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

THE KEYSTONE PROFESSIONAL

SPRING 2012

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Why critical illness insurance?

How it can ease the financial burden for your family

Despite medical advances, critical illness is still common. In fact, the chances of you — or a close family member — being diagnosed with a critical illness are very real.

- Every hour of every day, about 20 people will be diagnosed with some type of cancer across Canada[1]
- 40% of Canadian women and 45% of men will develop cancer during their lifetimes[1]
- There are an estimated 70,000 heart attacks each year in Canada (that's one heart attack every 7 minutes)[2]
- There are over 50,000 strokes in Canada each year (that's one stroke every 10 minutes)[2]

Although more people survive critical illness, they may live with the economic impact for the rest of their lives.

By the numbers:

63 The percentage of Canadians who admit they have no plan ready in case they are diagnosed with a critical illness[3]

75 The percentage of Canadians who are concerned about having enough money if they became critically ill[4]

18 The number of conditions covered by the Engineers Canada-sponsored Critical Illness Plan

Can you afford the costs of being critically ill?

Being diagnosed with a critical illness doesn't only spell emotional and physical distress. It can have an enormous cost for people living with the disease and for their families.

> "The financial burden can be as stressful as the disease. The financial impact can last longer than the disease itself."

Unfortunately, public health services in Canada do not pay for all costs associated with critical illness. Many costs of treatment must be paid for by the patient, including some drugs, medical supplies and prosthetics. The average cost of newer cancer drugs alone is $65,000 per course of treatment.[1]

Persons living with critical illness usually have to take time off work for treatment and recovery. Loss of work or return to work at a lower salary can have long-term effects. Pension benefits may be lost or reduced. Debts may take years to repay. The standard of living for the patient and their family may be permanently reduced.

If you are self-employed, your situation may be even more uncertain than for those with jobs and benefits — you may have no income during treatment and recovery because you are not eligible for Employment Insurance benefits.

How critical illness insurance can help

Unlike monthly disability benefits that cover your regular household expenses, critical illness insurance pays you a lump sum up front for more flexibility in meeting many other expenses. These could include costs for drugs, travel to and from treatment, meals, housekeeping and to allow your spouse to take time off work to care for you.

The Engineers Canada-sponsored Critical Illness Plan is available for you and your spouse in coverage amounts ranging from $25,000 to $1 million. The lump-sum benefit is paid directly to the insured upon diagnosis of life-threatening cancer, heart attack, stroke or up to 15 other common covered conditions.

[1] Canadian Cancer Society's Steering Committee: Canadian Cancer Statistics 2010. Toronto: Canadian Cancer Society, 2010.
[2] Heart & Stroke Foundation Statistics.
[3] Redfern Research, March 2009.
[4] LIMRA, Tracking Opinions of the Public in Canada (Financial Products), 2009.

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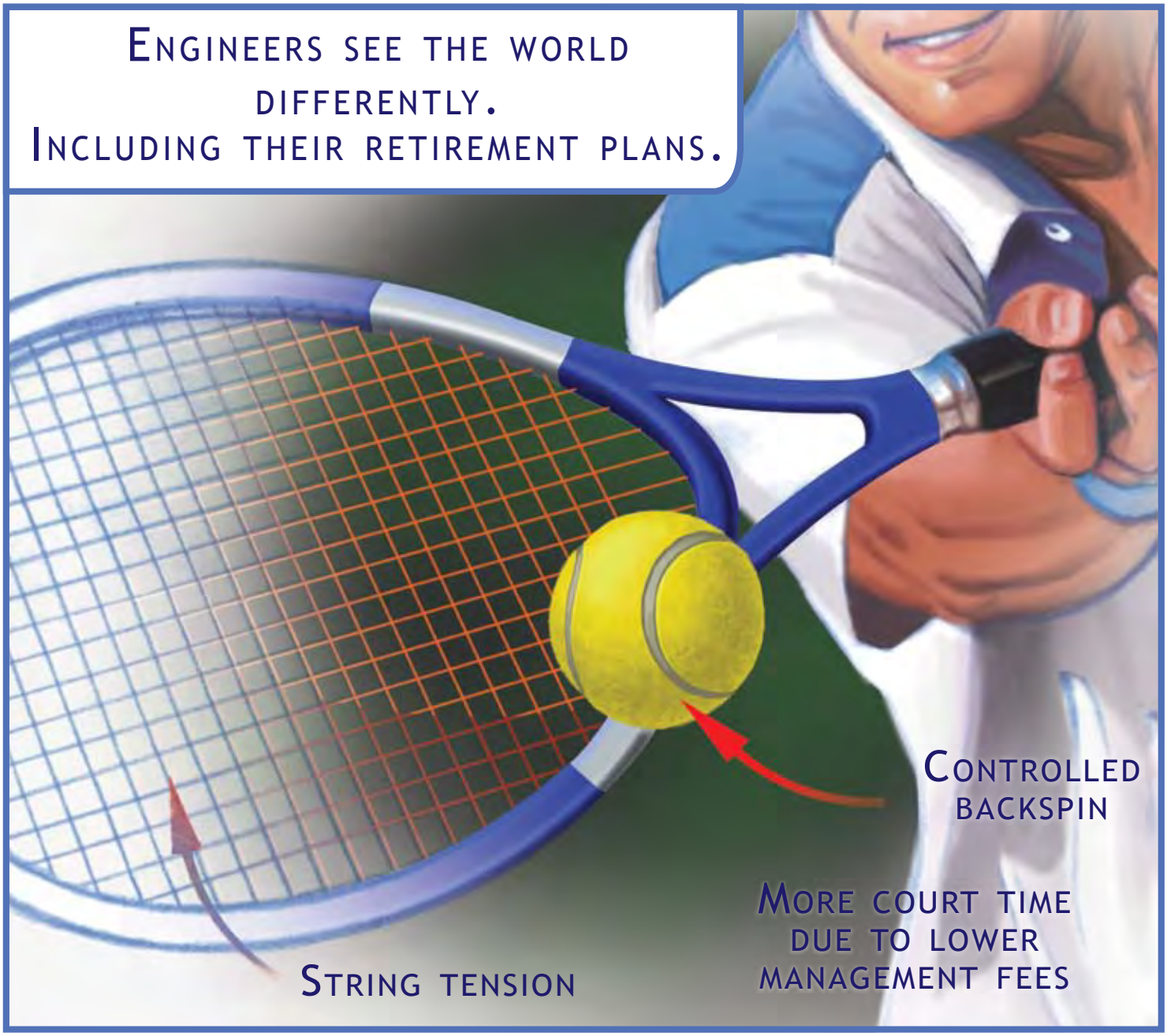

