

THE KEYSTONE PROFESSIONAL

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

DECEMBER 2006
www.apegm.mb.ca

AGM Illuminated by the NORTHERN LIGHTS in Thompson, Manitoba

T. Nyabeze, P.Eng.

After months of intense planning, APEGM's 87th Annual General Meeting (AGM) was held in Thompson, Manitoba. The following report highlights some of the key events that took place over the three-day summit.

Following the welcome ceremony, our hardworking student delegates and the decorating committee were off to prepare the Professional Development Symposium venue for Friday's sessions. Friday would not disappoint, as delegates were treated to a range of topics that included: Conflict Resolution, Reserves & Resources, Bridging the Gender Gap, and Building Respectful Workplaces: "the Thompson Model".

After the talks, the attendees went on various tours which included the Ford Cold Weather Testing Facility, RDPC Aviation Training Facility, INCO Birchtree Mine Underground Tours, Birchtree Effluent Treatment Facility, and the Inco Thompson Surface Operation Tour.

While the delegates toured, the companions program continued to be in full swing as they visited Pisew Falls and the Paint Lake Marina.



(Top) Annual General Meeting Gala Dinner, Thompson, Manitoba.
(Bottom) Elaborate spread: Gala Dinner appetizers and decorations.

The evening gala was spectacular, with guests being treated to a harpist during cocktails and a huge appetizer table. The event was opened by the Northern

Tornadoes accompanied by Suzanne, a traditional dancer. For her second dance, Suzanne had

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South of 60, Local Folk Group

For the most part, out-of-town guests arrived from Winnipeg and surrounding areas on Thursday, October 26, 2006. They, along with local sponsors, volunteers, and dignitaries, were treated to a welcome wine and cheese reception. In keeping with our northern tradition, the event was opened by a local drumming group, the Northern Tornadoes. Their performance was on point and set the tone for a great welcoming ceremony. In addition, the City of Thompson showed its spirit of hospitality by sending a dignitary to officially welcome all parties to Thompson.

Season's Greetings...

from the
APEGM Staff

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

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

New Members Registered August, September & October 2006

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I.F. Armitage (ON)	L.C. Gunawardhana	C.C. Mackie	L.E.J. Rindall
J.L. Azucena (SK)	(AB)	D.P. Mages	C.L. Sauve
J.M. Barrett (AB)	K. Han	D.A. Malinauskas	N.C. Scott (ON)
C.F. Bell	L. Harnois (QC)	(ON)	J. Seto
M.G. Besserer (AB)	I.M. Harrison (ON)	M.J.C. McDermaid	J.E. Silcox
Z. Bilic	S.A. Herbert	(NB)	E. Sison (AB)
T.C. Black	A.M. Hozaima	J.M. Melanson (ON)	P.R. Solylo
F.E. Butts (NS)	P. Ionita	W. Mi	R.A. Sprenger
C. Chung (BC)	V. Jankov	S.A. Mihalus	K.S. Tolton
J.-M. Crespy	R.B. Jensen	C.A. Orellana	T.N. Tuba
M.D. De Fehr	J.E. Karst	M.P. Page	S.M. Ullah
S.D. Dingley (BC)	R. Kevesdi (BC)	M. Patel	A.J. Walczak (AB)
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L.A. Gayle (AB)	M.J. Lubocki	M.M. Rahman	
J.A. Gilliland (AB)	M. Lukac (ON)	B.R. Reiter (SK)	

Licenses Enrolled August, September & October 2006

J.W. Sneed

Members-In-Training Enrolled August, September & October 2006

I.E.F. Abdalla	L.E. Fernandez	M.M. Hoque	S. Peng
N.R. Addis	F.C.J. Fernando	M.D. Isaak	D.R. Poole
I Akhnoukh	S. Filizadeh	V.E. Kane	C.L. Propp
D.A. Akinlade	C.J. Fraser	J.W. Kozub	B. Rezania
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B. Bagen	A.C. Friesen	A.K. Letts	C.P. Surgeoner
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Reinstatements August, September & October 2006

J.B.P. Blahey (AB)	KS. Jhass (AB)	D.L. Steeves (AB)
T.H.E. Cheng (BC)	W.A. Pitura (ON)	H.M. Tsoi (AB)
N.R. Dickey (AB)	R.B. Smith (AB)	

Certificates of Authorization August, September & October 2006

ADI Systems Inc.	Richards Consulting and Associates Ltd.
Groundsolar Energy Technologies Ltd.	R.J. Burnside & Associates Limited
Hepburn Engineering Inc.	Schappert Associates Ltd.
Magna Electric Corporation	

In Memoriam

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

Peter Abel Charles Boyd
Raymond Chant Paul Chung
William Evans Wilmar Finnbogason



President's Message

Robyn L. Taylor, P. Eng. PMP

It is my pleasure to be writing my first message as APEGM President. The 2006 AGM is now behind us, and a new year is ahead. Thanks to all who attended the meeting in Thompson, and to our generous hosts.

APEGM utilizes the Carver method of Policy Governance to govern the Association. This method ensures that the APEGM

Council is accountable to our stakeholders and moral ownership (engineers, geoscientists, government, public, etc.), and that the Executive Director is accountable to the Council. The broad policy statements set forth by our Ends assist to focus our direction.

Our first level End states that "APEGM exists so that the public interest is protected and promoted

through the professional excellence of engineers and geoscientists who have the privilege to self regulate".

Having served on the Public Awareness Committee for the past few years, it should come as no surprise that I believe that we, as professionals, need to increase our visibility. Few would disagree that the public does not fully appreciate or understand our profession.

I hope to continue with fantastic initiatives started by our most recent past president, Digvir Jayas, such as the Engineering Hall of Fame and the Manitoba Schools Science and Engineering Symposium.

I look forward to serving our Association for the next 12 months, and thank you all again for your support and continued volunteer efforts, which makes the operation of APEGM possible. There is no higher reward than to work, serve, and contribute with peers.

By promoting our profession, we can better serve and protect the public interest and thus elevate the value of our license.

I look forward to your questions and comments, and can be reached by mail or fax via the APEGM office, or by e-mail at rtaylor@teshmont.com. ■



Executive Director's Message

Grant Koropatnick, P.Eng.

(via video-conference), to conduct the business meeting. The agenda included reviewing APEGM's 2005-2006 operations, appointing new council members, considering some by-law amendments, and witnessing the passing of the gavel to new 2007 President, Robyn Taylor, P. Eng. Of course, many would contend that the agenda seemed dry and somewhat predictable, but the mandatory staging of this vital meeting gives legal standing to our Association. Without adequate attendance of voting members (ie. quorum), our Association would be at risk of failure. We must guard against apathy and encourage one-another to attend the AGM. Thank you to all who participated in the business meeting. You have participated in maintaining our honorable, self-governing profession.

AGM, many calls included the critical question: "So how's the weather in Thompson?" The replies were always upbeat and positive, but I must confess, I was worried about the potential for a blizzard on the weekend. Well, go figure... the weather was excellent; temperatures stayed on the "plus side"; it rained one evening, and delegates departed Thompson in brilliant sunshine. Following the President's dinner Saturday evening, out-of-town guests were invited to step outside onto the patio adjacent to the dining room. Once outside, it was like the Thompson Chapter hit the big "aurora borealis switch" and there they were! We witnessed a beautiful display of northern lights – a superb ending to a superb weekend.

A Big Thank You

Finally, I want to say it again – Thank You, Thank You, to the Thompson Chapter for a memorable AGM. For those who didn't attend, all we can say is "...you should've been there." ■

You Should've Been There...

It was eleven months ago when Wayne and Cathy Stewart presented their proposal to Council to host the annual general meeting in Thompson, Manitoba. At the time, the event seemed like a distant date on the calendar, but their proposal was so thorough, complete and professionally presented that council made the unanimous decision to "go north" for the 2006 Annual General Meeting (AGM).

In October, President Digvir Jayas, staff, and APEGM councilors headed north to Thompson for the 87th AGM. All I can say is... you should've been there! The Thompson Chapter rolled out the red carpet and the event was a great success.

Great Organization – Excited Members

So what makes a great event? The Thompson Chapter had great organizational leadership from chapter President, Theresa Nyabeze, and veteran members Wayne and Cathy Stewart. In an addition to these professionals, a volunteer committee of 25 excited members hosted two days of events. From the opening speech to the last note at the gala dinner dance, the weekend was staged with great organization and

fuelled by the energy of excited members!

