THE KEYSTONE PROFESSIONAL

Autumn 2009

Inside this issue:

A Visit By The Canadian Engineering Accreditation Board

Adventures in Authorship

6th Annual Making Links Engineering Classic Golf Tournament

Association of Professional Engineers and Geoscientists of the Province of Manitoba
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Front cover photo by Leif Anderson.
Leif Anderson is an amateur photographer in Winnipeg, MB, who is slowly being pulled into the world of professional photography.
He has been strongly involved in the hobby for nine years and is captivated by the depth of the craft.

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Don Himbeault, P.Eng.
President's Message

Such Stuff as Engineers and Geosicentists Are Made Of

My first comments are to congratulate staff and volunteers from APEGM and the Faculty of Engineering for another fun and successful Making Links Engineering Classic event. This time round, however, even having presidential powers did not help with my swing. It seems that to achieve a good hit requires attention to so many details, that for me, a successful drive is more about a serendipitous alignment of random events than skill. As I see my ball err off the tee, I am reminded of the conciliatory digitized voice on my sons' toy piano that I heard repeated so often as they learned on it; "Oh, need more practice".

In golf as in professional life, being an engineer or geoscientist requires attention to great many details. In fact, as the world seems to get more and more complex, there are increasingly so many more things we must know and consider in our professional life. This was in one respect the topic of the first-ever National Engineering Summit held in Montreal this past May. Organized in part by Engineers Canada, the summit gathered engineers, educators, regulators, government representatives, and industry experts to consider key trends, critical issues, and future projections related to health, the environment, safety and security, global competiveness, and quality of life.

During the summit, many attributes were identified to describe the qualities and knowledge that today's engineer should ideally possess to meet the challenges facing today's society. These included some that were perhaps not so prominent when I entered the workplace many years ago, such as; inter-disciplinary, entrepreneurial, assures security in design against external threats, understands the changing demographics of society, has social awareness of the impacts of their work, and understands the implications and impacts of public policy.

The stuff that engineers are made on is changing and expanding, which is where gatherings such as the Engineering Summit allow us to step back to look at the bigger picture and align our profession so it remains relevant. The summit concluded with the drafting of a statement, known as the Montreal Declaration, which highlights those areas where the Engineering profession should direct its efforts to best serve and lead in Canadian society.

The Declaration states our collective commitment to making Canada a better and more prosperous place to live, however at an individual level, I'm sure each of us will recognize within its statements the role we can play (or are already doing) in forwarding this goal, whether it be helping to mitigate the effects of climate change, conserving resources through product life cycle management, assuring energy security, and so on. Thus, I would encourage you to read the declaration to see if indeed you are keeping up your "stuff" in terms of knowledge and awareness to affect the best positive change in society. The declaration can be viewed at http://www.apegm.mb.ca/pdf/News/SummitDeclaration.pdf. ■

NOTICE

Notice to Members

Reports on the operations of APEGM will be published in the Annual Report issued October 2, 2009, following the meeting of Council on September 10, 2009.

The report will be available on the APEGM website, at the Annual General Meeting on October 23, 2009, or it can be obtained by contacting the Association office at apegm@apegm.mb.ca or by telephoning (204) 474-2736.

Year-end reports from the APEGM committees will be available at the Annual General Meeting or on the APEGM website as of October 23, 2009.

Grant Koropatnick, P.Eng.,
Secretary

Engineering Philosophy 101

Are We To Blame?

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

Economic difficulties always result in a search for causes. For example;

On July 22, 2009, it was reported that the Korea Advanced Institute of Science and Technology (KAIST) "is leading a drive for creativity over conformity to equip the economy for the 21st century."

On June 4, 2009, economist Michael Mandel was quoted as saying, "there's growing evidence that the innovation shortfall of the past decade is not only real but may also have contributed to today's financial crisis".

If one is to believe these selected citations, our "productivity problems" relate to deficits in innovation and/or creativity. In addition, a best selling book from about ten years ago referred to our problem as the "Ingenuity Gap".

> "As a profession, I believe we should all consider ourselves to be "Imagineers"

Rightly or wrongly, productivity is usually seen as an engineering problem. Many editorial writers imply that we, the Engineers, are not dealing adequately with the specific "deficit" they have identified. The problem with these inferences is that they are seldom accompanied by any clear indication of what, in their view, their specific "descriptors" mean. That, in turn, leads to the need to step back and look at some basic definitions.

The Oxford University Press dictionary that is imbedded in my word processor offers the following definitions as a place to start:

- Innovate > verb > introduce new methods, ideas, or products.
- Create > verb > bring into existence
- Ingenuity > noun > the quality of being ingenious.
- Ingenious > adjective > clever, original, and inventive.

Fine, so now we have a list of some "key words" and their meanings. However, before going much further, it is important to remember that specific meanings and classifications can be both useful and detrimental. From a positive perspective, they help us better appreciate inferences. On the other hand, they can be used as a debating point to defer meaningful action. Hopefully, this discussion will not lead to the latter.

At some point in history I was taught that "nouns" are words that identify "things", verbs are "action" words, and adjectives are "modifiers". Assuming this hasn't changed over time, we should probably focus on the verbs if we are looking for actions that might influence change. The verbs, "innovate" and "create", can be seen as "feel good" words. They imply new, different, and possibly better. "Ingenuity", a noun, is simply a "feel good" outcome that implies "good" things like "clever", "original", and "inventive". It is hard to imagine how these actions could be seen as serious threats.

We switch to a different view of the causes of our problems by considering the Sept 1, 2008, article that quoted Judy Estrin, the former chief technology officer of Cisco Systems, as saying ". . . that short-term thinking and a reluctance to take risks are causing a noticeable lag in innovation."

The word that jumps out from this quote is "risk". Again, going back to the dictionary for specific definitions,

- Risk > noun > a situation involving exposure to danger.
- Risk > verb > expose to danger or loss.

These definitions introduce both "danger" and "loss", definitely not "feel good" words. Clearly not a "good" circumstance.

Henry Petroski's observation in Pushing the Limits (2004) provides an Engineering perspective of the creativity issue. He stated that "making something greater than any existing thing necessarily involves going beyond experience". If Engineering is about creativity, innovation, and "making something greater", then it follows that Engineering is about creating risk. Generally, we prefer to look upon this as managed or controlled risk, but it is risk nonetheless.

Maybe the real problem for many people is that creating something that is new and different does increase risk. Maybe headline writers/seekers are simply hiding behind the "feel good" words because they permit "blame" to shift squarely to someone else. If the "creative" people involved can be accused of being neither creative nor innovative, the "organization" has a scapegoat. Does that make it "right"? Should we, the "creative" people in the corporate chain, simply accept our role?

Think about it. The Disney Corporation has an "Imagineering" division. They are charged with being innovative,

continued on page 21

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

I Like Obituaries

I t's true, I like the obituary pages in the newspaper. I find it fascinating to read about the life of a person after they're gone. Some stories are tragic and sad, but many are laudable and inspiring.

Recently, I read the obituaries of two APEGM members. One, you could say was untimely (passed on at age 54) while the other lived to see his 81st birthday. Both announcements inspired me! Each had unique personal and professional milestones. I'm sorry that their time on earth has ended. We miss them and their names will be remembered at the annual general meeting in a final gesture of respect and honour with the names of others who have passed on this year.

THE FUNERAL GUY

Have you ever written an obituary for a friend or relative? It is not easy. Often, the writing is done with a crippling amount of pressure and angst. Sometimes you have to do a considerable amount of background research; interviewing family, friends and work colleagues to collect the important information about the dearly departed. I enjoy this difficult task and I have delivered eulogies a few times. My friends call me "the funeral guy" because they know I enjoy this challenging task. They all want me to speak at their funerals, but I tell them with a big smile "Hey, what if I go first?!"

What about writing your will or personal obituary? Have you done that? Have you thought about doing it? Not many people do. I don't know any living person who has scripted their own death announcement. The thought of writing about yourself posthumously is unsettling. I suppose I could sit down and take a good crack at it, but I'm the guy who likes reading the obit pages, right? So what would you say about yourself? On such-and-such a day, passed peacefully, survived by, grew up here, went to school there, worked for . . . you know the typical details. But what about the un-typical details?

I admit that this topic is a bit unusual – no one gives much thought to the details that will appear in their obituary. The fact is, you are writing your own obituary every day. Yes, think about it. You are living the events that will make up the record of your life. So what are you doing about it? Is your life going to be a series of plain, routine events that will take about 3 inches to report in Section C of the Free Press? Or will your relatives be forced to spend the extra cash to cover the numerous details that they just can't leave out?

To ensure that your relatives have to spend a little extra cash on your write-up, let me give you some suggestions for living your obituary announcement before it gets written.

PERSONAL

What are you doing with your personal time? Giving too much away at the office? Missing that junior high band concert again. When was the last time you brought her flowers for no particular reason? What about learning to play the piano this winter? Taking a continuing education course at the university? How about losing a few pounds and getting out striding around the block at lunchtime? There are many worthwhile things we can do with our personal time – be creative and active!

PROFESSIONAL

What are you doing in your professional career? Are you keeping up your skill competency? When was the last time you attended a PD seminar? Do you supervise an EIT in your workplace? This year I encourage you to volunteer on an APEGM committee. We're looking for good people to join the Registration, Experience Review and Public Awareness committees (to name only three of 30 committees). Giving a few hours per month to your profession makes you better and strengthens the profession overall.