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Adam Pawlikewich, P.Eng.

Where does **APEGM fit** in Engineering

As I am going through this year as President of APEGM, a consistent thread of questions keeps coming up. The gist is; "Aside from giving me a stamp and collecting my fees, what does APEGM really do anyway?" I hope to try to start answering this question today.

As the regulatory body of the Engineers and Geoscientists, APEGM has certain functional requirements to regulate our members as required. But what does this really mean? Is it just APEGM showing up to remind us to register when we are in school, or requesting that we keep them informed when we are in training, and now having us make sure we keep reasonable records of our ongoing professional development? Or is it, on a more serious note, protecting the public when it comes to its members practicing Engineering and Geoscience? Yes to all of the above, and a lot more.

While it may not be obvious at first glance, APEGM exists through ongoing work from its members, other associations, Engineers Canada and Geoscientists Canada. As with many of the codes and guidelines we follow as professionals, expectations of our professions are ever changing, as is the state of professional practice, across the country and around the world. While it is not the most glorious task, making sure that we are keeping up in both practice and reputation is no small undertaking. Through local committees and leveraging of national initiatives through Engineers Canada and Geoscientists Canada the burden of these tasks is well in hand, but make no mistake, it is always ongoing.

In order to ensure that we are up to the task set out for us in our *Act,* APEGM has a full council and over ten committees to handle many of the regular tasks, these are comprised entirely of volunteers . The committees consist mostly of professional members to ensure that we guide the regulatory tasks which really affect us as professionals every day. Further to that, there are also staff members who take care of the daily grind of co-ordinating and running an association and regulatory body.

Essentially the above structure allows us, as Professional Engineers and Geoscientists, to work relatively unimpeded within the scope of our professions. Further to that, our work with other associations, government, and other professional bodies ensures that we manage our scope of practice. APEGM has several ongoing joint groups and relationships with the U of M, Architects, Legal Land Surveyors and Technologists, just to name a few. These initiatives require care and diligence to ensure a good working relationship within our profession and amongst other professions across the province.

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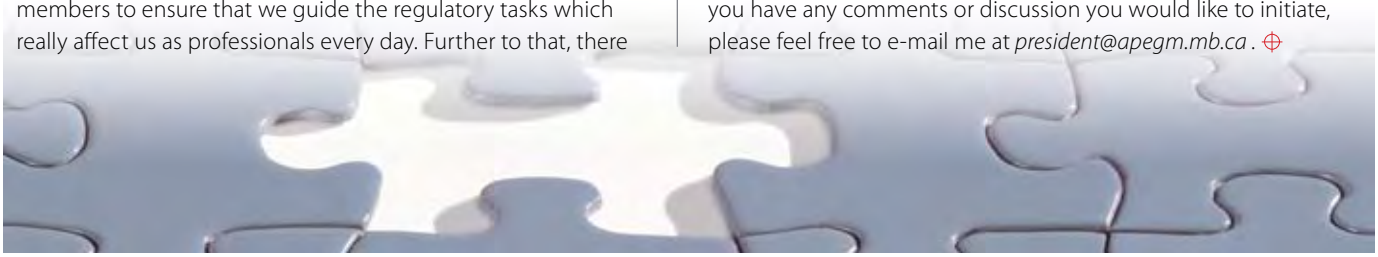
While there is not sufficient space in a full year's worth of articles to detail all of things done by APEGM and its committees, I hope I have at least peaked your interest into looking further into what the various groups of APEGM provide for their members. It is from this hard work and care of both staff and Members that we enjoy a good reputation as professionals in the community and the luxury of self-regulation as a profession. Your individual stamp represents that you have been granted membership in this Association of hard working and diligent professionals. Your annual fees are the contribution required from everyone for the hard costs of operating a professional association. The thousands of volunteer hours that many professional members spent over a year are the other cost that many others pay over the course of their years to help keep the profession going.