Professional Development Symposium and Tours

Four professional development sessions were presented on Friday morning: (1) Conflict Resolution (2) Mineral Resources and Reserves (3) Bridging the Gender Gap and (4) Building Respectful Workplaces – the Thompson Labour-Management Model. All sessions were excellent; blending the right amount of technical information with practical applications tips. Each session ran about 45 minutes with ample opportunity for questions and answers.

Following a tasty lunch (that included the BEST EVER chicken noodle soup) delegates were led by APEGM volunteer tour guides to one of three tour options: (a) Ford Cold Weather Testing Center and R. D. Parker Collegiate Aviation Training Facility (b) Birchtree Underground Mine and Effluent Treatment Plant and (c) Inco Thompson Surface Operations Tour.

AGM Business Meeting

Saturday morning, members assembled at two sites: St. Joseph's Hall, Thompson, and Robson Hall, University of Manitoba, Winnipeg

Northern Lights and Warm Hospitality

You've got to wonder how they did it. In the weeks leading up to the

Notice

Payment of 2007 Fees & Membership Renewals

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, 2006. Please note that the Declaration of Compliance must be signed annually.

Professional Development Event

October 18, 2006

Ductal®, A Revolutionary New Material for New Solutions

D.D. Himbeault, P.Eng.

Approximately 40 people attended the APEGM professional development presentation on Lafarge's new ultra-high performance, fibre reinforced concrete technology, marketed as Ductal. The presentation was given by Vic Perry, P.Eng., Vice president and General Manager – Ductal/Lafarge North America.

Mr. Perry began the presentation by enticing the audience's interest with images of a few of the elegant structures made using Ductal, where because of its superior properties, allows designers to create thinner sections and longer spans that are lighter, more graceful and innovative in geometry and form. This was followed by Mr. Perry providing details of the physical properties and the technology behind the product.

With compressive strength over 200 MPa, and flexural strengths up to 50 MPa., Ductal allows for solutions to be designed smaller,

without the use rebar, and in most applications, without prestressed or post tensioned reinforcement. Another unique feature of Ductal is the ductility of the product, with the capacity to deform and support flexural and tensile loads, even after initial cracking. A slide was presented of a demonstration where a beam loaded beyond failure, and showing a deflection well beyond what one would expect for concrete, was still able to support a vehicle parked overtop. Durability data was presented showing the product to be superior to conventional high performance concrete in this area as well.

These unique properties are possible through an innovative mix design which combines two fibre sizes for reinforcement, and a specially graded cement composition and superplasticizer to give the uncured mixture a high fluidity. A vial of a sample of these fibres was passed around, and

resembled the chopped glass fibres used in the fiberglass industry. It was noted that the formulation results in longer cure times, with set times often longer than a day.

Mr. Perry then went on to show some of the projects using Ductal, including furniture (interior and exterior), countertops, sinks, architectural cladding, and bridges. The showcase project in his presentation was the Shawnessy LRT station in Calgary. One of the important components of this project consisted of a three dimensional shaped thin shell canopy. The designer's initial intention was to construct the canopy from steel, however this proved to be very expensive because of the detailing required. Lafarge's solution to use Ductal would be less expensive. Details were presented of the closed mould used to cast the canopy, load testing of the structure, and the final installation.

In closing, Mr. Perry indicated that there are many ongoing research projects with Ductal. A copy of this presentation can be found on the APEGM website at <http://www.apegm.mb.ca/pdnet/papers/ductal.pdf>.

This event also marked a new location (the Victoria Inn) for hosting APEGM's Professional Development seminars. The PD committee is currently trying to identify different locations that will provide the best value and convenience to the membership for PD events. Feedback or comments are always welcome. ■



Showcase Project: Shawnessy LRT Station

APEGM Professional Development Conference

A.A. Poulin, P.Eng.

APEGM hosted their annual Professional Development Conference at the Niakwa Golf & Country Club on Friday, October 6, 2006. Attendance was surprisingly low this year, with only 78 total registered including staff. Curiously, out of that total were only 12 Members-In-Training (MIT). Whether it was a timing or content issue it is not clear, but I believe that all members not attending, MIT or not, missed out on a good conference. Members are encouraged to contact APEGM or to write a letter to the editor with any feedback.

The first presentation covered Project & Risk Management, with two case studies presented by Manitoba Hydro and the City of Winnipeg. Don Deviane presented the Risk Management program at Manitoba Hydro, focusing on identifying risk, mitigation of negative occurrences, and to try to take advantage of opportunities. He indicated that at hydro, the program is managed by committee.

The framework of the program includes a mission statement, and then a section on identification of risk, potential impact assessment, risk treatment, and residual risk. He stepped the audience through mapping risk and assessing residual risk (outliers). For project application, he went through how hydro identifies risk, followed by identifying ways to mitigate those risks, the importance of then controlling that risk and establishing tolerances so that it is clear when to take mitigating or corrective action.

Tom Pearson presented how risk was managed for the City of Winnipeg's Water Treatment Program. The Deacon Reservoir water treatment plant, a \$300 million project, is the largest scale project undertaken to date by the department, and he pointed out that while it was determined that the project was low risk, it also had high consequences with the product (water) being something that people would ingest. Risk management for this project was identified in the project terms of reference and a two day workshop lead by "Dr. Rysk"

himself, was held on risk assessment before starting any detailed design.

Professor Neil Fassina from the I.H. Asper School of Business presented next, challenging everyone to be a good negotiator and providing some negotiation tips. His advice - preparation is 90% of the game. Why - because information is power! He went through ways to create value in a negotiation, the bargaining zone, and considering the "next best alternatives" by determining a reservation point (the worst deal that is still acceptable). He reminded the audience that sometimes, no deal is in fact a deal.

Following the spirit of challenging great minds, Darren Swanson presented on "Climate Change & It's Effects on Engineering Practice", urging the audience to think more about accepting that climate change is indeed happening. He presented information that showed the consensus trends in Manitoba are higher temperatures, while

precipitation impacts are mixed. The future climate will not equal the past climate, and indications are that we are headed toward more change.

His main message was to convey that it was time to start thinking about how we might incorporate climate change impacts into engineering designs for the future, with a future climate of more variability and change. He suggested it is time to accept that information on climate change may improve over time but will never be perfect. His message was that there is a need to start the adaptation phase, through mediums like scenario planning, SWOT analysis, and determining adaptive policies. The tools do exist!

After a wonderful lunch and opportunity to network, Professor Arthur Schafer debated the subject of Whistle Blowing - defined as calling attention to conduct that is illegal or objectionable. He suggested it is a part of an engineer's obligation to whistle blow and we have a "special

obligation” as it is our calling to protect public safety and is concurrent with our Code of Ethics. He indicated that whistle blowing is not without consequence and reviewed some infamous cases. We were reminded that it is important to ensure proper determination of when is it legitimate to “whistle blow” and ensure that the proper process of notification has been followed.

Next, the audience was reminded of the challenges facing Manitoba Manufacturers today and tomorrow, as presented by Tony van Rosmalen, Vice President of Canadian Manufacturers & Exporters. He suggested that because of the rise in the Canadian dollar, high energy costs, and stiff competition, manufacturers were facing decisions to outsource, relocate and/or close up altogether.

Although it may appear that manufacturing productivity has increased, employment has been declining and finding laborers has become a big issue. Tony suggested that Manitoba has one of the toughest regulatory environments and suggested that this needs to change as it is negatively affecting the industry. In the meantime, he suggested Manitoba manufacturers can try to survive by focusing on niche markets, focusing more on the customer, reduce costs, and may need to consider offshore manufacturing.

Last, but not least, Standard Aero’s Senior Vice President Brian Lanoway presented “Managing and Coordinating Change in the Workplace”. Brian’s message was that “it can be done”, if managed appropriately. Rigorous project management is the key to get intentions to become reality. His tips included the importance of creating a road map, recognizing that implementation is equally important to the preparation phase, and most importantly to focus on process ownership.

Some lessons learnt and shared: full-time teams are strongly recommended, communication is key, and remember to expect that with change, things always get worse before they get better, but it is possible to manage and coordinate change successfully.