COMMUNITY

What are you doing in your community? Are you coaching mini-soccer, volunteering on the parent council of your local school or knocking on doors for CancerCare or other charity? What about your ethnic or faith community? Do you volunteer at Folklorama or serve on the board of your church, mosque, temple or synagogue? As a profession, we can only create visibility and public appreciation by working side-by-side with our neighbours in these non-engineering contexts.

Don't wait until your relatives are forced to sit down and figure out what they're going to say about you. Start today, by living the events and actions that will give them lots of material to work with. Have a great day.

Your feedback is invited and always welcomed. If you have any thoughts on anything you read in the KP, please email me at apegm@apegm.mb.ca or message me through Facebook. ■

LETTER TO THE EDITOR

RE: BLOOD IS THICKER THAN WATER (SUMMER 2009)

Just wanted to pass along a word of support for the agreement to allow volunteer hours to be claimed for blood donation. This is a completely voluntary process, but it is incredibly important to society - something that we expect to be there if we need it. It is often overlooked that the blood supply is completely driven by volunteers, so yes I agree that this should be recognized.

To add some insight to this article, I am one of those people who donate regularly and made my 75th blood donation last week. Blood donation is scheduled with appointments that are staggered 5 minutes apart, so the total time from walking in the door to walking out the door is reliably just over an hour.

In terms of pain, the majority of people there show little to no discomfort (myself included), so the recommendation is to give it a try to find out. You never know if and when you may need blood, and donating will give you the satisfaction that you are playing an active role what many in our society take for granted.

- B. Ellis, MASc, P.Eng.

editor's note:

Your comments are always welcome by the Communications Committee through commfeedback@apegm.mb.ca.

Advertising in the Keystone Professional: Advertising will generally be limited to products and services of technical or professional interest to members of the Association. They can include: engineering, geological, or geophysical services, educational products and services supporting continuing professional education and development, employment opportunites, and financial services.

The publication is produced using full-colour process (CMYK), however, Advertisers have the option to submit black & white advertisements instead.

Would you or your company like to advertise in an upcoming issue of the Keystone Professional? More information, including our full Advertising Policy, Mechanical/General Information, and Insertion Order form can be found at www.apegm.mb.ca/KeystoneAdvertising.html or by contacting Angela Moore at amoore@apegm.mb.ca.

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

Thoughts On Design

. . . and the Difference Between Science and Engineering

In the minds of many who focus on definitions, Engineering is simply an applied Science. Others consider Engineering to be a profession that relies on science as a problem solving tool. Neither of these groups, however, represents the broad public understanding. It is probably fair to say that the majority of the population doesn't see the distinction between Science and Engineering as an issue that affects them.

Notwithstanding public apathy, it is important that persons who make policy and process decisions understand the roles various professionals play. For practicing Engineers, this is even more important because we are often just considered to be a part of the Science input.

Almost every day, a "leader" somewhere makes a pronouncement stressing the importance of Science in today's economy. New discoveries are said to be the engine that will lead to economic recovery. In order to facilitate this pursuit of these new discoveries, new funds are injected into "science" projects. The difficulty is the huge gap between "knowing" and "using".

It is important, no, it is critical, for Engineering to emerge from the shadow of Science in order to allow us to exercise the leadership our profession can provide. The boundaries that separate Engineering and Science are not always clear. The manner in which the information is used, however, is easier to explain.

After the release of the Columbia Accident Report in 2003, Henry Petroski wrote an article (New York Times, 03 08 29) entitled "Failure is Always an Option" in which he undertook to identify the different roles of Scientists and Engineers. In his opening paragraph he cites the aerospace pioneer Theodore von Kármán who is supposed to have said, "Scientists seek to understand what is, . . . , while engineers seek to create what never was. The space shuttle was designed, at least in part, to broaden our knowledge of the universe. To scientists the vehicle was a tool; to engineers it was their creation."

Later, in that same article, Petroski noted: "Rather than following from science, engineered things lead it. The steam engine was developed before thermodynamics, and flying machines before aerodynamics. The sciences were invented to explain the accomplishments - and to analyze their shortcomings."

To me, this provides a clear distinction that we, the Engineering profession, need to champion. Why should we accept a lesser role?

"Things" come into existence through projects. Project development is not the exclusive domain of Engineers. All sorts of other perspectives come to bear as decisions are made. Hugo Spowers, the founder of Riversimple, an organization based in Britain that is developing a new, . . . , energy efficient "Urban Car" has been quoted as saying that ". . . the problem is automakers are focusing too much on science in a search for big breakthroughs when the basic technology already exists." The "automakers" identified in this statement come from all sorts of backgrounds. If there is any truth in Spowers statement, projects like his would benefit from more Engineering and less Science. But the backgrounds that lead to this sort of decision making place Science in an unrealistic light.

So, what do we do?

It has been stated that any individual has three options. One can lead, follow, or get out of the way. I would suggest that, far too often, our profession has chosen the middle path. We have been willing to make our technical contributions and leave the "other stuff" to other people. How often have you heard a discussion about a project that was summed up with the comment ". . . in the end, I just did what I was told."?

As a profession, Engineers possess significant technical knowledge. Those of us who are steeped in the design tradition we are typically driven to solve problems, not talk about them. Frequently, however, we allow ourselves to become victims of our need to avoid risk. Like Dilbert, we allow our "pointy haired" bosses to dictate to us. We need to take charge, or at least be heard.

If we are the users of science based tools, if we are driven ". . . to create what never was", we need to make sure our point of view is clearly seen and understood. Unless we accept our responsibility to educate others, from teachers to lawyers and managers, about the difference between Science and Engineering, we will never be seen as more than applied Scientists. The difference matters to our profession, and to society as a whole. The problem is that we haven't bothered to take on the challenge, and no one else is going to do it.

We can lead, follow, or get out of the way.

Volunteer Appreciation Barbeque

A. Erhardt, EIT

On a very windy 23rd day of June, APEGM hosted their annual Volunteer Appreciation Barbeque. This year's event was a western theme as a variety of volunteers, council members, and APEGM staff did their best to give the parking lot behind the new APEGM building a down home country feel!

With live country music being performed by Melissa Plett and her band, volunteers were treated to a fantastic meal, line dancing lessons and a complimentary bottle of APEGM Certified Barbeque Sauce. While people enjoyed the country atmosphere, pairs of contestants were pulled aside to try their hand at milking a cow. Thankfully, Bessie the wooden-stand-in-cow ensured that no real cows were harmed in the making of this event. Congratulations to Councilor Ed Ryczkowski, who took home the cow milking crown and a brand new BBQ. Another winner did the best at guessing the purpose of a variety of items that would be found in and around a barn or stable.

To the over sixty volunteers who attended, along with those who were unable to make it out, APEGM staff and council once again offer a heart-felt thank you for your time, dedication and efforts to help keep the APEGM train a-running, rolling 'round the bend . . . ■

Howdy Partner! Get your boots on & yourself in gear
We're having a party
Celebrating this past year.

Grant Koropatnick, Mike Gregoire, Andrew Reddoch, and William Boyce from the APEGM office enjoy the western atmosphere.

APEGM Volunteers enjoying the great food and good music.

APEGM Staff and volunteers line dancing

Objects to identify that could be found in a barn or stable.

Chantal Guay, P.Eng., M.Env.
Engineers Canada
CEO Message

Engineers: The Enablers of Dreams

As the Secretariat for the Canadian Engineering Leadership Forum*, Engineers Canada spearheaded the planning and execution of the first National Engineering Summit, entitled Leading a Canadian Future; The New Engineer in Society, which took place in Montréal from May 19 to 21, 2009. The conference provided participants with a refined focus for the future of Canada's engineering profession and a vision to improve the life of Canadians.

Emerging from the summit, Canada's engineering profession presented a declaration to take collective action in the areas of health, the environment, safety and security, global competitiveness and quality of life. The declaration is in synergy with the Leadership Forum's purpose to help steer the profession and implement its vision, providing Canada's engineers with the capacity to realize their strategic vision together.

As chair of the Leadership Forum, Engineers Canada must be a leader in transforming what we have learned at the Summit into actions. We will now work collectively with the Leadership Forum on the six recommendations defined in the declaration, which are:

- The need to pursue greater collaboration across disciplines and professions;
- Increase engineers' influence in policymaking;
- Reexamine our accreditation process;
- Transform engineering education and practice;
- Encourage the greater participation of underrepresented groups such as Aboriginal Peoples; and
- Attract and retain women in much greater numbers.

The declaration outlines the profession's commitments in innovation, sustainable development, educational engagements and public policy development. In my opinion, the declaration expresses the profession's resolve to help ensure Canada and its citizens thrive and prosper—today and into the future.

The summit has provided a stronger vision for our constituent members and for Canada's professional engineers to thrive in. I am proud that the Leadership Forum is committed to playing a central role in enabling the profession to achieve these ends and provide direction by fostering collaboration.

Engineers Canada's Board of Directors appreciates the value of the Leadership Forum and we embrace the enormous potential of the engineering profession to work towards a better Canada. The next step for the Leadership Forum will be for member organizations to review the declaration and consider its recommendations for future adaptations of their individual strategic plans

I am deeply committed to ensuring that both our constituent members and Canada's professional engineers receive the support they need to advance the engineering profession.