If you are still not clear, I encourage you to submit your name for volunteering, and get on one of the many working committees which allow us the luxury of the P.Eng./P.Geo. designation. For those that already volunteer their time to the Association, I would like to extend sincere thanks as a member and your President. If you have any comments or discussion you would like to initiate, please feel free to e-mail me at *president@apegm.mb.ca* .



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

Hitting the **Wall**

I know some engineers who work long hours. Some project teams resemble a pack of marathon runners in their ability to stride effortlessly for hours. But watch out – there is always a 'wall' in a marathon. When your project team 'hits the wall' do you know what to do? Some do, while many do not.

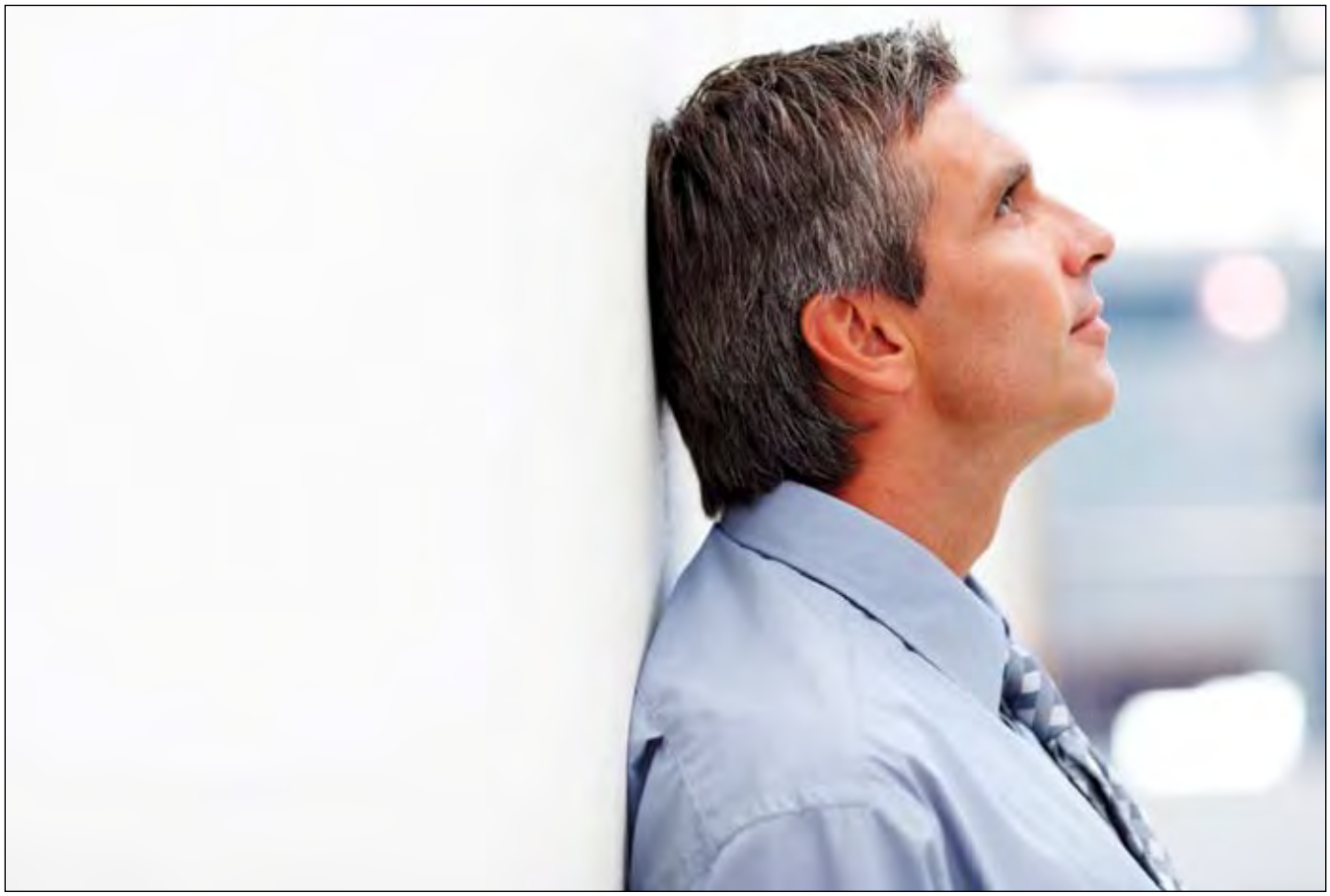
Mental acuity drops after the first eight hours and unfamiliar, strange behavior can occur in the next few hours. Studies show that errors by medical practitioners increase dramatically after two, four, eight or more hours of overtime. The record shows that errors due to tiredness have caused death. Tiredness leading to errors is the same for other professionals too – engineers and geoscientists are not exempt.

Hidden Demons

Tiredness, low blood sugar and the abundance of carbon dioxide in a room can result in untypical behaviour. Have you ever seen a team of engineers attempt to edit a paragraph at the end of a day-long meeting? It is hilarious. One will announce: "Let's finish this document and then go for supper." It ends-up taking two more hours to finish one paragraph. The idea of finishing before breaking sounds so practical (and logical) that the group over-rides the hidden demons of tiredness and mental blindness. They bicker, criticize and insult one another while shuffling periods, commas and words around to the frustration of everyone. It seems impossible to recognize the fact that they have become victims of tiredness. It is too bad.