Overall, it was a very good conference with thought provoking topics. Some of the presentations are now available on the APEGM website: www.apemg.mb.ca/pdnet/papers.html ■

Professional Development Event September 20, 2006

LearningCITI: A Wireless Corridor in Downtown Winnipeg

S.M. Jurkowski, EIT

On the morning of September 20th, 28 APEGM members, members-in-training and student members gathered at the Holiday Inn for a breakfast presentation by Mike Langedock, the Executive Director of the Technology Solutions Centre at the University of Winnipeg. The topic of discussion was the concept and progress of the LearningCITI Project - A Wireless Corridor in Downtown Winnipeg.

LearningCITI (Computer Information Technology Infrastructure) is a collaborative project between the University of Winnipeg, Red River College, the Centre for Aboriginal Human Resource Development, and Smart Partners of Manitoba. Its vision is to “establish a wireless corridor that will support the development, empowerment and enablement, and quality of life of people living in, working in, and/or visiting Winnipeg’s downtown core.”

During the breakfast portion of the morning, some discussion at the tables involved questions and speculation about the scope of this project — in particular, was this going to provide free internet access to the downtown core?

We soon found out, however, that this service would provide wireless access to a website or portal containing various

educational, employment, and community resources and services. Only an authorized student or employee of these institutions would have access to the Internet beyond each partner’s website and the LearningCITI portal. Additionally, Smart Partners sponsors a Computer Lending Library program, which plans to provide basic PC training and 1,000 computers annually over the next two years to applicants who would otherwise not have the ability to purchase a computer, nor establish a means of connecting to the Internet.

At the heart of the design of this technological solution is WiMAX (Worldwide Interoperability for Microwave Access), using the IEEE 802.16a Wireless Metropolitan Area Network standard. The base station is located on the roof of the University of Winnipeg, and it broadcasts to Red River College on Princess St. and the Centre for Aboriginal Human Resource Development on Higgins Ave. It also links to two “hotblock” neighborhoods – a series of hydro pole-mounted access points along Granville Street in North Point Douglas, and down the lane behind the International Centre on Edmonton Street. These access points link to the user’s home computers with ordinary 802.11b/g wireless network cards. WiMAX is the Internet backhaul service and



operates at a frequency of 3.5 GHz, is non-line-of-sight (which is an important consideration given the height of buildings between the three schools), scalable, and advertises the speed and distance capabilities required by a project such as this one.

A major challenge was discovered during testing in August 2006. While tests conducted the previous March in the North Point Douglas area were successful, by August the leaves on the trees were obstructing the WiMAX signal. The answer to this problem was to relocate the WiMAX receiving station.

The ongoing development of this project includes expanding the area of the wireless service, enriching the educational content that sits behind the www.learningciti.ca portal, and securing additional partners to take the wireless service to a broader scope beyond education. The expected launch date is November 21, 2006.

The LearningCITI web portal is accessible at www.learningciti.ca/ ■

Professional Development Event September 27, 2006

St. Andrews Lock and Dam Tour

D. Grant, P.Eng.

A year earlier, I had put together a TSD Rally for the local Triumph and Austin Healey clubs, which included a pleasant drive along the Red. I thought of holding an APEGM tour of the area, including a tour of the St Andrews Lock and Dam facility run by the Government of Canada. There was no opportunity to do so in spring of 2006, but we put together a facility tour on 2006 September 23.

The event was not your usual luncheon speech. We met at various times during the day at the facility entrance. There were two morning and one afternoon groups. The weather was lovely for mid-fall. The turnout was good also, near capacity for each of the three groups.

Most folks know there is a bridge over the Red at this point; most have noticed that there is more river on one side of the

bridge than on the other. If you are not traveling by watercraft, you may not notice that you need this lock system to traverse this change in elevation. In recent years Ottawa has funded some major refurbishment here. While car-pooling was suggested, we were on our own getting to Lockport and returning. Hopefully, most enjoyed the tour and the riverbank drive, to and from. ■



PRESS CLIPPINGS

By N. Soonawala, Ph.D., P.Geo (Ret)

From time to time, the Winnipeg Free Press and other publications and websites carry news items of interest to engineers and geoscientists. We thought a summary compilation of some such items would be appropriate for the Keystone Professional. Hopefully, we will have this column repeated in future issues. Also, elsewhere in this issue is a reprinted Free Press article about an engineer and his work on traffic lights.

NSERC GRANTS FOR U OF M PROFS

Professor Behzad Kordi has received a Natural Sciences and Engineering Research Council (NSERC) grant for laboratory simulation of equipment that could protect sensitive components, such as computers, TVs and VCRs, from natural electromagnetic energy, such as that generated by thunderstorms. Professor Jitendra Paliwal has also received a NSERC grant for analyzing the content and quality of grain by a computerized spectroscopy system.

(Winnipeg Free Press, September 18, 2006)

CLEAN UP OF TOXIC MINE SITES

On September 28, Manitoba Mines Minister Jim Rondeau announced in Lynn Lake that his government has set aside \$70 million to clean and detoxify old mine sites throughout the province. The primary clean up will be at Lynn Lake, Snow Lake, Gods Lake, Sherridon and Baker Paton, while another 144 abandoned mines have been identified as low or medium risk.

(Winnipeg Free Press, September 29, 2006)

THE LAVAL BRIDGE COLLAPSE

The tragic consequences of the failure of a highway overpass at Laval in the Montreal area on September 30, led Professor Aftab Mufti of the U of M to recommend that electronic sensors be installed in bridges, many up to 60 years old, across the province including Winnipeg, to monitor their condition. Mufti is the president of Intelligent Sensing for Innovative Structures Canada. Professor Shamin Sheikh of the University of Toronto thought the collapse was the result of rebar separating from the concrete because of corrosion. He added that since the bridge functioned well for 30 years, design deficiencies could be ruled out. Shortly after the Laval collapse, the Government of Manitoba closed an overpass on the Trans Canada Highway near Portage La Prairie and announced plans to dismantle it and build a replacement.

(Winnipeg Free Press, October 2 and 12, 2006)

HOME GROWN SPACE SATELLITE

About 40 Manitoba University and high school students are developing a satellite, less than a kilogram in weight, which hopefully will be launched by a Russian rocket sometime in 2007, at a cost of only about \$50,000. The project is seen as a major recognition of the talents of Manitoba science and engineering students. Professor Ron Britton of the U of M said the project was an excellent example of the mating of real-world design challenges with academic experience. Bristol Aerospace is also a sponsor of the project.

(Winnipeg Free Press, October 25, 2006)

MANITOBANS HONOURED WITH ORDER OF CANADA

Winnipeg resident Frank C. Hawthorne, P.Geo., one of the world's foremost authorities in mineralogy and crystallography, was honoured as an Officer of the Order of Canada. He is a professor of geological sciences at the University of Manitoba. The Order of Canada recognizes people who have made a special contribution as a Canadian. Three different levels of membership honour people whose accomplishments vary in degree and scope. They are companion, officer and member.

(Winnipeg Free Press, October 7, 2006)

FOREIGN TRAINED ENGINEERS GET ACCREDITATION

Nine foreign educated engineers were registered to practice engineering in Manitoba after completing the one-year Internationally Educated Engineers Qualification Program at the University of Manitoba. Marcia Friesen of the U of M, the director of the program, said that previously foreign engineers were on their own in seeking professional recognition, which for most was a frustrating experience. Grant Koropatnick, Executive Director APEGM, expressed APEGM's enthusiastic support for the program.

(Winnipeg Free Press, October 25, 2006)

WIND POWER EXPANSION IN MANITOBA

Sequoia Energy Inc of Manitoba has acquired sites near Miami, Killarney and Elie where it proposes to install wind turbines to generate up to 100 megawatts of energy at each site. The associated expenditure will be about \$700 million. It is hoped that Manitoba Hydro will enter into an agreement to purchase the power.

(Winnipeg Free Press, October, 2006) ■



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Engineering Philosophy 101

... and still hidden in plain view

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

Recent infrastructure failures in Montreal and here in Manitoba have raised our profession's media profile. News bites often begin with "Engineers are working on . . .", or "Engineers are looking into . . ." or "Engineers assure us . . ." But the people speaking to the public through the media are seldom engineers. It makes one consider if Kipling's characterization of engineers as the "sons" of Martha may, in fact, be true.

Leaving Kipling's politically incorrect gender specificity aside, why is our "message" usually delivered by others? Why don't the media come to us and let us explain the situation? Why are we still "hidden in plain view"?