I would like to thank everyone who was involved in the planning and implementation of the summit, including the organizers, speakers, and participants. Your involvement has contributed to furthering the advancement of the engineering profession in Canada. I look forward to working towards the renewed vision for the profession, and working with the Leadership Forum towards creating a healthier and more sustainable Canada. ■

** The Canadian Engineering Leadership Forum brings together representatives from:*

- *Engineers Canada Association of Consulting Engineering Companies - Canada*
- *The Canadian Academy of Engineering*
- *The Canadian Federation of Engineering Students*
- *The Engineering Institute of Canada*
- *The National Council of Deans of Engineering and Applied Science*

In Memoriam

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

Michael Hawrylak
Ross Henderson

A Visit By The Canadian Engineering Accreditation Board

R. Foster, P.Eng.

The Winter 2008 issue of the Keystone Professional carried a message by the Engineers Canada CEO outlining the purpose and work of the Canadian Engineering Accreditation Board (CEAB). In a nutshell, the CEAB, a standing Committee of Engineers Canada, is responsible for the accreditation of Canadian engineering education programs for the purpose of professional registration.

Most APEGM Members will never cross paths with the CEAB unless they teach Engineering at a University, and as such, it might be of interest for members to know a bit about what actually happens on an accreditation visit.

Accreditation is initiated only at the invitation of the institution. It is individual programs which are accredited, e.g. civil, electrical, and so forth; not the entire engineering faculty. A program may be granted accreditation for a maximum of six years, or less if the Board determines that there are issues to be addressed.

Normally, a visiting team is comprised of a Chair, usually a member of the Accreditation Board; a Vice-Chair; a General Visitor appointed in consultation with the local Association; and one Program Visitor for each program being visited.

Prior to the visit the team members receive a large amount of information on the Engineering Unit as a whole and on the various programs which will be visited.

A typical visit proceeds as follows.

Sunday

10:00 a.m. – 12:00 p.m.

This is the first team meeting, held in the hotel. Introductions are made and the Chair will ask for a thumbnail backgrounder from each team member so that the members will recognize each others experience and specialties. The schedule for the visit is reviewed and any procedural questions dealt with. The Team Chair will stress the strict confidential nature of the process.

1:30 p.m. – 5:30 p.m.

Off to the University campus. Sunday afternoon is dedicated to review of program materials. The faculty member having responsibility for organizing the visit will have set aside a large room for use of the visiting team during the visit. There will be space for each team member to set up a work station with appropriate computer access.

There will also be tables holding program materials for each program. These comprise curricula, course outlines, sample assignments, sample tests and exams, sample transcripts (names removed), and capstone project reports.

This last item is very important as the accreditation criteria require that a student's studies culminate in a significant design experience which integrates the knowledge and skills acquired in earlier course work. The Team Chair, Vice-Chair, and General Visitor are concerned with all programs being visited and on a large visit there is often only time for these individuals to review capstone projects.

8:00 p.m.

The second team meeting is held in the hotel. The team will share first impressions and more important will identify "things to watch out for" the next day.

Monday

8:00 am

Off to the university

8:15 a.m.

The team meets with the Dean, Assistant Deans and Department Heads; introductions all around. The Team Chair will make some comments about the accreditation process, confidentiality, and that the team only carries out an assessment; the CEAB makes the decisions.

8:30 a.m. – 12:00 p.m.

At this juncture the team goes separate ways. The program visitors will each get together with their respective Department Head and for the remainder of the day will interview faculty and support staff, and visit labs within the department.

The Chair, Vice-Chair, and General Visitor will have individual schedules. The Chair, and possibly the Vice-Chair, will meet further with the Dean.

The Team Chair will usually want to meet with senior university administrators: the University President, VP Finance, VP Academic, VP Administration, and so forth depending on the organization of the institution. This is partly to gain information on how the Engineering Unit "fits" in the overall scheme of things but also to educate these senior people because some may have no idea of what CEAB is or does.

The Team Chair will participate in scheduled meetings with students and will usually want to meet with those responsible for the Complimentary Studies portion of the programs. The Team Chair will also visit the engineering labs.

The Vice-Chair and General Visitor may accompany the Chair in some of these activities but will also have individual assignments such as visiting the library, meeting with the Dean of Science, meeting with basic science and mathematic instructors who teach engineering classes, visit basic science labs, and meet with the Director of Research, Deans of Arts and Social Science, Complimentary Studies instructors, and students. In other words, the Vice-Chair and General Visitor are expected to cover anything of a general nature which the Program Visitors do not have time for.

1:00 p.m. 5:00 p.m.

The team is back to work as described above until time to head back to the hotel.

8:30 p.m.

The third team meeting is held back at the hotel. This is usually a long meeting, sometimes going to midnight or later. By this stage in the process all of the information should be available for the team to formulate its preliminary findings; actually, almost final findings. There is typically a great deal of discussion on the individual team member's issues, their opinions and on the relative importance of this and that.

Consistency is of major importance; for example if the amount and effect of obsolete equipment in the mechanical and electrical labs are similar, it would not do to have one visitor rate the situation as acceptable and the other to rate it as not. Also, some issues may be specific to one program, others will be found in several or all programs. On a large visit with many programs the Team Chair must be a diplomat and a dictator to get through this meeting.

Tuesday

8:30 a.m.

The team returns to the university. Tuesday morning the team members are expected to see any one they missed the day before, perhaps conduct further lab visits and check back with people as necessary to confirm, clarify or expand on the information gleaned the day before. Tuesday morning may be a bit open but is usually just as busy as the day before.

The Team Chair will likely have a last one-on-one visit with the Dean to clarify any outstanding questions arising from the Team Chair's own observations or from the discussion the evening before. The Team Chair will probably as a courtesy give the Dean a brief preview of the points which will be raised at the exit interview.

11:00 a.m. – 12:00 p.m.

The team now goes "in camera" to prepare its final list of issues. Each team member will provide input and the Team Chair will draw up a list, probably divided into program-specific and general items.

1:00 p.m.

The work, and usually some last minute debate, continues. The Dean, Assistant Deans and Department Heads are put on standby.

The list of issues with accompanying explanations or supporting data is finalized. This is a very important step because the Team Chair will be very reluctant to later introduce any significant surprises in the forthcoming written reports.

Each team member's final written report is submitted to the Team Chair within two weeks but some will hand in his or her report now.

2:30 p.m. – 3:30

The Dean and others are invited for the exit interview. The so named "exit interview" is really not an interview. The Team Chair goes through the list of issues, asks if there are any questions and usually there are none, although sometimes there may be a bit of discussion. ■

Robert Foster, P.Eng. was a member of the Canadian Engineering Accreditation Board from 1986 to 1994. As such he chaired numerous visits including Dalhousie University, Queen's University, University of Toronto, Ryerson University, University of Calgary, and others. He has recently renewed his involvement with the CEAB and in 2009 chaired a visit to the University of Windsor.

Council Report

Wednesday, June 17, 2009

A. Erhardt, EIT

The summer Council meeting was called to order at 12:35 p.m. by President Don Himbeault. Following a round of introductions, the agenda was unanimously adopted, the previous meeting's minutes were reviewed and accepted and things were underway.

The first item for review was the topic of continuing professional development (CPD). Councillor Bill Girling presented a review of where things currently stood. The council task group responsible for exploring continuing professional development was looking at the Alberta model as a starting point. It would be simple and easy to complete for members using the new APEGM website. Currently, the task group was looking for direction from Council for assistance with a strategic motion to be put forward at the next Annual General Meeting. The proposal suggested a one year pilot plan, with voluntary participation to establish a good base, with required reporting being implemented following shortly thereafter. Discussions also led to the suggestion of a presentation being made at the Annual General Meeting.

It was brought forward that about half of Canada's engineering associations have required continuing professional development reporting. Within Manitoba, most professional associations have CPD programs with reporting policies already existing for many years. It was also noted that professional development is already required in the Engineering and Geoscientific Professions Act, however, the reporting of said development is not. Other behind-the-scenes issues need to be addressed, such as how APEGM would address non-compliance. As well, what would APEGM do with "non-practicing" members (ie. those on parental leave or retired)? How would they report, or would they have to report at all? Engineers Canada Director Dave Ennis drew upon his experience of 11 years ago when APEGM tried to introduce continuing professional development. His belief is that the only way to make this happen would be through a by-law change.

In the end, a motion was passed to create a proposal for a CPD program with required reporting to commence in the fall of 2010, with a voluntary program starting in November 2009. It was pointed out by Councillor Girling that members who have come through the EIT pre-registration program are familiar with reporting their professional experience and should find the new CPD proposal easy to follow. It is estimated that new members since the last member vote on CPD (1998) comprise half of the current membership.

Following the conclusion of the CPD agenda item, Dr. Marolo Alfaro, P.Eng., made a presentation on behalf a group of Philippine Educated Professional Engineers. He introduced Council to the new group, which represents engineers who have been trained in the Philippines and who are registered members of APEGM. Dr. Alfaro explained who they are, their mission statement and their long term hopes and goals. The question was raised on whether or not this newly formed organization would also cover geoscientists. Dr. Alfaro indicated that currently there were no Philippine trained geoscientists, so the current plan was to only cover engineers. Council thanked Dr. Alfaro for the presentation, and planned to discuss it later on in the meeting.