Analysis Paralysis

Personality theorists call this condition being 'trapped in your inferior self.' It is the re-ordering of personality strengths when



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physiology and environmental factors combine to irritate our normal sense of self. Instead of being logical and rational, people can become flippant, distracted and overly emotional. Some may want to do more analysis instead of making a decision. This is called 'analysis paralysis.' Others may become overly critical or adamant on a point that would not normally cause them to be concerned.

Does this sound familiar to you? Have you seen your project team or committee get ambushed by this quirky dynamic? Consider the following tips before beginning your next meeting.

Avoid Hitting the Wall:

- Set a realistic meeting agenda. Divide the meeting into two hour-long segments.
- Know when to break or adjourn. Watch the vital signs of team members.
- Plan for nutrition breaks and fresh-air breaks.
- Decline sugary drinks, fatty snacks and too much caffeine.
- Start with the end in mind.
- Respect time zone differences affecting those team members who travelled a long distance to be at the meeting.
- Guard against ultimatums: 'We are not leaving here until this is done.'

Meet APEGM's Volunteer Coordinator

Have you met APEGM's Volunteer Coordinator yet? Diana Vander Aa has attended several committee meetings and a Council meeting so far. She began working on January 3, 2012. Her position covers a range of duties including volunteer recruitment, training, and development. The position is half-time and it fits perfectly with her other role; raising two small children and running a busy household with her husband. Diana comes to the association with a Bachelor of Human Ecology degree, a Certificate in Volunteer Management and nine years of solid experience. She is an active member of the MAVA – Manitoba Association for Volunteer Administration. Welcome Diana.

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

Baba's best borscht recipe

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

I love borscht. I have since I was a little boy. I suppose my Ukrainian heritage predisposed me toward this savory sweet beet soup, but you do not have to be Ukrainian to enjoy a good bowl of borscht. For a long time, I used my Baba's big batch recipe. You know the one – a recipe that makes enough to feed a small army for a month. I stopped using the big batch recipe, because although I love borscht, I do not want that much all at once. Freezing borscht is not the answer.

For the past year, I have been attempting to create a small batch recipe. The following is my alternative to the large volume, which Baba used to make. This recipe makes four nice bowls of borscht. The instructions are simple: chop everything, put all the ingredients in a pot, bring to a boil, then simmer on low heat for two hours. One thing I have learned over the years: do not overcook the borscht. Baba's borscht was bright purplish-red in colour and the beets were firm. If you overcook the borscht the beets change to a weak orange colour and are mushy.

I hope you enjoy this recipe in honour of my grandmother Anastasia (Melnechenko) Koropatnick.

Di borsia za zdorovie!

Small Batch (serves 4)

2 cups water	1 crushed garlic clove
2 beets	2 tablespoons pork fat
1 carrot	1 teaspoon vinegar
1 celery stalk	1 pack fresh dill weed
half onion	1 teaspoon salt
half can beans with pork (molasses)	¼ cup brown sugar

Engineering PHILOSOPHY 101

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

How can I recognize an Engineer?

A number of years ago we introduced a graduate class in which we explore the philosophical foundations upon which engineering, in general, and design, in particular, are based. Given that the class is based on discussion rather than lectures, student input identifies the focus of each class meeting.

Functionally, we have identified six books, each of which presents a unique perspective on philosophical/historical issues relating to engineering. Students read the books in the prescribed sequence over the full two-terms of the academic year. After reading each book, students inevitably have questions, two of which they submit for discussion. The questions are collected, formatted and distributed prior to the next three-hour meeting. This provides a 'springboard' for classroom discussion. During the following two-week interval, students develop their personal responses to any two questions posed for the previous meeting. Again, the responses are collected, formatted and distributed for discussion. So, in a four-week span each book provides the base for two, three-hour classes in which students discuss issues they see as having value.

As you might expect, we get a broad range of questions and responses. The discussions are always thought provoking and only marginally predictable. Hopefully the students learn as much as I do.

The underlying ideas that show up in my philosophy columns often originate from thoughts shared in this class. Typically, my ideas develop from the 'tone' of the discussions. This specific column is an exception.

This past fall our class had just read Billy Koen's book. *Definition of the Engineering Method,* and one of the questions posed related to the issue of differentiating engineers from the general population. One of the responses to that question, submitted by Steve James, prompted a great deal of discussion in class. His response does not in my opinion, need clarification or expansion so I asked him for permission to reproduce the submission in this column.

"I would argue that engineers can be more aptly differentiated or recognized by their collective sharing of the following:

- *Technology Focus - an engineer's focus is on the use of tools/technology to interface with, and leverage, our physical environment/endowment;*
- *Building Mission - an engineer's mission is to develop, manufacture,*

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and maintain physical technologies and systems that will further permit us to harness and exploit our physical reality and, by result, improve our human well-being;

- *Applied Scientific Knowledge - an engineer's ability is supported by a strong understanding and use of applicable existing scientific and mathematical principles;*
- *Specialized Problem-Solving Skills - an engineer's success resides in his or her transparent, traceable and judicious use of accepted discipline-specific problem-solving heuristics and practices;*
- *Professional Attitudes - an engineer believes in, and values, the development and use of technologies; good, applicable, safe, and beneficial technologies."*

I believe that few engineers would debate with this explanation of whom we believe we are, what we think we do and how we think we do it. However, I would argue that even fewer engineers would/could state our case so succinctly.