Like you, I've heard the "reasons" (excuses?) offered for our anonymity. They don't understand, they aren't interested, the education system is flawed, the media is biased, the media is incapable of dealing with details and on and on. It reminds me of "reasons" my teenage children missed their curfews. Invariably it was someone else's fault.

Are we not capable of speaking for ourselves? Are we the problem?

A number of years ago, I had the opportunity to tour the "upper reaches" of Salisbury Cathedral.

My host was a retired engineer who volunteered with the group that was restoring the roof system. My problem was that my wife and two traveling companions were also on this tour, a recipe for disaster. However, because our host had learned to stay away from the technical details (except when the two of us were speaking to one another) he soon had the three non engineers totally involved. In fact, they were the ones who were reluctant to end the tour. None of them understood why I was taking pictures of "some old piece of wood", but all three of them were deep into the discussions of how the individual "stones" in the tower were held together, and how the material hoist, which is still in place, worked. We were in the same place, looking at the same things, but we were on different tours.

Later that evening, after a pub dinner and further discussions of our tour, my wife asked me why I couldn't explain things in such an understandable way. She summed it up with the very pointed question, "why do you always have to get lost in boring detail?"

Maybe that is the base of the problem. I saw, and talked to our host about, an interesting horizontal shear failure in a cantilever section of a horizontal 12 x 12 oak beam.

They saw, and talked with our host about, a massive piece of timber that people must have struggled to get up into the roof. Engineer to engineer it was a technical condition that allowed us to speculate on the source of the load that caused the failure. Engineer to non engineer it was a physical situation that allowed them to speculate on the human effort that had been required to put that piece of wood in place. I saw, and felt compelled to talk about, a failure that had resulted from some unknown load which, if it had remained, could have caused serious problems. They saw, when I pointed it out, a 700 or 800 year-old crack that was collecting dust.

And just maybe that is why the media avoid engineers when the public needs an explanation. Our education, our experience and our interests cause us to look at these details. Our knowledge of the potential complications that could result from seemingly unimportant situations causes us to take a particular view. Typically we attempt to tell people too much about things they don't care to know. Thinking back to that vacation, I have to admit that my wife's version of the Salisbury Cathedral tour finds a much wider audience than mine.

Surveys suggest that the general public consider engineers to be competent, ethical persons who design and build the myriad of devices that have become necessities in our modern world. They trust us to look after their best interests and their safety. But bitter experience suggests that they just don't want us to talk about it.

If we want to become spokespersons for our own profession, we probably need to learn to adjust our explanations to a need-to-know level. Once when I was at a conference at the Chateau Montebello, a huge log building, I was sitting looking up at the logs in the roof structure. A colleague, a psychologist, asked me what I was looking at. I told him I was looking at the checking in the old wood and then started to explain which "cracks" were just features of old logs and which ones were indications of possible problems. He stopped me and asked if the roof was safe. I assured him it was. He, in turn, decided he would sit next to me for the rest of the conference. He knew what he needed to know. And it turned out that he too was a baseball fan.

Possibly based on these experiences, and some awkward moments in classrooms, we hired a communications specialist when the Design Chair was created. She defines her job as translating what we say into English. She also works at teaching us how to speak. The number of media persons who show up in the Engineering building has increased. Some of them are even starting to speak to us. ■

Call for Nominations

CPE is seeking nominations for the following eight awards. The deadline for nominations is **4:00 p.m. EST., Friday, January 12, 2007.**

1. The **Gold Medal Award** for exceptional individual achievement and distinction in a field of engineering;
2. The **Young Engineer Achievement Award** for outstanding contribution in a field of engineering by an engineer 35 years of age or younger;
3. The **Meritorious Service Award for Professional Service** for outstanding contribution to a professional, consulting or technical engineering association or society in Canada;

4. The **Meritorious Service Award for Community Service** for an exemplary voluntary contribution to a community organization or humanitarian endeavour;
5. The **Medal for Distinction in Engineering Education** for exemplary contribution to engineering teaching at a Canadian university;
6. The **National Award for Engineering Achievement** for outstanding engineering projects or achievements by an engineering team in which Canadian engineers were involved;
7. The **Award for the Support of Women in the Engineering Profession** for outstanding support of women in the

engineering profession and engineering excellence; and

8. The **Gold Medal Student Award** for outstanding leadership, contributions to society, and volunteerism by an undergraduate engineering student.

Information and the terms of reference for the eight Canadian Engineers' Awards, as well as nomination forms, are posted on CCPE's website at www.ccpe.ca.

Award recipients will be honoured at the Canadian Engineers' Awards Gala in Winnipeg, Manitoba, in May 2007. ■

Annual General Meeting Awards Dinner October 6, 2006

A. Anderson Skrabek

The Fall Awards Dinner, held at The Niakwa Country Club, was a star-studded affair with a few surprises. Attendees were greeted with live smooth jazz courtesy of Janice Finlay and her trio, which added a nice touch to the already pleasant surroundings.

After all the cocktail mingling, past president, Allan Silk, P.Eng., got the evening started with his official welcome and introduction of Minister Jim Rondeau. Minister Rondeau's usual self-deprecating humour and obvious admiration of engineers and geoscientists was warmly appreciated by all in attendance.

Malcolm Symonds, P.Eng., then took to the podium to announce the recipients of awards.



Dean Jenkinson captures guests attention with his top-notch stand up comedy.

OUTSTANDING SERVICE AWARD



ARNOLD H. PERMUT
M.Sc., P.Eng.

Arnold Permut became registered with this Association on January 10, 1977. He has been a registered professional member for 29 years.

Arnold has been a member of APEGM's Council twice (totalling nine years) and was elected President in 2004. He has been a member of the Executive Committee for four years; the Sports Committee for six years; the University Liaison Committee for five years (of which he was Chair); the Professional Development Committee for four years; the Awards Committee for two years; the Registration Committee for four years; the Women in Engineering Advisory Committee for one year; the Nominating Committee for five years (Chair in 2005); the Issues Awareness Board for six years; the Past President's Committee for two years; and the Aboriginal Professional Initiatives Committee

(APIC) for two years. This totals 50 committee years of service.

Arnold graduated from the University of Manitoba with a B.Sc. in Civil Engineering; a M.Sc. in Sanitary and Environmental Engineering, plus a Certificate in Public Administration. Arnold started his career as Assistant Engineer and Survey Party Chief for Canadian National Railway.

He then became a Research Assistant at the University of Manitoba before accepting a position with Templeton Engineering Company. In 1978 Arnold started working for the City of Winnipeg, Waterworks, Waste and Disposal Department and graduated through the ranks to Manager of Laboratory Services Division and then to Wastewater Systems Planning Engineer – a position which he has held since 2004.

Arnold is also a member of the Institute of Public Administration of Canada; the American Waterworks Association; the Water Environment Federation; and the Western Canada Water and Wastewater Association.

Over the years Arnold has contributed uncountable hours of dedicated and generous service to ensure the continued development of engineering as a career and as a self-regulated profession.

The Association is extremely grateful to Arnold Permut for the service he has rendered over the years, and feels he is a most deserving recipient of the Outstanding Service Award. ■



BRIAN STIMPSON
Ph.D., P.Eng.

Dr. Brian Stimpson was registered with this Association in September 1985, after transferring from the Alberta Association, where he had been a member since 1976. He has been a registered professional member for 30 years.

Dr. Stimpson holds Bachelor, Master, and Doctoral degrees in geology and rock mechanics from the University of London, England. He worked at the Royal School of Mines; Golder Brawner & Associates; and the University of Alberta before coming to the University of Manitoba in 1985 as Head of its Geological Engineering Department.

Later he was Associate Dean in the Faculty of Engineering and provided distinguished service on many senior-level committees of the University.

Dr. Stimpson was a member of the Council of APEGM for two years and served on many of its committees, chairing several of them. The committees include the Academic Review Committee, the Nominating Committee, the Communications/ Publication Committee, the Salary Research Committee, the Admissions Board, and the Public Awareness Committee.

He served as APEGM's representative to the Canadian Council of Professional Geoscientists, and more recently was the leader of the Association's Engineering and Geoscience Week activities in shopping malls and the media. His outreach activities include career symposia in high schools, integration of immigrant engineers into the profession, and involvement in the Canadian Institute of Mining, Metallurgical and Petroleum, and the Canadian Geotechnical Society.