The consent agenda was then up for approval. The agenda included the 2009 budget, and the final revision of the Manual of Admissions. This was all reviewed and passed without further questions.

Following the consent agenda, Council opened up discussions on the presentation by Dr. Alfaro and the Philippine Educated engineers. It was noted that in order to qualify for membership in their organization, a prospective member had to be a member of APEGM; either already registered or in the EIT or academic assessment program. Similar parallel associations exist with other professional groups in Manitoba (eg. registered nurses), and also engineering groups in Ontario. The end result of the discussions was a motion supporting their mission in principle, with the possibility of forming a memorandum of understanding. Council asked Executive Director Grant Koropatnick to ask the group to consider a name that was dissimilar to APEGM. One suggestion was to use the word "society" instead of "association" – Society of Philippine Educated Professional Engineers of Manitoba (SPEPEM).

A request has been made of APEGM to support the World Federation of Engineering Organizations' presidency nomination. Engineers Canada Director Dave Ennis gave some background information to Council, explaining the organization's request for support, both political and financial. The point that raised attention of Council was the request for financial support. Council was of the opinion that there were other funding options, such as federal government grants and that there was no need to raise member dues to support this initiative. Similarly, Engineers Canada's recommendation was to not support the funding aspect of the proposal. As such, a motion was passed to support the presidency without funding.

The memorandum of understanding between APEGM and UMES requires a Councillor representative. Previously, former Councillor James Blatz was the liaison between UMES and APEGM. However, as he is no longer on Council, a new representative was required. Council nominated Councillor Jeannette Montufar for the role, pending her acceptance as she was not in attendance at the meeting.

A few outstanding items required review prior to the close of the meeting. A strategic planning date was set for reviewing and planning the short term council goals. As well, the Discipline Committee still requires a professional geoscientist as no one had been found to date. The Science Symposium name change initiative is still ongoing along with the Ownership Linkage contact with Yellowquill College. The CPD task group was progressing following today's meeting. The Labour Mobility Act issues are also being actively monitored by Council.

As things came to a close, Council reviewed and assigned the monitoring reports and reviewed the agenda for the next meeting. The information items were also reviewed, including details on the spaghetti bridge competition and the 100th anniversary of the University of Manitoba's geology department. Council performed their self evaluation, and the meeting was adjourned shortly after 3:30 p.m. ■

BUILDING ON ENGINEERING KNOWLEDGE
ENGINEERS CANADA NATIONAL SCHOLARSHIPS PROGRAM

Engineers Canada invites professional engineers to enter the 2010 National Scholarship Program competition.

Refer to the application form for the complete list of eligibility requirements.

Deadline : March 1, 2010

Manulife Financial Scholarships

Field: **Engineering**
Value: $10,000
Criteria: Candidates must be accepted or registered in a faculty of engineering, beginning their studies no later than September 2010.

TD Insurance Meloche Monnex Scholarships

Field: **A field other than engineering.** The field of study chosen should favour the acquisition of knowledge pertinent to enhancing the performance of the candidate in the engineering profession.

Value: $7,500

Criteria: Candidates must be accepted or registered in a faculty other than engineering, beginning their studies no later than September 2010.

TD Insurance Meloche Monnex Léopold Nadeau Scholarship

Field: **Public Policy Development.** The field of study can be engineering or another subject area.

Value: $10,000

Criteria: Candidates must be accepted or registered at the time the scholarship is awarded (in the fall), in a master's or doctoral program that will greatly enhance their engineering expertise, abilities and potential to influence the development of public policy.

Application forms are available at:
www.engineerscanada.ca/e/pr_awards_2_1.cfm

or contact the National Scholarship Program at:
awards@engineerscanada.ca

engineerscanada ingénieurscanada

Engineers Canada is the business name of the Canadian Council of Professional Engineers.

*The term ENGINEERING is an offical mark held by the Canadian Council of Professional Engineers.

6th Annual Making Links Engineering Classic Golf Tournament

The sixth annual Making Links Engineering Classic (MLEC) was held on June 18, 2009 at Quarry Oaks Golf Course in Steinbach, MB. The tournament is put on every year by the APEGM Sports Committee in association with the University of Manitoba. Net proceeds from the MLEC go to the education of Manitoba's future engineers at the University of Manitoba.

Players getting in some practice time on the driving range before the game.

Over 220 registered golfers joined volunteers from APEGM and the University of Manitoba for a wonderful day making this year's tournament a huge success. This year's tournament raised over $14,000 for the Faculty of Engineering at the University of Manitoba.

Once the golfing was finished, the golfers indulged themselves in a tasty steak dinner and networking around their tables.

Speeches were made by Leo Martins from Great West Life, the major sponsor for the 2009 tournament, and by Dr. Doug Ruth, Dean of Engineering at the University of Manitoba. Many thanks were given out on behalf of the University of Manitoba for the generous donation from the MLEC golf tournament.

The 2009 MLEC had many different hole and competition sponsors, including lunch sponsor, HudBay Minerals Inc. and golf cart sponsor, City Mix. There were also three Hole-in-One contests sponsored by Birchwood Honda, Investors Group, and Hit a Ball for MS. The Chipping Contest and Par 3 Poker were sponsored by Lafarge Canada Inc.

The other competitions included: Straightest Drive, sponsored by Bockstael Construction, Stantec Consulting Inc., and SNC Lavalin Inc.; Closest to the Pin, sponsored by Smith Carter, Ranger Insurance Brokers, and ENG-TECH Consulting; and Longest Drive sponsored by National Testing Labs, Wardrop Engineering, and Lavergne Draward & Associations Inc.

Players heading out onto the course.

continued on page 17

Teams making their way out to their starting green after shotgun start.

4th Place Team: Jeff Richmond, Nolan Klassen, Graeme Leib, Roman Hudon

3rd Place Team: Julien Lavergne, Brad Draward, Robert McDonald, Bill Craplewe

2nd Place Team: Dan Scherger, Gord Sieclert, Dan Treger, Dan Green

1st Place Team: Brian Blahey, Howard Procyshyn, Beau Brissette

This area is in recognition of those sho have endeavoured to support and fund the 2009 MLEC, without whom, we would not be able to bring you such an outstanding day of golf and networking.

Please support our Sponsors in turn, so they may continue to thrive and grow, and continue to finance this opportunity to support the future of Manitoba's Engineers at the University of Mantioba.

Major Sponsor
Great-West Life

Cart Sponsor
City Mix

Par-3 Poker Sponsor
Lafarge

Lunch Sponosr
HudBay Minerals Inc.

Hole/Competition Sponsors & Supporters

ACI Manitoba Chapter
Acres Manitoba Ltd.
AMEC Earth & Environmental
Building Products & Concrete Supply
Canad Inns Fort Garry
Cansel Survey Equipment
Con-Force Structures
Cowin Steel Co. Ltd.
CTTAM
David Aplin Recruiting
Dillon Consulting Limited
E.H. Price Winnipeg
Earth Tech Canada Inc.
ENG-TECH Consulting Limited
Fast Air Executive Travel
Hit a Ball for MS
Inland Aggregates Limited
Investors Group
KGS Group
Lafarge
Lavergne Draward & Associates
Lewis Instruments
Manitoba Hydro
Mid-Canada Reinforcing
MTS Allstream
National Testing Laboratory
Nelson River Construction Inc.
North Garden Restaurant
Pauwels Canada
Powerland Computers
Ranger Insurance Brokers
Standard Aero Ltd.
Stantec Consulting
The Personal Insurance Company
Vector Construction Group
Wardrop Engineering
Wolseley Engineered Pipe Group
XL Insurance & Oldfield Kirby Esau Inc.

BUILDING ON ENGINEERING KNOWLEDGE
ENGINEERS CANADA NATIONAL SCHOLARSHIPS PROGRAM

FOUR SCHOLARSHIPS

to support you
on your path to greater knowledge

TD INSURANCE MELOCHE MONNEX, provider of the home and automobile insurance program endorsed by Engineers Canada, is proud to be associated with the Engineers Canada Scholarship Program by offering four scholarships this year.

Three TD Insurance Meloche Monnex Scholarships of $7,500

Each scholarship will assist engineers returning to university for further study or research in a field other than engineering. The discipline should favour the acquisition of knowledge which enhances performance in the engineering profession. Candidates must be accepted or registered in a faculty other than engineering.

The TD Insurance Meloche Monnex Léopold Nadeau Scholarship of $10,000

This scholarship is awarded to students pursuing studies in Public Policy Development in the field of engineering or another discipline.

To be eligible, candidates must be accepted or registered, at the time the scholarship is awarded in the fall, in a master's or doctoral program that will significantly enhance their engineering expertise, abilities and potential to influence the development of public policy.