For the record, Steve is not an engineer. He is a former rugby playing Physics grad who became an air force pilot. Along the way he earned an MBA, and eventually ran the MBA program at the U of M. He has spent his career working with and observing, engineers. So his is an 'outsiders' view of our profession. It is, in my opinion, a flattering assessment of what we are, or more probably, what we should be.

Consider that Steve defines our distinguishing characteristics as **Focus, Mission, Knowledge, Skills, and Attitudes.** These are, for the most part, actions founded on beliefs, not facts. Apparently, these fundamental tenets are/and have been demonstrated by the collective actions of many of our colleagues, over time. They must be beliefs we absorb from our environment because they most certainly are not taught explicitly, as a part of our academic programs.

I believe that Steve's response to a question posed by one of his classmates represents a challenge to each of us. If he is right, and I most certainly hope that he is, the performance bar for our profession is set very high. Are we, individually and collectively, up to meeting the challenge that performance bar represents?

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Thoughts on Design
. . . and Design Engineering

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

The Natural Sciences and Engineering Research Council (NSERC) launched their Chairs in Design Engineering program in January 2001. Dr. Tom Brzustowski, P.Eng., then President of NSERC, was the innovator behind this unique program. The intended purpose of the program was, and still is, . . . 'to improve the level and quality of design engineering activity within Canadian universities.'

We often speak of engineering problems being 'open ended.' Clearly, if we accept this 'open ended' concept, delivery of the Chairs in Design Engineering program is a perfect example of an engineering problem.

Traditionally, engineering specializations have been identified on the basis of technical applications. Individuals and programs identify themselves as mechanical, computer, electrical, civil, biosystems, etc. Given that all engineers do 'design', many people questioned the logic and the validity of the designation Design Engineering. In 2001, this seemed to me to be more of a distraction than a concern. If NSERC was prepared to provide funds that could be used to improve instruction associated with 'design', I was prepared to take up the challenge.

I had the privilege of being one of the original Chair recipients. My focus, and therefore the focus of the Design Group that grew using Chair funding and industry support, was to find ways to improve design instruction within our programs. I did not/do not consider Design Engineering as a distinct type of engineering. I simply assumed/assume that an integrated exposure to the vagaries of the design process would help graduates adapt to the demands that they would face in the 'real' world. Those of us associated with the group concentrated on causing change to happen, not participating in debates regarding the legitimacy of the program title.

As of the end of 2011, my day-to-day administrative responsibilities for Design Group activities are complete. The initiative has passed to the capable hands of Doug Ruth. Hopefully decisions made over the past eleven years will prove to be a foundation upon which Doug and his colleagues, both local and national, can build.

For me, retirement provides an opportunity to step back and among other things, attempt to gain a better understanding of Tom Brzustowski's original vision. First on my agenda was to address the still debated issue regarding the title Design Engineering.

Like most people today I began my search with Google, which led me to Wikipedia. The Design Engineer section simply notes that 'Design Engineer is a general term that covers multiple engineering disciplines. Further, it notes that a design engineer takes care of the total system as well as inner workings/ engineering of a design.'

Further Wikipedia comments add to the explanation. For example:

- 'The design engineer may follow the product and make requested changes and corrections throughout the life of the product. This is referred to as "cradle to grave" engineering. ,
- Design engineers, . . . , are more concerned with designing a particular new product or system.
- and . . . synthesis paramount for design engineers.'

In other words, Design Engineers follow a project from concept to delivery, working with any number of design specialists, to counter the potential hazzards of "over the wall" design/delivery. Given Dr. Brzustowski's mechanical engineering background and his manufacturing industry experience, the choice of the Design Engineering title makes sense. It brings the historic role of Master Builder into a present day context.

Looked at from another perspective, Design Engineering is a function, not a discipline. Pragmatically, it is a function that requires experience well beyond the academic base that can be provided in a typical undergraduate program. If faculties are to respond to the stated NSERC Chair purpose . . . 'to improve the level and quality of design engineering activity within Canadian universities,' they need to expose undergraduate students to the interdisciplinary nature of design in industry and begin to conduct research into the project control process that is Design Engineering.

And for future consideration, taking a step back from the simplicity that Wikipedia's definitions provide, is it possible Design Engineering is actually engineering's equivalent to Project Management in Business schools?