Dr. Stimpson has also served the wider community in Winnipeg in many valuable ways. He served on the University of Manitoba United Way Campaign for eight years, chairing it on two separate occasions – 1991 and 1997. He was a Board Member and Facilitator for the Learning Disabilities Association of Manitoba from 1989 to 1992. Brian has also been closely involved as a volunteer in numerous church activities over the past 30 years. He currently chairs the Elders' Board and the Church Board in Southside Bible Church, and is a Board Member of Pentecostal Campus Ministries.

While this is a factual record of outstanding service and fully justifies the award, it gives only a small indication of the quality of the man

himself. Brian Stimpson is a caring, supportive individual who has given much of himself in serving his family, his church, his students and col-

leagues at the university, and the profession. The Association has great pride in presenting him with the Outstanding Service Award. ■

HONORARY LIFE MEMBERSHIP



ERWIN WEISZMANN
B. Sc. (Civil), P. Eng.

Erwin Weiszmann, registered with the Association on December 2nd, 1957, and has been a member continuously for 49 years. He was also registered in the Provinces of Ontario, Saskatchewan, Alberta, British Columbia and the Northwest Territories.

Erwin served on the Advocacy and Member Services Committee for 2 years and on the Consulting Engineers Committee (now called

Practice Standards Committee) for 33 years of which he is still an active member. For a number of years he chaired the Consulting Engineers Committee and represented it at the CCPE meetings in Ottawa. This totals 35 Committee years of service.

Erwin received his degree in Civil Engineering from the Joseph Nador Technical University of Budapest, Hungary in 1949. He worked as a structural design engineer and later as a department head at the Industrial Building Design Institute in Budapest, Hungary. He received several awards for his outstanding work there. Erwin and his wife Judith, also a structural engineer, fled Hungary following the failure of the Hungarian Revolution in 1956.

As a refugee in Austria, Erwin was able to find work as an engineer first in Tyrol Austria at the Reuttener Textile Factory, where he designed industrial buildings and later in Vienna at the firm Industriebau Gessellschaft, where he designed the first high-rise building

in Vienna while waiting for his immigration documents for Canada.

Upon arriving in Canada, he was employed as a structural designer at Letendre Monte and Associates Consulting Engineers in Montreal. Erwin and Judith moved to Winnipeg in the fall of 1957, whereupon, Erwin commenced work as a structural design engineer for Winnipeg Hydro (formerly called City Hydro).

He established the firm Weiszmann and Associates in 1959 and proceeded to design building structures in Ontario, Manitoba, Saskatchewan, Alberta, British Columbia and the Northwest Territories over the next 40 years. He designed structures for schools, public buildings, apartments and industrial complexes.

He provided consulting engineering services for lawyers and investors, and was involved in a wide range of specialized engineering works over the 40 years in his varied consulting practice. He provided structural design for countless projects in Northern Canada, devel-

oping special techniques for ease of construction there.

As a former refugee, Erwin assisted newcomer engineers and technicians settle into practising their profession and assisted them in finding work. Erwin was invited many times to give lectures regarding safe construction practices to members of construction companies. He was commissioned to write a handbook for building wood grain elevators.

He never stopped furthering his knowledge in his profession. In the year 2000 he received a "Golden Engineering Degree" from the Technical University of Budapest for his 50 years of outstanding engineering work. Erwin is now winding down his consulting practice, but still does not refuse those who seek his help or ask him for his engineering advice.

Honorary Life Membership was granted to Erwin Weiszmann in recognition of his many years of service to the Association and his significant contributions to the engineering profession. ■

LEADERSHIP AWARD



DOUGLAS W. RUTH
Ph.D., P.Eng.

Dr. Douglas Ruth is a distinguished graduate of the University of Manitoba, having completed both

his B.Sc. (1970) and M.Sc. (1972) degrees in Mechanical Engineering there. He later obtained his Ph.D. (1977) from the University of Waterloo, also in Mechanical Engineering.

After working in the private sector from 1972 to 1987, he chose to pursue academic life. He has taught several courses related to Transport Phenomena in Porous Media, supervised 25 undergraduate theses, six M.Sc. theses and six Ph.Ds. Doug received the University of Manitoba Merit Award (Teaching) in 1989 in recognition of his contribution to teaching excellence.

In the 1990's, he decided to assume increased responsibilities for the administration of the Faculty of Engineering; first as Head of

Mechanical Engineering, then as Associate Dean of Engineering for Undergraduate Education, until his election in 1998 as the Dean of the Faculty of Engineering.

Dr. Ruth is one of the most visionary Deans that the Faculty of Engineering has ever been privileged to have. His drive to promote the University and create a facility that will foster learning excellence in the Province of Manitoba, and his leadership and dedication to establish a new engineering building for the faculty, together with a state-of-the-art heavy structures laboratory, have been greatly admired.

Through his tenacity and commitment, he managed to lead a team which was successful in raising a building fund of approximately

\$42 million, of which \$18.5 million was private sector funding. He has guided the construction of these new facilities through adversity, setbacks, and triumphs and has brought this enormous project to completion.

The new W.R. McQuade Structures Laboratory now stands as one of the best facilities in Canada, if not in North America. Its impact on the education of future structural engineers will be a tribute to Dean Ruth and the Faculty of Engineering for years to come.

Early in his tenure as Dean, NSERC initiated the new Design Engineering Chair program. Because of Doug's encouragement and enthusiasm, one of the first five such Chairs was awarded to the

Faculty of Engineering.

Through his support of new concepts like Engineers-in-Residence, professional Communications staff, industry-based design courses and regular industry/university Design Colloquia, the Chair to Develop Design-Ready Engineers has become one of the most diversified and successful in Canada.

Dr. Ruth's other CRC chair and other Faculty selections reflect his vision for creating an institution with teaching excellence and student learning in mind. These appointments will not only impact academic and research life at the university but will also bring benefits to the Province of Manitoba, to Canada and to the global community.

This new generation of instructors was attracted to the University of Manitoba because of Doug's encouragement and support in creating research facilities and a teaching environment that provide them with the tools necessary to excel in their

chosen profession. As well, these vibrant young researchers and excellent facilities tend to attract students from far and wide, who wish to study under the best.

As well as being a member of the Association of Professional Engineers and Geoscientists of Manitoba, at the national level he is the Vice-Chair of the Canadian Engineering Accreditation Board of the Canadian Council of Professional Engineers. He also serves on the Minerva National Board, the Petroleum Society of CIM, the Society of Core Analysts, the Society of Petroleum Engineers, and the Society of Well Log Analysis.

In recognition of his outstanding leadership in improving the quality and relevance of engineering education for the benefit of all Manitobans, the Association was pleased to present the Leadership Award to the Dr. Douglas Ruth.



Stephen Fletcher, MP for Charleswood-St. James-Assiniboia, presented special citations to Brian Stimpson and Doug Ruth on behalf of the Federal Government.

Each of the winners were obviously moved at being recognized by their peers, and each took time to specifically thank their spouses and families for supporting their career and service goals.

In a surprising and emotional moment, Member of Parliament, Stephen Fletcher, took the floor to give his special commendation to Brian Stimpson and Doug Ruth. Both had played a major role in his engineering education at the University of Manitoba, and Mr. Fletcher wanted to personally thank them for their influence in his life. He also presented them with special citations and thanked APEGM for allowing him to "crash their party".

Nothing helps the digestion of a tasty prime rib dinner like a good belly laugh. Kudos to the organizing committee for planning ahead and inviting comedian, Dean Jenkinson, to come and close out the evening with some humorous stories and songs. Congratulations to all the award recipients, and to the organizing committee for another successful Awards Dinner. ■

87th Annual General Meeting

P.H. Boge, P.Eng.

The 2006 AGM took place in Thompson Manitoba on October 28, 2006.

This is the first time that the Norman Region has hosted the APEGM's Annual General Meeting (AGM). Numerous volunteers from the Thompson Chapter were part of the organizing team of the inaugural northern AGM. Digvir Jayas called the meeting to order and recalled recent Professional Development Conference and awards presented during the Awards Dinner in Winnipeg, namely: Doug Ruth recognized for his leadership, Honorary Life Membership issued to Erwin Weiszmann and Outstanding Service Awards presented to Brian Stimpson and Arnold Permut.

After a moment of silence was observed for the deceased members since the last AGM, the agenda was approved followed by the introduction of the Council,

Committee Chairs, Chapter Representatives and a recognition of guests. Digvir Jayas then introduced members of other Manitoba organizations who were present via videoconference, who brought greetings; Barry Ottenbreit, President of the Manitoba Association of Architects and Roger Rempel, President Consulting Engineers of Manitoba.

