUARRY OAKS, STEINBACH, MB PH: (204) 326-4635 **FORMAT:** TEXAS SCRAMBLE, SHOTGUN START

COST: \$195.00 PER PERSON (INCLUDES BBQ LUNCH, 18 HOLES OF GOLF, CART, DINNER, AND PRIZES) OR \$750.00 PER TEAM OF 4

THE FIRST 220 REGISTERED GOLFERS WITH ACCOMPANYING PAYMENT WILL PLAY. ENTRIES AND PAYMENTS ARE TO BE SUBMITTED TO THE APEGM OFFICE BY 4:00 P.M. FRIDAY MAY 16, 2008.

CONTACT THE APEGM OFFICE AT 478-3727
FOR MORE INFORMATION AND REGISTRATION



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