APPLICATION DEADLINE: March 1, 2010

Application forms are available at:
www.engineerscanada.ca
or by contacting the National Scholarship Program at Engineers Canada
awards@engineerscanada.ca

Endorsed by:

engineerscanada

Engineers Canada is the business name of the Canadian Council of Professional Engineers

TD Insurance
Meloche Monnex

*The term "engineering" is an official mark held by the Canadian Council of Professional

EPIC Educational Program Innovations Center

EPIC

Upcoming Courses - 2009 & 2010

Civil

• Evaluation of Bridge Condition for Safety and Bridge Rehabilitation	Sep 24-25, 09	Regina
• Deep Foundation Design, Construction and Testing with Related Case Histories	Oct 26-28, 09	Winnipeg
• Life Cycle Cost Analysis for Pavement Design	Nov 16-17, 09	Winnipeg

Electrical

• Electrical Design For Industrial, Commercial and Institutional Facilities	Oct 27-29, 09	Winnipeg
• Electrical Equipment: Selection, Applications, Operation, Diagnostic Testing and Troubleshooting	Jan 25-29, 10	Winnipeg
• Canadian Electrical Code	Apr 19-20, 10	Saskatoon
• Modern Power System Protective Relaying	Apr 19-21, 10	Regina

Environmental

• Soil and Groundwater Remediation Technologies	Sep 21-22, 09	Winnipeg
• New Challenges in Air Emissions Management	Nov 5-6, 09	Winnipeg
• Achieving Water Quality Standards By Effective Stormwater Management	Nov 30 - Dec 1, 09	Regina
• Environmental Site Assessment and Remediation	Mar 8-9, 10	Regina

Construction

• Bidding, Evaluation, Negotiation and Contract Award - For Construction Projects	Oct 19-20, 09	Regina
• Interpretation and Enforcement of Construction Contracts	Nov 2-3, 09	Winnipeg
• Avoiding Construction Over Runs and the Resultant Construction Disputes	Feb 22-24, 10	Regina
• Foundations of Construction Law	Apr 12-13, 10	Winnipeg

Mechanical

• Mechanical Engineering for Non-Mechanical Engineers	Oct 5-9, 09	Regina
• Power Generation: Gas Turbines, Co-Generation, Combined Cycle Plants, Wind Power Generation and Solar Power	Jan 18-22, 10	Winnipeg
• Pumps: Selection, Operation and Maintenance	Mar 8-9, 10	Regina
• Industrial Piping and Associated Equipment	Mar 10-12, 10	Regina

EPIC offers online courses in the following areas: Information Technology, Business and Management, and Engineering. For more information, please visit www.epic-edu.com and select "Online Courses".

EPIC On-site Programs
EPIC courses are available on-site at your location and they can be customized to suit your specific requirements.
For more information on these programs, please visit our website at www.epic-edu.com or call Tim Chugh at 1-888-374-2338 ext 242 or email him at tchugh@epic-edu.com

Successful completion of EPIC courses entitles you to CEUs.
For information regarding these courses and our recently added courses, please visit our website

Toll Free: 1-888-374-2338 ext. 222 • Fax: 1-800-866-6343
www.epic-edu.com

continued from page 14, 2009 MLEC

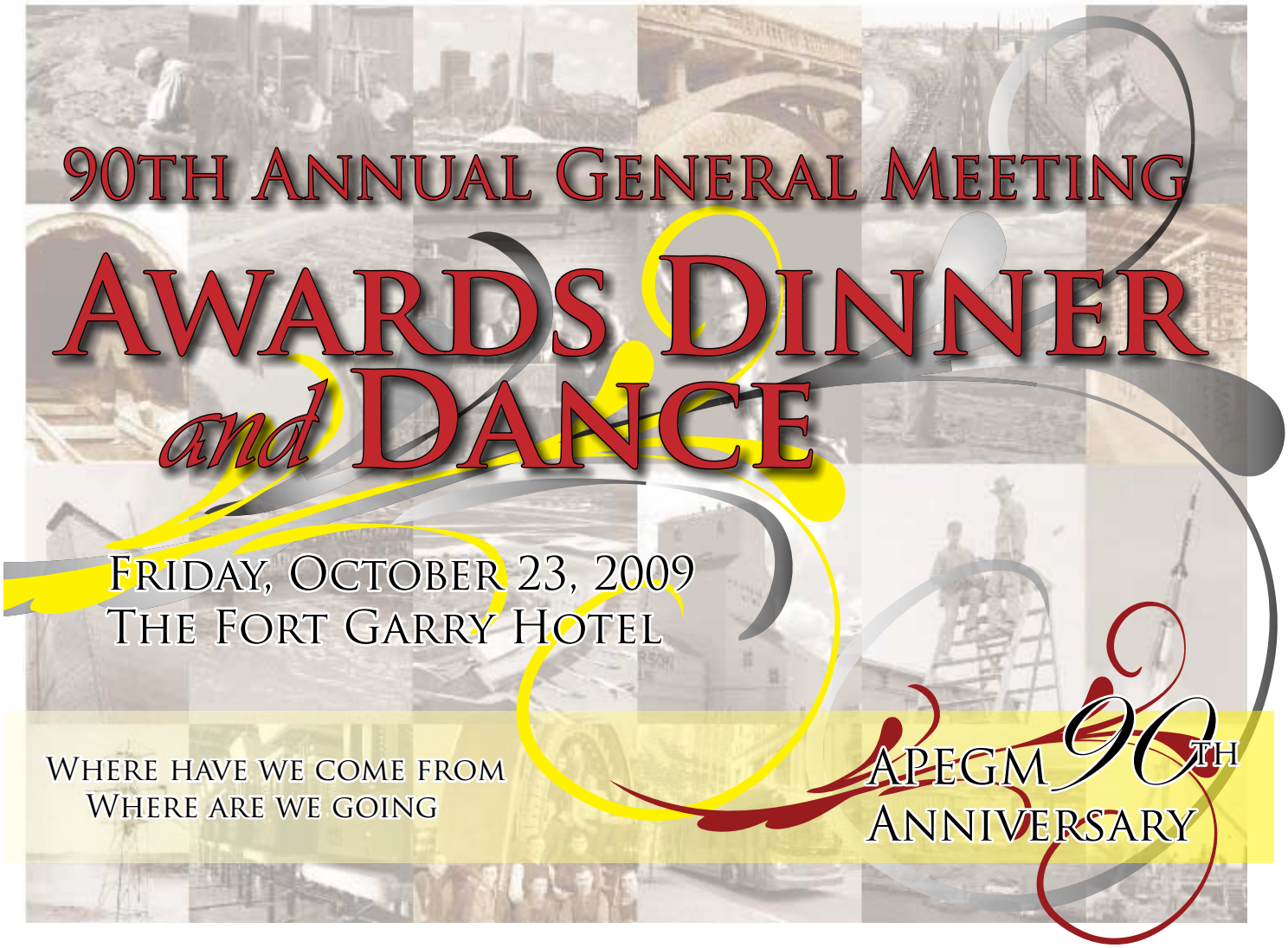
There was also an astounding amount of prizes available to the players. In addition to the tee gift bag filled with goodies, each player received a numbered prize at random from a large selection of items ranging from power tools to home accessorizing equipment.

Presentation of the $14,000 donation to the University of Manitoba Faculty of Engineering.

This year's tournament winners were Howard Procyshyn, Brian Blahey, and Beau Brissette. The Landon Cup (2nd place) was awarded to the team of Dan Scherger, Gord Sieclert, Dan Treger, and Dan Green. The Sullivan Cup (3rd place) went to the team of Julien Lavergne, Brad Draward, Robert McDonald, and Bill Craplewe.

The APEGM Sports Committee would like to thank all the people that came out to play, who doing so, helped support the future of Manitoba's Engineers at the University of Manitoba and made tournament festivities possible. Hope to see you all next year on June 17, 2010. Watch for more details to come. ■

APEGM Past Presidents Garland Laliberte and Ron Britton connecting during dinner.



Adventures in Authorship

D.A. Ennis, P.Eng.

The Faculty of Engineering at the University of Manitoba marked 100 years of engineering education in Manitoba in 2007. Many of the graduates and Faculty helped to mark the occasion with the 'Party of The Century' on the Homecoming Weekend on September 14, 2007. The timing was great too, as the new building, the Engineering and Information Technology complex, with its show-case atrium had been recently finished.

In the spirit of that party, and on an initiative of Dean Doug Ruth and Robert A. Kennedy, B.Sc. EE 1962, it was decided to publish a 'history' of the Faculty. The book is now in print and available through the Faculty. The title is Grinding Geers for 100 Years.

Its title might resonate with graduates who reflect on the abrasive process that engineering students are subjected to during their degree programs, while the cover and the content recall the fun and mischief that provided diversion and relief from the grind. Alumni will attest to the observation that together, those realities served as the catalyst for long-term friendships, and in some cases marriages.

In my naivety, assuming that with my exposure to the Faculty through my employment with the Association I had acquired an appropriate knowledge history on my own, I agreed to be the primary 'researcher and writer'. I soon realized that I really only had the typical ten percent awareness of the 'iceberg' otherwise known as the world of university and academia. I should have been wise enough to consult an experienced author such as Paul Boge, B.Sc. CE 1996 beforehand. I didn't and the task became an adventure in authorship.

The 'history' is structured around the service periods of the nine individuals who served as Dean over the 100 years; Ernest Edmund Brydone-Jack, Edward Phillips Fetherstonhaugh ("Feathers"), Albert Edward Macdonald, Jacob (Jack) Hoogstraten, Martin Wedepohl, Edmund Kuffel, Garland Everett Laliberte, Donald Hugh Shields, and Douglas Warren Ruth. The names of the Deans and of those who graduated with a B.Sc. degree comprised the ten percent above the water line.