Dr. Jayas presented the Report of the President which highlighted his main points his message found in the 2005-2006 Annual Report.

The minutes of the 2005 AGM were adopted followed by Business Arising from the Minutes and it was carried to table the motion of removing the (Ret.) designation from P.Eng. or P.Geo members who are retired until later in the meeting.

Tony Dawe, President Elect of the Canadian Council of Professional Engineers addressed the meeting. He spoke about the

need for more people to enter engineering as he has noticed an overall decrease in university enrollment. He noted the increasing need for engineers both in Thompson and throughout Canada. He concluded by thanking volunteers sitting on CCPE Committees.

Terry Gifford, Executive Director CTTAM brought greetings and thanks from the Certified Technicians and Technologists Association of Manitoba.

The Report of the Scrutineers followed, which brought the declaration of the results of the election to serve on the Council for the November 2006 to October 2008 term. Since there were only five candidates for the five vacant positions, the new five councillors were acclaimed without an election. The five councillors for the 2006-2008 are James Blatz, P.Eng. (reappointment), Jim Miller, P.Eng. (reappointment), Ed Ryczkowski, P.Eng. (reappointment), John Woods, P.Eng. and Ian Blakley, P. Geo. Councillors who are neither engineers nor geoscientists reappointed for the 2006-2008 term are Avery Ascher, Arthur Chapman and Brian Shortt.

Dr. Hamid Mumin, President Elect of the Canadian Council of Professional Geoscientists (CCPG) addressed the meeting by recognizing the council and thanked Digvir Jayas and Grant Koropatnick, Executive Director, for their work this past year. He mentioned that with the controversial issues coming through CCPG this coming year, he looks forward to working closely with APEGM. He expressed his thanks to APEGM for holding the meeting in Thompson noting the great hospitality and encouraged them to continue to do this, as it will have a great impact on the geoscience students which attended from Brandon for a long time.

The Auditor's Report was accepted as presented. BDO Dunwoody was appointed as the Association's auditors for the 2006-2007 fiscal year. The 2006-2007 budget and the 2007 Schedule of Dues and Fees were considered and received as information.

After a short break, the call for nominations for the five available positions on the Nominating committee resulted in the following persons being nominated:

Continued on page 12

THOUGHTS ON

Design

...do we work in Teams or Committees?

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

Most current discussions about design revolve around teamwork. It is rare to see an advertisement for an engineering position that doesn't speak to the ability to contribute to "the team". Today, typical technically based projects are large, complex and multi disciplinary, demanding a broader range of skills and knowledge than is practical for any one of us to maintain. We must assemble groups of people with diverse skills if we are going to have the capacity to deliver.

In the professional world, the problem with this "group think" mode is that we are licensed to practice our profession and to accept responsibility for the work we do as individuals. We work to maintain our individual technical competence and take pride (or at least should) in our individual abilities. Can we maintain that individualism and still react to the apparent need to work in groups?

The response to that question requires a look at the basics, both good and bad, upon which group action is based. That, in turn, causes me to click on my Oxford dictionary to get some fundamental definitions to work with.

As a place to start, consider the word "group", a noun that is defined as "a number of people or things located, or classified together". This suggests little more than the obvious plural nature of the term. But the use of the descriptor "classified" may imply some commonality of purpose or understanding.

The two most common "groups" most of us are exposed to are committees and teams. Reverting to the Oxford again, a committee is (noun) "a group of people appointed for a specific function by a larger group". Digging deeper, "function", as a verb, means to "work or operate in a proper or particular way". On the other hand, a team (again a noun) is "two or more people working together". These definitions provide an interesting difference. While team implies some level of cooperation, committee focuses on the process of formation and delegation of responsibility with a set of rules to control the output.

It is interesting to note that "team" is also defined as a verb, this time meaning "come together as a team to achieve a common goal". That, in turn, leads to the

definition of the noun "teamwork", as "the combined effective action of a group". "Committee" is not defined as a verb and "committee work" is not defined at all.

If we think back to the days when many of us suffered through the study of grammar, nouns were always thought of as "things" and verbs as "action". Does that give us any clues as to the difference? Can this simplistic comparison explain why most people see "teamwork" as positive but "committee work" as drudgery?

Our use of the terms may be an unconscious link to the world of sports. In this venue, teams are composed of a number of people with different individual skills. They produce positive results if they cooperate to combine their skills. A 90 kg running back can gain significant ground when one or more 160 kg linemen provide the blocks to create an opening. All of these people are a part of the team. They each bring very different skills to that team. But the team cannot work without them.

Committees, on the other hand, tend to be linked with meeting rooms and chairs. They don't have that same excitement. Committee members are appointed to do something on behalf of someone else. No doubt there are different skills available within the

membership, but somehow the difference isn't as obvious.

In our engineering world, we find ourselves working on design teams and code/standards committees. The design teams are expected to produce something that responds to a need. The Code/standards committee is expected to produce a document that will be subjected to public criticism. Both groups will have to assess the options and compromise based on the information they have available. Both groups will have to function to some sort of deadline within some level of externally imposed constraints. But again, there is usually a different level of excitement.

It is said that a camel is a racehorse designed by a committee. On the other hand, a 5-4-3 double play is the result of teamwork.

Maybe it is just a matter of semantics, but doesn't the prospect of being on a team seem more interesting than being on a committee? Design demands action, and if we are to believe the Oxford dictionary, that means design demands teams. Or maybe, design demands behavior that just happens to fit the definition of team (the verb) provided by the Oxford dictionary. The important thing is the attitude each of us brings to the task at hand. But if my interpretation of these definitions is anywhere close to the truth, I hope you spend most of your career on teams and not committees. ■

Provincial Engineering & Geoscience Week (PEGW)

Coming Soon!



The Planning Committee has been busy organizing events for the upcoming 2007 Provincial Engineering & Geoscience Week! Come join us at St. Vital Centre, March 2 - 4, for the following events:

- Celebrity Competition
- Spaghetti Bridge Competition
- Special Imax Presentation
- Children's Activities
- PENGEO Activity Book
- Entertainment

For more information please see our website: www.apegm.mb.ca

See you there!

Council Reports

Thursday, September 14, 2006

A. Kempam, P.Eng.(Ret.)

APEGM COUNCIL GRAPPLES WITH ENFORCEMENT

The September 14, 2006, meeting began, as is the custom, with routine items. The agenda had items moved around and deleted before being approved. The minutes of the June meeting were reviewed and received a few minor revisions.

The auditor's report was presented to council by David Anderson from the firm, BDO Dunwoody. President Digvir Jayas raised a motion for APEGM to maintain \$1 million in unrestricted net assets. Why \$1 million? Dr. Jayas said this amount was mutually agreed to by the Executive Committee and was meant to protect against multiple liabilities as might arise if the Association faced a lawsuit and a personnel event simultaneously.

Next came the monitoring reports. The Association has "ends" and monitoring reports ensure that Association performance meets the Association's "ends." Monitoring reports may be written by either the Executive Director or councillors.

When the monitoring report on "Interactions with Members" written by Executive Director Grant Koropatnick came up, councillor Avery Ascher asked if member comments were logged. She explained that some businesses in her home town logged any contact with the public for future reference. President Digvir Jayas said logging all comments would be cumbersome. Director of Admissions, Sharon Sankar, said many comments were received by e-mail, and those were preserved. Executive Director, Grant Koropatnick, confirmed that e-mails were archived and said he felt the public was pleased with the Association's response to inquiries. Councillor Ascher said she wasn't looking to create work for staff, and they should only log contacts if it served a useful purpose. The monitoring portion of the meeting ended with mass approval of all monitoring reports.

Next, the consent agenda was approved and council moved on to governance issues. In January of 2006, Past President, Allan Silk, agreed to review the terms of reference for the Nominating Committee. The report was ready for this meeting, so Mr. Silk shared it with the councillors via a PowerPoint presentation. They requested that the information in the document not be reported in the *Keystone Professional*.

The Memorandum of Understanding with the University of Manitoba Engineering Society (UMES) received its final blessing before council. A signing ceremony was scheduled and Councillor Blatz said UMES was very happy with the document and looking forward to the event.

GENERAL MEETING...Continued from page 10...