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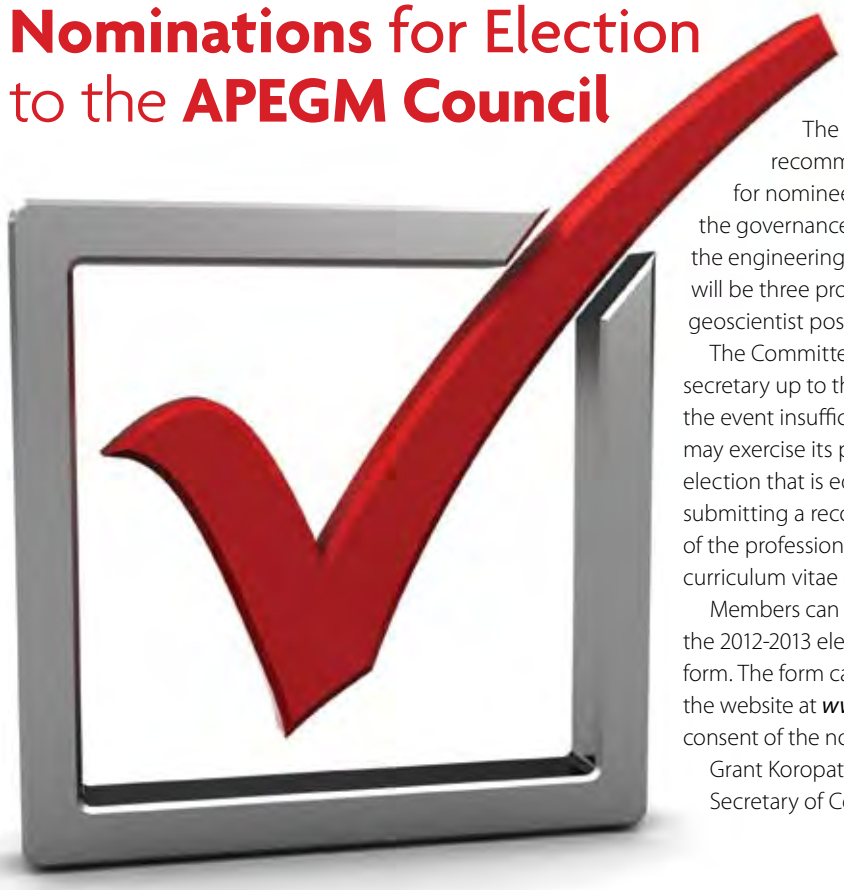
Nominations for Election to the **APEGM Council**



The Nominating Committee of APEGM requests recommendations from members and members-in-training, for nominees who they consider to be qualified to participate in the governance of the Association and who are willing to so serve the engineering and geoscience professions in Manitoba. There will be three professional engineer positions and one professional geoscientist position to be filled as of October 2012.

The Committee will consider recommendations received by the secretary up to the close of business on Friday, September 14, 2012. In the event insufficient recommendations are received, the Committee may exercise its prerogative to put forward a slate of candidates for election that is equal to the number of positions to be filled. Persons submitting a recommendation are required to obtain the consent of the professional member being recommended and to provide a curriculum vitae or biographical sketch.

Members can also be nominated directly and be on the ballot for the 2012-2013 election by the completion of the prescribed nomination form. The form can be obtained from the Association office or from the website at *www.apegm.mb.ca/NominationsForCouncil.html*. The consent of the nominee must be obtained.

Grant Koropatnick, P.Eng.
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Design of Sanitary Sewer and Storm Water Drainage Systems - Workshop	24	Winnipeg		18-21
Construction			**May**	**June**
Cost Engineering - Effective Estimating and Cost Control of Engineering and Construction Projects	12	Winnipeg		11-12
Electrical			**May**	**June**
Transformer Operational Principles, Selection and Troubleshooting	18	Regina	1-3	
Modern Power System Protective Relaying	18	Regina	7-9	
Testing, Commissioning and Start-Up of Electrical Systems	12	Winnipeg		12-13
Electrical Power Equipment - Selection, Commissioning and Maintenance	18	Winnipeg		19-21

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Changing the conversation about Engineering

As I reflect back on 2011, I have had several discussions around how professional engineers explain what we do and how we are represented to others as a profession. As engineers, it is up to us to promote engineering as the rewarding career that it is, but we must also focus more intently on the excellent innovative work we do that benefits society in Canada and abroad.

The National Academy of Engineering in the United States has undertaken a campaign they call **Changing the Conversation.** The goal of this program, funded by the National Science Foundation, is to inspire young people and get them excited about engineering careers. To meet this goal, they are working at improving the engineering narrative.

Through this campaign, the profession is working on messaging that will put less emphasis on math and science skills and reposition the focus on the creative, innovative side of engineering and how engineers make a difference in their communities, and countries around the world. Our membership may be different from the National Academy, but the issues we encounter are the same.

I would agree with the idea that much emphasis has been put on math and science skills, which has perhaps reinforced the stereotype of engineers as nerdy cube-dwellers. If we want to attract more women and other under-represented groups to the profession, we should shift our focus to the broad range of disciplines and activities engineering encompasses, and promote it as a helping profession, much like medicine, law enforcement, and teaching. Engineers are often working behind the scenes, and the only attention we draw is when something goes wrong. It is time for the Canadian profession to decide what engineering is and agree how we want to repackage engineering to present to, and engage with, the public.

At various points in our history, Engineers Canada has attempted to launch a sustainable national advertising campaign to fulfill one of our mandates as the national voice of the engineering profession: 'Enhancing the public image of the Canadian engineering profession, promoting its interests, and increasing public awareness of how the work of Canada's professional engineers benefits society.' Our most recent advertising campaign was directed at parents and employers.

"Engineering is the lifeblood of the new economy. And changing the conversation about engineering will ensure more students feel compelled to join the profession."

Now we need to talk to young people themselves; especially young women and Aboriginal students who are woefully under-represented in the profession. They need to see and hear something different about our profession. 'Engineering is the math & science profession' is not going to cut it anymore. Students want to know how their chosen profession impacts the world they live in –Will I work in a cube farm doing equations? Or can I make real difference in the environment, improving people's health and quality of life? etc.