One of the earlier revelations from below the waterline was that, while the University and Faculty have accurate academic records of the graduates, the record of the staff, their service periods, and positions held

Engineering and Information Technology Complex at the University of Manitoba

was often patchy and in some cases non-existent. In general the University of Manitoba seems to have a record system focused on the business of academic research achievement, but little on maintaining a chronological record of campus happenings, particularly from the perspective of the student caught up in the 'grind'.

Fortunately the Faculty is blessed with a number of loyal and long-serving (both active and retired) academic and support staff. Their memories and assistance helped greatly in documenting the Faculty's story. Another bonus was that five of the nine Deans are still alive and were willing to share their recollections. Among the most useful sources of information was the 1982 history authored by the staff (primarily A.J. (Art) Carlson) to mark the 75th Anniversary. It built on a 1977 document put together by Ed (Easy Ed) Magill.

Grinding Geers for 100 Years attempts to chronicle not only what was going on in the Faculty but also within the broader University and beyond the University gates from the students' perspective. One of the revelations was the sensitivities as to what can be published. A case in point is the incident which in the University is known as "the defalcation", when in 1932 the treasurer was found to have stolen $860,000 of the University's endowments. I suggested that it is amusing to contemplate that only a university would employ such a fine euphemism to mask its

continued on page 23

GREEN WASHING

T. Krahn, P.Eng.
Engineering Manager
Building Alternatives Inc.

Dr. K.J. Dick, P. Eng.
Associate Professor
Biosystems Engineering
University of Manitoba

2009 marks the tenth anniversary of 'greenwashing' as an entry in the Oxford English Dictionary. The OED defines the term as: "Disinformation disseminated by an organization so as to present an environmentally responsible public image." Are there any implications here for a professional engineer or geoscientist working for a given organization?

What is the professional's responsibility with regards to greenwashing? Does our mandate include the demystification of advertising campaigns and corporate promotional strategies, or do we simply rely on 'buyer beware' and pass the responsibility for due diligence and information gathering to our clients?

It is not the purpose of this article to comment on products in the marketplace that make claims regarding ecological soundness, or "green-ness". However, recent discussions in our office have lead to this question:

If we are brought into a project for our expertise on a very specific part of the design, are we obliged to comment on aspects outside of our contract if we see issues that we know will affect the overall performance of the finished product?

As an example, we were engaged in a structural inspection of a residence recently. A home inspector was not satisfied that the building was structurally sound, so he had the prospective owner (who had made an offer to purchase, conditional on an inspection) contact us to inspect the foundation of the house. Upon visual inspection, the building proved to be in average structural condition for its age and construction style. It was not in imminent danger of collapse, but some upgrades could have been made. However, the moisture levels in the basement were excessive, there was evidence of mold and mildew and recent repairs were showing drainage and damp-proofing problems that needed to be addressed.

The prospective owner, realtor and the home inspector were present at the time of our site visit. We presented several options for remedying the moisture issues – which in our opinion would have positive impacts on the structure. The discussion shifted away from the structural condition, and towards the healthiness of the home. If a person had respiratory difficulties, for instance, would they be able to live here comfortably?

As professionals, our first responsibility is the safety of the general public. Does this responsibility give us permission to tell our clients what to do or how to live? Within our scope of practice, these are the sorts of questions that enter into discussions of design philosophy. A client wishing to make the 'greenest' choices will have their decision limited by economy, timelines, product availability, expertise within the building community, and the quality of the information available about a given product or process.

We are not presenting any hard and fast answers here – just offering some food for thought. If you are interested in continuing this discussion, come and join us at the fourth 'Northern Climates Alternative Buildings Design Day' at the University of Manitoba's Alternative Village, Saturday, September 19, 2009. ■

continued from page 4, Engineering Philosophy 101

ingenious, and creative. As a profession, I believe we should all consider ourselves to be "Imagineers", regardless of where or how we apply our skills. And when we do this, we are probably creating some different level of risk. We should acknowledge and manage the risks we cause to develop. If we don't champion the value of those risks then we can be rightly accused of being the basic cause of our nation's economic woes. ■

Members in the News

Dr. Douglas Ruth, P.Eng.

President Ravi Ravindran inducted 36 new Fellows into the Canadian Academy of Engineering on June 17, 2008. The ceremony took place in Montreal, in conjunction with the Academy's 2008 Annual General Meeting and Seminar. Included on the list of new Fellows was Dr. Doug Ruth, University of Manitoba.

Douglas Warren Ruth is known internationally as a visionary and a "shameless promoter of all things engineering". He has been successful in waking the public to the importance of engineering with his challenging and provocative talk "Engineers: Enablers of Civilization".

Dr. Ruth is a ground-breaker in raising the profile of engineering being a key component of an "innovation economy" and has been invited to speak internationally on this pivotal topic. Dr. Ruth's work in the area of Transport Phenomena in Porous Media Research is leading-edge. He is responsible for introducing and championing many innovative analysis techniques in the petroleum-core analysis industry.

For more information, please go to http://www.acad-eng-gen.ca/e/fellows_.cfm. ■

Doug McNeil, P.Eng.

Doug McNeil has been appointed to the position of Deputy Minister of Manitoba Infrastructure and Transportation effective June 29, 2009.

Mr. McNeil holds both Bachelor and Masters Degrees in Engineering. He has served for the last six years as the Vice President of Engineering and Construction, and Vice President of Hydraulics with the Manitoba Floodway Authority (MFA).

The MFA recently completed the $660 million expansion of the floodway channel which diverts high water on the Red River around Winnipeg.

Prior to the joining the Province of Manitoba, Mr. McNeil spent 20 years with the City of Winnipeg in the Water & Waste Department in various engineering roles, including Senior Land Drainage and Flood Protection Engineer.

His municipal experience included taking an active role in coordinating the City's flood fighting response during the 1997 Flood of the Century.

Mr. McNeil was selected following a public civil service competition. He will be assuming the many responsibilities previously held by retiring Deputy Minister Andy Horosko with the various provincial, national, and international transportation and infrastructure organizations, partnerships, agencies and groups in the coming months. ■

continued from page 19, Adventures in Authorship

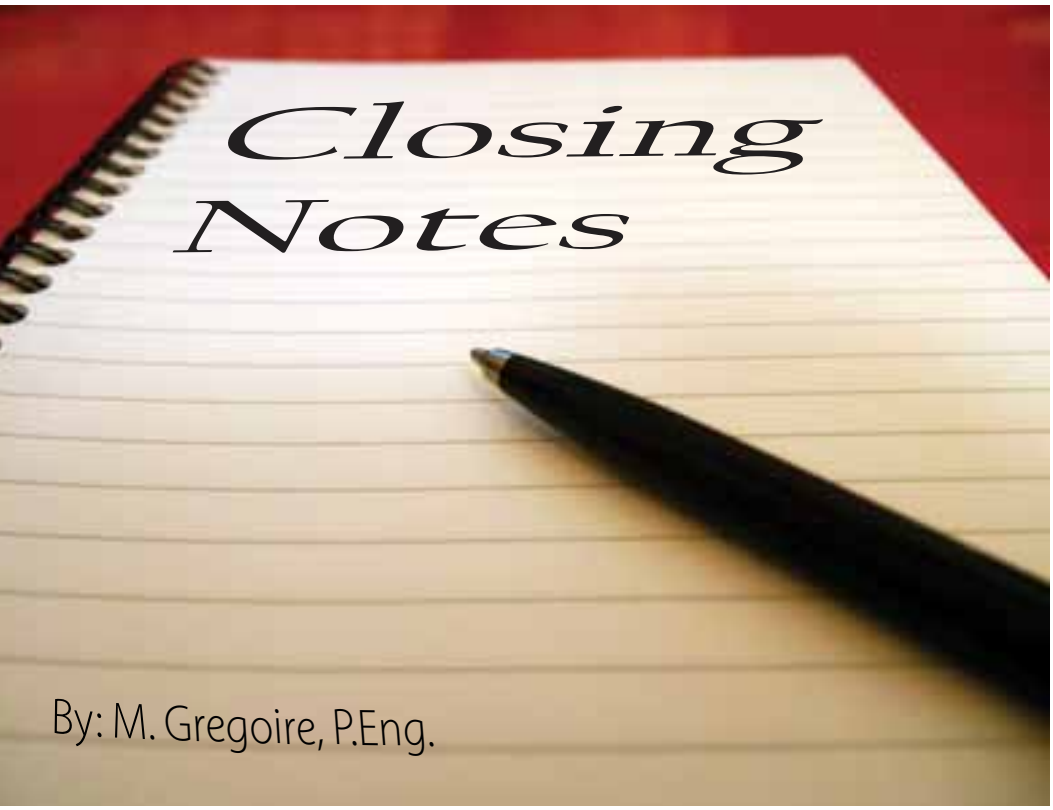
embarrassment. It didn't get into the book that way.

In tracking student activities, the Faculty of Engineering's the *Slide Rule*, most of which are preserved in the library in the Engineering Library, and later the *Red Lion* publications were helpful resources.

The *Red Lion* was generally less than a paragon of journalism, but on the other hand, the *Slide Rule,* in its early years at least, served as a general technical journal. Some of the articles in the depths of the depression of the 1930s make interesting reading in the context of the present world economy.