Renee Barrette, P.Eng., Doug Chapman, P.Eng., Allan Silk, P.Eng., Selvin Peter, P.Eng., Arnold Permut, P.Eng.

By-Law Change Proposals were carried for by-law 4.6, 7.1, 12.1, 15.3 with little opposition. That was followed by the acceptance of all Committee and Staff reports published in the 2006 Annual Report.

Grant Koropatnick advised that there were no resolutions received which was followed by recognition of retiring councilors including Pat Lengyel and Allan Silk.

Then came time for the Ceremony of Turning over the

Gavel to the Incoming President. Retiring President, Digvir Jayas, called upon Robyn Taylor, P.Eng. He handed the gavel over to her, within which is a scroll upon which are inscribed the signatures of all previous Presidents of the Association. Incoming President, Robyn Taylor, P.Eng., accepted the official gavel of APEGM – symbolic of the office of the President. "I shall endeavour to carry out my duties in keeping with the best traditions, which this gavel symbolizes."

Digvir took out the scroll and Robyn signed it. Robyn then gave her Incoming President's Address.

The next topic before council generated much discussion. The subject was APEGM's enforcement function, always a thorny issue. President Jayas started with the premise that APEGM had no enforcement function; did they need one, and were members ready for a dues increase to create an enforcement arm? Enforcement would mean hiring a new staff member for just that specific job, presumably to knock on doors and heads, if need be. Councillor Blatz felt APEGM definitely needed an enforcement officer and dues would need adjustment, as required. Executive Director Grant Koropatnick passed around an estimate for doing the job.

Councillor Shortt said Ontario lawyers paid \$22 a head for their enforcement function. He pointed out that the difficulty in Manitoba would be what part(s) of the act to enforce since presently APEGM had no investigative powers under the act. Councillors Blatz, Shortt, and Corkery agreed at various times that defining the duties of the enforcement officer was the place to start. Executive Director Koropatnick said information on that topic was available from other jurisdictions. He felt the concept would be more palatable to the membership if a plan was developed before a fee increase. Past President Silk said they must be aware of the effects on the membership of a substantial fee increase. Former Executive Director Dave Ennis, now representative for CCPE, thought the first priority for enforcement should be inter-jurisdictional mobility.

The discussion outcome was to have Executive Director Koropatnick take a year to develop the full plan. His plan would include any proposed fee increases, By-law changes, and would include the ramifications on professional development and intergovernmental relations.

The meeting wound down with informational items. President Jayas reported on the CCPE Constituent Member President's meeting in Whitehorse, YK. He said the provincial associations needed a uniform screening process across the country before full mobility was possible. Council reviewed the Outstanding Action Items list and the agenda for the December council meeting. Councillor Blatz commented on the recently installed logo gracing the doors of the new APEGM Design Studios at the University of Manitoba. He said it looked great!

The AGM was fast approaching and with it changes in council, so this was a meeting for good-byes. Past President Silk was one of the retirees and he said his time on council was the most rewarding experience of his life.

Correction: In my June 22, 2006, council report I stated that "...the Manitoba School Science Symposium would henceforth be known as the Manitoba Schools Science and Engineering Symposium." I should have said President Jayas met with the MSSS committee to request the name change, and that the change was under consideration by MSSS. ■

After Ms Taylor greeted those in Thompson and Winnipeg, and thanked all who had been involved in the planning of a wonderful weekend, greetings from other associations were brought forward. This included Walter Bilanski, President-Elect of PEO; Bert Munro, Vice President of APEGS; Dave Chalcraft, President of APEGGA; Kevin Hodgins, President of NAPEGG; and Ross Rettie, Director of Professional Practice and Ethics for APEGBC.

Closing comments were made by Dr. Digvir Jayas, including a reminder about the Provincial Engineering and Geoscience Week

in the first week in March, 2007, and the fourth annual Making Links Engineering Classic on June 14, 2007. He asked for a show of appreciation to the Thompson Chapter for organizing the Professional Development sessions and tours the day before.

As of the end of the business meeting, Robyn Taylor, P.Eng., is officially the President of the Association of Professional Engineers and Geoscientists of Manitoba. Her term of office will continue until the end of the 2007 Annual General Meeting. ■

Red Light Engineer Feels Your Traffic Pain *L. Reynolds*

If you get stuck at one red light after another on your way to work today, just sit back and think about poor Luis Escobar.

The city traffic signals engineer feels your pain – and he’s trying desperately to do something about it.

Escobar and his 40-member department look after the maintenance, design and operation of Winnipeg’s 605 traffic light intersections.

If a light goes out, an entire traffic corridor can turn into grid lock.

Even on a good day, when there are no serious snafus, Escobar knows hundreds of strangers are bitterly complaining about the way he does his job.

“I don’t always tell people right away what I do for a living,” he says sheepishly. “Everyone has something to say about traffic.”

In fact, after the mosquitoes and the frigid winters, traffic’s probably

our favorite topic of conversation. Entire dinner parties could be (and likely have been) dominated by debates over whether Bishop Grandin or Kenaston are more frustrating routes.

Is there a reason why Broadway crawls during the day? Why it takes half an hour to drive the length of McPhillips? Why you have to stop dead at the Sterling Lyon Parkway?

Escobar sighs. There are reasons, he says. Some are historic. Some are monetary. Some are simply a matter of him being overruled by his political bosses on the standing policy committee on public works.

He’s doing his best.

“If people travel in other cities, they realize they have freeways and, when they come here, there aren’t any freeways. In some places you can travel 10 kilometres without stopping.”

Not here – and that’s due to a decision made by the city leaders

when Unicity was formed in 1972. The former “cities” were determined not be left off a freeway that would go around or through the centre of Winnipeg. As a result, all we’ve got are arterial roads, some as crooked as a dog’s hind leg, that connect the various communities.

Escobar’s job is to move traffic efficiently along those roads.

“The more signals you have, the more opportunity to have failures,” he says. “You need to make sure they are properly spaced. I give my opinion on where they should be and the implications of those decisions. Really, it’s up to my bosses to make those decisions.

Sometimes I may want to have a new traffic signal installed but they need to tear up the road and fix it instead.”

One problem with the system is that 200 of the signals are Edsel-old. They still operate with cranks and camshafts. Stand at the corner of Carlton and Portage, head for the

box decorated with the picture of the paper boy and you can hear the chunk, chunk, chunk of very old machinery.

The new signals are computerized. The city is even trying signals with radio antennae on Bishop Grandin, devices that can “talk” to each other to coordinate traffic flow.

But there’s always room for improvement. Any Winnipegger will tell Escobar that.

What’s his final word to Winnipeggers who are convinced the traffic light situation is a vast conspiracy to drive us out of town?

“Either you do it with a lot of money quickly or you do it with a little money and a lot of time,” he says.

And, as we all know, City Hall has more time than money. ■

(Winnipeg Free Press, July 7, 2006)

AGM...Continued from page 1...

people out of their seats and doing a circle welcome dance. This was a great icebreaker and set the tone for a relaxing evening. After the fully served meal, more entertainment ensued, starting with a local folk group, “South of 60”, performing some custom songs for the engineers and geoscientists in the audience.

The final performance was from Cornie Rempel, an Elvis impersonator and impressionist, who got a few members of our audience up in cameo roles as security guards! During the gala, welcoming speeches were given by President Digvir Jayas as well as Inco CRVD Mine Manager, Stu Waring. Friday night ended with dancing and good music.

Saturday was the AGM Business Meeting, which went off successfully and was epitomized by a lunchtime talk from the Honorable Steve Ashton. As well, the APIC committee met for a training session on the new outreach presentation on flight that will be presented to schools all over the north.

In all, the three day AGM event was entertaining and we even managed to take care of some business details. It was an honor for the City of Thompson to host this event and we hope you all come back soon to visit, stay, or work! ■



“I can’t help falling in love with you . . .”



*(Top) Professional Development Symposium, Thompson, Manitoba
(Bottom) Elvis is in the building . . . and he brought security!*

Yesterday's Toys: Engineering's Doorstep

I. Smallwood, EIT & M. Theroux, EIT

Lego®. To many adult engineers, the word conjures memories of their first experiences in creative design.

As for me, these first experiences developed into years of creating new Lego® worlds on a regular basis. When I was given the opportunity to judge a Lego® building exhibition in Grunthal, Manitoba, this past August, I jumped at it.