While the timing may not have been appropriate for our most recent national campaign, it did get us thinking about what engineering is, how the profession wants to portray itself, and our role in society. Our colleagues at the Ordre des ingénieurs du Québec were forced to address the issue of public image as a result of recent events, and at the end of last year embarked on their own three-year campaign to address specific issues for the profile of the profession in that province.

At last year's Engineers Canada Board workshop, the Board held a special session on branding. We were tasked with creating simple, concise phrases to explain to our constituent associations, government, our sister engineering organizations, and the public what engineers do. The resulting message? We help 34 million people every day. This high-level message is then followed up with statements tailored to suit various audiences and contexts.

You may wonder about the usefulness—and perhaps effectiveness—of these exercises, as they do not relate directly to the practice and business of engineering. However, branding presents a unified message to audiences.

Engineering is the lifeblood of the new economy. And changing the conversation about engineering will ensure more students feel compelled to join the profession. Our job, as engineers, is to decide what our engineering message is and whether that message is worth investing in. Removing pre-conceptions about engineering takes work and can take a long time. A unified, reinforced message over the long-term will ultimately increase public trust in our profession. Canada's future depends on it.

I would be interested to know how you package and promote the profession when talking to others, interacting with colleagues and clients or end users of services. Feel free to contact me at *executive.office@engineerscanada.ca* if you have comments or responses to this, or any other topic. I would be pleased to hear from you.

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Repairing wells in Malawi

Two years ago we introduced Chrispin Damubla, a Water and Sanitation Officer in the district of M'mbelwa, Malawi.

More than half of his community lacks access to safe drinking water, and in Malawi, around 30% of all water points simply do not work. This problem is exacerbated because district officials like Chrispin did not have accurate data telling them which water points were functioning, which needed to be replaced, and which could be repaired at a fraction of the cost.

One of the ways that EWB became involved in Malawi was helping districts to develop an inventory of the water points using GPS equipment, identifying which are in service, and which areas are not serviced at all. The monitoring tool (yes, it is a spreadsheet) cost EWB less than $100k to develop and deploy and has helped guide $6.2 million of new investments efficiently.

If all the 45,000 wells in Malawi were working, the country would be close to meeting its Millennium Development Goal for water access. The goal is to cut in half the proportion of people in the country who do not have access to safe drinking water by 2015. With access to safe water comes less danger to people, especially children, who often die from preventable water-borne disease. Better access to water would save lives. If the existing wells were better sited—rather than some areas with multiple wells and other areas with none—Malawi would already have met the Millennium Development Goal.

This year, the EWB Winnipeg Professional Chapter has begun funding a new initiative in Malawi—the 'District Supported Area Mechanics Initiative.'

Developing the well inventory has been successful, but before we can say that all is well, there are other pieces that have to come together. When the wells and pumps stop working, someone on the ground is needed to do the actual fixing. In Malawi, this is increasingly being undertaken by Area Mechanic networks. Area Mechanics are community members who are trained in advanced borehole repair and assigned a catchment area in which they work to maintain functionality levels of water points after they are installed. They are rural entrepreneurs, who are paid by the communities to which they provide services.

However, these Area Mechanic networks have not made significant improvements to water access in Malawi. Although the Area Mechanics often receive training, support, and management from large NGOs such as UNICEF, once the networks are established the NGOs hand over control to the District Water Offices. These district offices simply do not have the funding or the human resources to maintain the program at the same level when the NGOs are gone.

As opposed to critiquing or proposing a different system, EWB is cooperating with this existing development work to make the system better. EWB will continue to work with the District Water Offices. District Water Officers like Chrispin have

"This year, the EWB Winnipeg Professional Chapter has begun funding a new initiative in Malawi—the 'District Supported Area Mechanics Initiative.'"

the potential to play a strong role in the coordination of Area Mechanics. While EWB has observed the high competence and commitment of the district staff, we have also observed their role being hindered by minimal access to resources to run their offices, lack of necessary information or guidance on district planning and absence of training required for management and evidence based decision-making.

A better link is needed between the improved information gathered during the GPS mapping and inventory work and the Area Mechanics who know how to install and repair wells. If the people who know where repairs and new wells are most needed are better able to communicate with the mechanics who do the work, access to water in Malawi will improve. EWB will assist the District Water Offices in Malawi by finding ways to manage the Area Mechanics effectively with the limited resources available to them.

EWB will provide training to District Water Officers in areas such as communication, project planning skills, time and people management skills, monitoring and interpreting data, and evidence based decision-making. We will also help to create a reporting system with incentives for Area Mechanics to better keep in touch with the district offices. Additionally we will assist the mechanics with business training and with publicity and promotion of their services so communities know where to go when their wells break down.

You can help us fund the project by donating online: *https://perspectives.ewb.ca/winnipeg-city-network*. Up to $7k will be matched by MCIC so your donation is twice as effective in raising funds! You will receive a tax receipt for any donations over $20.

This winter our chapter held its Third Annual Curling Bonspiel on March 2. As always, you can stay abreast of upcoming events through our webpage at *http://winnipeg.ewb.ca*.