There were also developments that couldn't be nailed down. Among them are: when the slide rule was officially replaced by the calculator for course work and exams; and when drafting ceased as a course requirement and was replaced by CADD. Also, I was surprised to learn that the Faculty no longer owns surveying equipment. (I couldn't borrow a level to check out the 1950 Flood level.) These days the survey equipment is very sophisticated and expensive and is leased for the weeks of survey school and returned to the owner.

Of course I am biased, but I think that alumni of any era will find Grinding Geers for 100 Years an interesting and sometimes amusing read – at the very least their names and those of their classmates are in the book! ■



Having gone through the Department of Biosystems Engineering at the University of Manitoba, my colleagues and I had the opportunity to learn a few things from all of the other disciplines. In some of these disciplines, course work included a basic understanding of introductory topics. In the area of Electrical Engineering, my course work included circuitry and instrumentation. I didn't pursue that field beyond this basic level.

In contrast to my knowledge of this discipline, a friend of mine sought and received a Master's Degree through the Electrical department with a focus on antennas. I have yet to pick her brain about the topic and so my understanding of these devices remains fairly limited. I am certain of one thing, though: use of an antenna for transmitting information is an incomplete process if there is not another antenna receiving the information and properly interpreting that information.

The same holds true for communication at the personal level, too, but we are too often prone to forgetting this.

The first definition of the word communication on Princeton's Wordnet website is to "pass on" or "transmit information". Like me, this definition is likely in tune with your impulse. This definition omits a key component, however, that Merriam Webster satisfies with one of its definitions: "to transmit information, thought, or feeling so that it is satisfactorily received or understood".

A quality course on communication skills will cover the important aspect of listening. We have all undoubtedly been told by instructors on the topic that we need to listen actively while receiving the information and paraphrase the received information to ensure that we've understood it. It can be all too easy to forget to apply this to engineering and geoscientific processes.

In several cases I've been involved with, communication breakdown was a contributing factor leading a complainant to contact APEGM's Investigation Committee. In one case it was as simple as a member not responding to phone calls and e-mails from their client. In others, the communication breakdown was not quite as straightforward.

In one case, miscommunication on two levels led to the initiation of an investigation into a member of APEGM's work. A detailed document prepared by the investigated individual was intended to address a fairly specific concern raised by a member of the public. Upon receipt of the document, the concerned person passed it on to another member of APEGM in order to have it reviewed.

The reviewing member attempted to contact the author in order to discuss the document but the latter's legal counsel advised against this. Without a chance to talk to the investigated individual, the reviewing member assessed the document as a stand alone and considered it to be lacking support of its broader conclusions. As it turns out, the broader issues discussed in the document were based on previous work published in another document, but not referenced. Unfortunately, this was not clearly stated in the document forwarded to the Investigation Committee by the complainant.

Upon completion of the case, it became clear that the investigation could've been avoided by the member in question on two occasions. In preparation of the original document, a clear understanding of its intention would've formed the basis upon which the member could've avoided the broader topics. Listening to the requesting individual's parameters would've ensured clarity and conciseness in the final document. The investigated member could also have spoken briefly with the reviewing member in order to quickly gain an understanding of why the document was being reviewed.

In another case, a complaint was submitted due to a disparity between the member's initial design and the end user's desired system. The contractual agreement for the project meant that the member in question did not have direct contact with the owner and end user. Despite the situation that the member found themselves in, the investigation could likely have been avoided by using advanced listening skills.

Using the listening skill of actively observing the owner/end user would have been a better starting point to the design process. Although the designer didn't meet the owner/end user in person, visits to the building in question during construction should've given a clear indication that they were not 'typical', as described by the client. These observations should also have prompted the member to employ another listening skill: paraphrasing. This could've been accomplished by sending the client a short correspondence describing the design assumptions and a request that the owner/end user approve the assumptions.

Although many of us may have received formal training in the art of communication in the past, it is always helpful to review these skills. Active observation and paraphrasing are important but are only two of the many components vital to good communication. So I highly encourage all members to perform regular maintenance on their receiving antennas to ensure that they are functioning properly. ■

Detach page for posting

The Brown Sheet

National Professional Practice Exam

Deadline for application September 11, 2009.

Information and the application forms are available at the APEGM web site: www.apegm.mb.ca/PPE.html

Deadline: September 11, 2009

Date: October 19, 2009

Driving Forward Golf Tournament

The Driving Forward Golf Tournament promises to be a lot of fun and will provide industry representatives with an excellent opportunity to network with University of Manitoba students in a casual setting while enjoying the great game of golf. The tournament will be 18 holes of golf, Texas Scramble format, and will follow tournament scoring rules. Teams will be foursomes, consisting of two students and two professionals.

Date: September 24, 2009

Time: 1:00 p.m. Tee Off

Cost:
$60.00 Professionals

Location: River Oaks Golf Course, South Waverley, Winnipeg, MB

CEM Young Professionals Committee Official Launch Gala - Into the Future

Mr. Andrew Steeves, P.Eng. is the Vice-President of Administration for the ADI Group of Companies and has over twenty years of experience and will be presenting on QBS (Quality Based Selection).

QBS is quickly becoming the procurement method of choice; legislation specifying procurement based on QBS has been passed federally in the United States and provincially in Quebec. The House of Commons Standing Committee on Government Operations and Estimates recently recommended the legislation of QBS as the required federal procurement process in Canada.

For more information, see website: www.cemanitoba.ca.

Date: October 1, 2009

Time: 5:30 p.m.

Cost:
$35.00 Individual
$165.00 1/2 Table
$315.00 Full Table

Location: Western Canada Aviation Museum, 958 Ferry Rd. Winnipeg, MB

APEGM Annual General Meeting Professional Development Conference

Robert J. Sawyer's specialty is extrapolating today's scientific, medical, and ethical concerns into the next few decades, and making the radical changes that are forthcoming and understandable to any audience.

Robert will be dealing with the accelerating pace of change, understand new technologies, and avoid future shock, including the topics:

1. What are the top trends affecting the profession today and into the immediate future?
2. How do engineers from Canada compete against global titans India and China?
3. In what areas should engineers step-up?
4. Specialization vs. Generalization: Which education is more relevant in today's marketplace?

For more information, see the brochure included in this issue of the Keystone Professional or the APEGM website: www.apegm.mb.ca/AGM.html.

Date: October 23, 2009

Time: 8:30 - 11:15 a.m.

Cost:
$100.00 Early Bird
$125.00 Regular

Location: The Fort Garry Hotel, 222 Broadway, Winnipeg, MB

APEGM AGM Business Meeting

The Annual General Business Meeting is an opportunity for members to become directly involved in the business of the Association, vote on current matters, and acknowledge Councillors completing or just beginning their terms.

Pre-registration is required, lunch, and door prizes included.

Date: October 23, 2009

Time: 11:30 a.m. - 2:00 p.m.

Cost: Complementary with Registration

Location: The Fort Garry Hotel, 222 Broadway, Winnipeg, MB

APEGM AGM Awards Dinner & Dance

Fine cuisine and highly enjoyable entertainment set the stage for a first-class evening honouring member achievements and corporate contributions to the professions. Join representatives from government and industry on this special evening followed by an evening of great entertainment and dancing with Anders Magic and the Ron Paley Dance Band.

As one of Canada's premiere Entertainers, Anders will make this event one to remember. His full-scale after dinner show is a polished, professional act, complete with comedy, magic, and escapes, along with plenty of audience interaction.

Ron Paley formed the Ron Paley Big Band in 1976 after playing bass with the big bands of Buddy Rich and Woody Herman, with whom he recorded two CDs.

For more information, see the brochure included in this issue of the Keystone Professional or the APEGM website: www.apegm.mb.ca/AGM.html.

Date: October 23, 2009

Time: 6:00 - 11:00 p.m.

Cost:
$75.00 Individuals
All Professional Members and MITs:
Buy One, Get One Free
$500.00 Table (8 Tickets)

Location: The Fort Garry Hotel, 222 Broadway, Winnipeg, MB

Sharpening Your Written Communciation Skills

This will be a highly interactive two days of instruction. The course leaders will provide detailed instruction on, and provide numberous opportunites to practice, how to identify key information and focus readers' attention on it, and plan and write email, letters, reports, and proposals. There will be exercises with individual and group practice, followed by discussion and feedback.

Counts as 14.0 Professional Development (PD) contact hours. Optional: Textbook *Get to the Point!* for an additional $39.95. This course fills up quickly as there are only 25 spots. ***Register Early!***

Date: November 9 - 10, 2009

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

Cost:
$365.00 Registration

Location: APEGM Office, 870 Pembina Hwy., Winnipeg, MB

Climate Change in Manitoba - From Impacts to Adaptations

This full-day workshop, featuring speakers from across Canada, will provide APEGM members with background information on current and anticipated climate change affects in Manitoba and the Prairies; report on the Engineers Canada infrastructure vulnerability assessment carried out at Portage la Prairie; and guide the participants through a step-by-step process that has been developed to assess infrastructure climate change risk.

Case studies and techniques demonstrated in this workshop will assist participants to effectively incorporate climate change adaptation considerations into design, development and management of existing and planned infrastructure systems.

More information can be found on the APEGM website.