When I arrived at the Hanover Agricultural Fair venue, I was surprised to see not just Lego®, but another brand of building set called K'nex. This equally elaborate toy was just as prevalent at the exhibition, so we decided to broaden the scope of the judging to include it.

Included in the exhibition were an operating train, Ferris wheel, windmill and a couple of elaborate ball lift-and-drop mechanisms that were similar to another childhood game named Mousetrap. All of the entries were interesting in their own right, but I would like to share a few notes with you regarding this fun day of interacting with perhaps the engineers of tomorrow.

As judges interacting with the exhibitors, three conversations stood out to us based on their creative engineering design, understanding, and trouble-shooting ability.

First, there was an interesting young child explaining how he modified his cement truck chute to

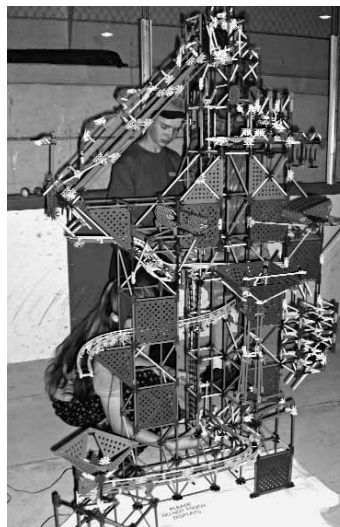
fold away while it was on the road. Mainly based on his explanation and creative change to the set design, he left with a tied first place in his age category.

I was also encouraged to hear a youth state the box truss under his flat bed trailer was there to increase its strength and stability. Although this entry was one of the least complicated, this understanding of tube frames was a good step toward engineering design.

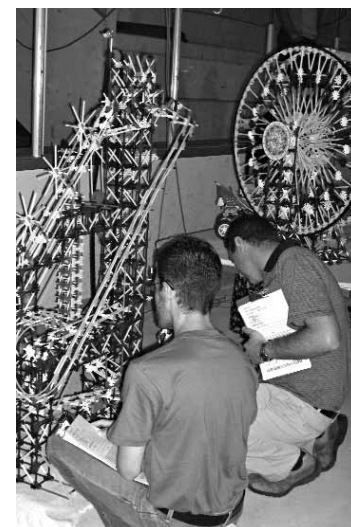
One participant had two entries that were quite technical in nature. He explained how he had to trouble-shoot a crane that just wouldn't work smoothly. By taking it apart and evaluating the placement of numerous pieces, he was able to change the design, and thus enhance its operation. His second entry used a series of pneumatic tubes that distributed pressure from a hand pump to pairs of cylinders. It took due care on his part to route these tubes properly so each cylinder operated at the same rate.

The experience was well worth the short time required of us as judges. It was good to see engineering principles at work in the toys of today. It will be exciting to see how next year's participants respond to being asked to stretch themselves further with their own unique designs and creativity.

The Hanover Agricultural Society is a non-profit organization,



(Left) Elaborate 'K'nex'-tions: one of the first place winners during judging. (Right) Close up of Ball Tower's intricate design, structure, and engineering.



run by dedicated volunteers. The Hanover Agricultural Fair is held in Grunthal, Manitoba, in August, as a combined effort from the communities in the RM of Hanover. For more information about the

Lego® Competition and a wide range of other events, activities, and attractions for the whole family that take place throughout the weekend, please visit the website at www.hanoverag.com. ■



Judges Ian Smallwood and Marc Theroux, with the K'nex Windmill entry for the Youth Category.



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ENGINEERING Access Program (ENGAP) – University of Manitoba

The ENGAP Advantage

W. Boyce

The ENGINEERING Access Program (ENGAP) was established by the Faculty of Engineering at the University of Manitoba in 1985. ENGAP is designed to provide Aboriginal persons (Status Indian, Non-Status Indian, Métis, or Inuit) with access to university studies. ENGAP provides academic, social and personal supports based on the individual needs of the student. Successful completion of the program leads to a Bachelor of Science Degree in Engineering. ENGAP is the most successful program of its type in North America, producing 58 graduates over the last 20 years.

ENGAP offers an opportunity for Aboriginal students who may not meet the normal entrance requirements for engineering, by providing academic upgrading and support. Those students who meet the regular engineering requirements will be able to accelerate their program based on demonstrated ability.

At the March 24, 2006 ENGAP graduation, Dr. Doug Ruth, Dean of the Faculty of Engineering, University of Manitoba, described the ENGAP advantage.

“By my calculation, I have done this 10 times now at the ENGAP, so most of the graduates actually would have seen me speak before. So, I thought that I would do a little review.

First of all, I want to say how proud I am of all of our graduates, but I am particularly proud of the people who come out of the ENGAP program. This is a very special program for some very special people, and I think that very special people, the people who make it possible, the people who work in the office, Randy and his gang, they really do deserve a round of applause for what they have achieved.

In the past, I have talked about quite a few things about our ENGAP grads. I have talked about the fact that the Aboriginal people of North America are natural

engineers, because engineers are people who take their environment and adapt it so it is liveable; and, it's very clear that North Americans and North America has got some of the most challenging conditions to do that in. And, in a very real sense, when the Europeans came to North America, if the Aboriginal people hadn't taught them how to live with the environment, they would never have survived.

I've talked about the role of our graduates in motivating the youth, who might come into engineering some day. I'm always impressed that we always have our graduates, our former graduates, come back to this event. You have become the role models for the students, and just like Jay says, this is just the beginning of a long journey. And I think, when you keep coming back, you keep demonstrating that the success keeps going on and on and on, it is a very important part of this. I have talked a lot about what ENGAP has brought to the students, how important ENGAP has been to them, to the lives of the students who have gone through it.

But, today I want to talk about another side of that. I want to talk about what ENGAP students have brought to our faculty – the other side of the story. I call this the “ENGAP Advantage”.

I like to put it this way, it's clear that the Aboriginal people of Canada are moving toward self-government. It's clear that we are moving toward finally settling the land claims. And, it's very clear that within a decade, this province will have 25% of the people of Aboriginal origin, or Aboriginal heritage.

This is a huge opportunity for development. It's a huge opportunity for growth. And the Aboriginal people of Canada, especially in this part of Canada, in Manitoba and Saskatchewan particularly, are going to have a huge economic clout. And, all we got to do is look at three things that are happening here. There is a very large Aboriginal presence on the

floodway project, in fact one of our graduates', he works for the floodway. The hydro development up north, at this time, it will be in partnership with the people who own the land. And, hopefully, we will find some diamond mines in Manitoba, but certainly the diamond mines in the North West Territories and Yukon are definitely in development with Aboriginal initiatives.

Let's put this in perspective, all of these things are engineering challenges. We graduated 58 students out of this program. You represent roughly one-third of all the registered engineers in Canada who claim Aboriginal heritage. And you are never going to do all these projects with 58 or 160, or even a couple of hundred people. So, this is where we come down to what I call the ENGAP Advantage; because, along with the four ENGAP students who graduated this year, we will also graduate about 200 more students.

Now these students are your friends, these are people you have met, you've worked with in your classes, and you helped educate. When they move on in their careers, they will have the knowledge that you helped them acquire about Aboriginal issues, about Aboriginal culture, and they will have relationships that they can carry into their career. And when they get involved with projects which involve Aboriginal peoples, and they will get involved with projects involving Aboriginal peoples, they will have the ENGAP Advantage. They will have friends in the community, and they will have an appreciation of the differences in the cultures. So, just by being part of this faculty, ENGAP has enriched the lives of all the students in the faculty.

ENGAP is not just about ensuring that Aboriginal students have an equal chance to be educated; it's about all of our students being exposed to the vibrant culture that Aboriginal people enjoy. It's about ensuring



that our entire student body is prepared to participate in the coming opportunities made possible by the growth in the Aboriginal economy. And that is something that is unique to Manitoba. The ENGAP Advantage is only available to students at our university, and for that we thank you.

Just to put it in perspective, you represent 58 students who went through access programs, who are students of Aboriginal heritage, in the rest of Canada there might be five. So, we have ten times as many students from this program as probably all the rest of Canada.

So students, I want to assure you this, the degree that you are receiving is one of the most powerful degrees in the world, a University of Manitoba engineering degree opens doors, opens any doors. Your future will be limited only by your ability to dream. So, what I encourage you is: dream big, and live your dreams.


All the best!" ■

Full information on the ENGAP program at the University of Manitoba may be accessed from their website: www.ENGAP.com/ or by contacting ENGAP


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