Date: November 17, 2009

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

Cost:
$50.00 Early Bird
$75.00 Regular

Location: TBA

New Members Registered May, June, & July 2009

F. Agharazi
H. Ahmari
A.P. Alderman
J.D. Allen
N.L.H. Aung
A. Berdichevsky
A.H. Bhuiyan
A.N. Bogdanovic
D.C. Bonin
T.D. Bradka
D.V. Brankovich
D.P. Brault
A.M. Butcher
P.R. Caguia
C. Chan
A.R. Chevrefils
C. Chung
Y. Coderre
H.D. Cohen
M.M.R. Dawood
V. De Henau
T.W. Dietrich
M.M. Dlot
M.S. Enzlberger
E.M. Fainblum
S. Fazal
A. Fereidooni
G.D. Ferraro
S. Filion
J.D. Friesen
S.J. Friesen Reed
M.R. Gerrits
E. Ghannoum
M.S. Gill
T.M. Goh
S. Goyal
E. Grano
F. Guay
E. Guimond
E.J. Guinn
G.P. Hamilton
M.M. Hamilton
B.S. Hartman
R. Hertanto
S.B. Holgate
J.T.R. Horrocks
J.K. Hosseinzadeh
D. Ignatow
M.D. Isaak
V.M. Jamadagni
K.W. Johnson
E. Jonus
S.S. Khalilieh
B.D. King
P.J. Kingerski
R. Knoll
K.A. Koenig
J. Krpan
S.G. Kryuchkov
R.D. Lanerolle
B. Lapointe
R.M. Lay
T.K. Leitch
V.F.W. Lessoway
S.A.M. Liebrecht
B.R. List
F. Liu
Y. Loevsky
J. Mackenzie
J.P. MacInnes
J.J. Malenchak
M. Mantaci
I.R. McCallister
D.C. McCloskey
E.A. McEwan
B.A. Miller
J. Molnar
J.A. Morgan
W.K. Mysyk
A.V. Nedeltchev
A. Nematallah
A.M.K. Ng
A.M. Osman
C.J. Palin
B.M. Patel
M.P. Patel
R.O. Petanca
R.J. Petursson
B.J. Polan
B. Pouliot
K. Qin
T.J. Ramnath
B. Ratnayake
S.R. Redmond
T. Renic
M. Riaz
D.S. Robinson
M.R. Saad
H.S. Saggi
S.W. Sauve
J.R. Scott
M.V. Seppanen
I.S. Sethi
J.E.J. Shewchuk
M.J. Shewfelt
K.L. Shuvera
A.J. Singbeil
P.A. Slater
I.C. Smallwood
R.H. Steinke
S.R. Suderman
D.A. Sweeney
S.S. Tanapat
S. Tekle
D.J. Thomson
M.L. Tsen
M.J. Van Helden
D.A. vanGaal
H.H. Vansadia
F. Venneri
C.G. Walrond
R.D. Webster
P.M. Weissgaerber
D.J. Wilhelm
A.E.R. Wolfe
E.W.LU. Wong
P. Wong

Licensees Enrolled May, June, & July 2009

G.H. Garrison
C.M. Putnam
J.W. Sneed

Members-In-Training Enrolled May, June, & July 2009

A.K. Agrawal
S. Ai
T.P. Anseeuw
N.B. Bhatt
B.S. Bilkhu
B.A. Briggs
N.L. Chester
R.T. Connor
V.J. Cordova
J.R. Dahl
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P.N. Dompierre
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S.J. Dysievick
T.J. Epp
A. Franchuk
M.K. Gajda
M.C. Gervais
S.D. Godon
R.L. Gribben
L.B. Groening
S.E. Hammond
Y.H.A. Ho
T. Huynh
A.N.S. Islam
M. Jia
M.C. Jones
G.J. Keith
T.LY.P. Kempers
M. Knyazher
M.R. Kohinski
K. Kolegaev
J.D. Krebs
M.D. Krentz
C.H.S. Kuo
N. Kyriakopoulos
A.N. Lashari
D.S. Light
D.W. Lu
A. Maapaar
B.L. MacAulay
M.S. Manzano
D. Maximets
B.E. Miller
B.A. Mukanik
S.J. Murphy
T.M. Ngatched Nkouatchah
J.D. Nguyen
S.W. Olynick
R.D. Patel
S. Phat
M. Phengpacdy
J.V. Polak Scowcroft
S.M. Proskurniak
P.K. Rajurkar
C.M. Regier
J.J.D. Ringash
S.M. Romancyshyn
T.D. Routledge
C.L.J. Simpson
J.D. Smith
K.R. Surminski
A.R. Syed
C.J. Tait
J. Tan
S.A. Timpa
E.D. Tonsaker
I.A. Urquhart
D.M. Vanderzwaag
C.D. Vogt
D. Vujadin
K.D. Wiebe
D.G.P. Wijeweera
D.M.T. Williams
J. Xu
C. Yang

Certificates of Authorization May, June, & July 2009

1640286 Ontario Inc. o/a Callidus Engineering
ARCADIS Canada, Inc.
BCA Structural Consulting Services inc.
Bearpaw Corporation Inc.
Blatz Engineering Inc.
Cascade Engineering Group Inc.
CPE Structural Consultants Ltd.
D.H. Charles Engineering, Inc.
D.W. CAMERON & ASSOCIATES LTD.
David Skinner & Associates Inc.
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ESTI Consultants Inc.
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Kassis Enterprises
KMH Engineering Inc.
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Lowe Mechanical Services Ltd.
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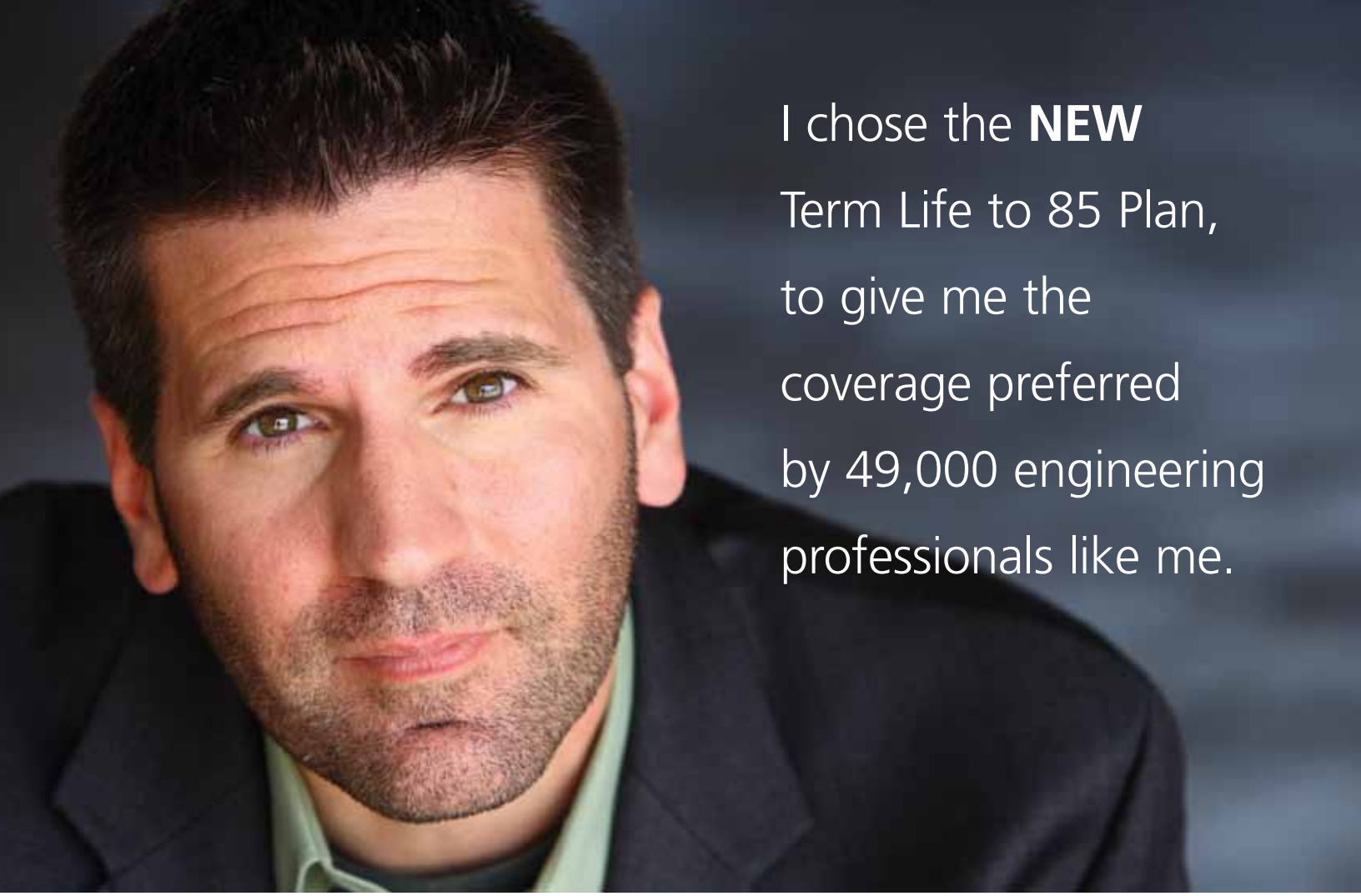

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