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A major donation by an alumnus will support an upgrading and redevelopment of electrical engineering research and teaching facilities at the Faculty of Engineering.

Stanley F. Pauley, through The Pauley Family Foundation, made the donation to renovate and refurbish existing laboratories and facilities. Pauley, chairman and CEO of Carpenter Company in Richmond, Virginia, is a graduate of Electrical Engineering in 1949.

"I have fond memories of the U of M. It is a great school," says Pauley. It was an exciting time for me while I was getting a great education that served me well during my working years, so it was easy to decide to give something back that would help others."

The present building housing electrical engineering research facilities requires upgrading of the electrical distribution system, HVAC, water and all other services to be fully utilized and meet current building use standards. The entire building and its laboratories will be renovated, refurbished, and renamed the Stanley Pauley Centre, devoted to education and research associated with electrical power conversion.

"I am delighted that we can honour Mr. Pauley with the establishment of this centre," says Jonathan Beddoes, Dean of Engineering. "The Stanley Pauley Centre will allow the department of electrical engineering to maintain its leadership position in teaching and research. I am already looking forward to seeing the exciting projects that students and researchers will undertake in this Centre. This will give students the knowledge needed to make valuable contributions to energy efficiency and renewable energy technologies that are critical to our future economic well-being."

The Stanley Pauley Centre will house three major laboratories: the Intelligent Power Grid Laboratory, the Electric Vehicles Laboratory and the McMath High Voltage Laboratory.

"This generous gift will transform our university and transform lives by ensuring our engineering students, faculty and staff can study, teach and conduct research in the best possible facilities," says U of M President, David Barnard. "We thank Mr. Pauley for giving back to the university and investing in our future success."

Pauley has also established an endowed fund at the U of M to finance the Stanley F. Pauley Award in Electrical Engineering, which will support three $5,000 bursaries each year. Pauley notes: "It is important to me that I help some electrical engineering students who have financial need, so that they will not have to work during the school year. I worked every summer so that I could afford to attend the university without being distracted. I am hoping this will result in training more electrical engineers that the economy needs so badly."

2012 APEGM Networking Dinner

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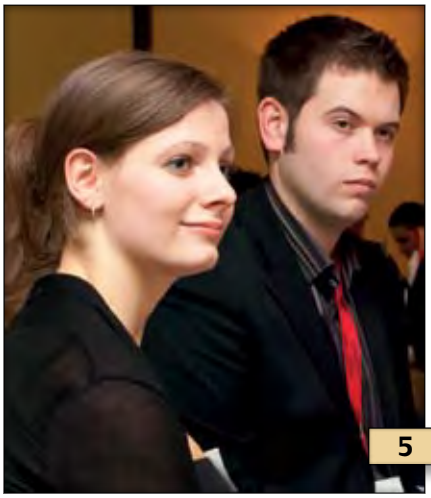
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1 The 2012 APEGM Networking Dinner boasted a sold out room full of professional members, students, and representatives from industry.
2 The Dinner provides a great opportunity to promote yourself and your company.
3 Graham Moore, P.Eng., in conversation with three student representatives.
4 An evening filled with discussion on various issues and ideas surrounding the professions.
5 MC's for the evening: Andrew Condon, EIT, APEGM Public Awareness Committee, and Kaitlyn Fritz, University of Manitoba Engineering Society.
6 Speaker George Trachilis, P.Eng., addresses the attendees.
7 Dean Jonathan Beddoes, P.Eng., brings greeting on behalf of the University of Manitoba Faculty of Engineering.
8 The APEGM Networking Dinner brings students and professionals together to strengthen the future of Engineering and Geoscience in Manitoba.
9 President Adam Pawlikewich, P.Eng., brings greetings on behalf of APEGM.

9

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The Heritage Committee goes

You have probably heard about Wikipedia, the on-line users written encyclopedia. The Heritage Committee of the Association is about to start its own version of this popular web site. Our site will focus on the significant engineering and geoscience work in our province and on the world-wide achievements of our members.

The site will begin modestly, with several articles which have appeared in the *Keystone Professional* or which have been written for the site by the members of the Heritage Committee. There will also be brief pages on events, works and individuals identified by our committee as significant.

We hope that our members and the general public will contribute to the site, adding detail and comment. We also hope that there will be new pages created on material not listed by the committee.

The web site will be very flexible, allowing anyone to add, modify and delete material – both text and pictures.

The Wiki site will have detailed information about copyright and the use of material submitted. In brief, you should not submit copyrighted materials unless you have obtained permission for the use of the material, and anything submitted to the site may be modified and/or reused (with attribution).

Submissions to the Wiki site will be reviewed and inappropriate (obscene, slanderous) content will be deleted. Any copyright material will be deleted immediately if the copyright holder objects to its use on the site.

"We hope that the Wiki site will become the virtual museum of the association, for use by members and the general public. If you have stories to tell and pictures to share, we want to hear from you."

We hope that the Wiki site will become the virtual museum of the association, for use by members and the general public. If you have stories to tell and pictures to share, we want to hear from you. Watch for further information from the association regarding our Wiki site.

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The Heritage Committee, at times, receives offers of donations or loans of Heritage material (books, notes, equipment, photos). Due to the risks associated with loss of or damage to loans, we have decided to decline offers of loans. Donations are welcome. Depending on the material received, it may be put on display, placed into storage while it is reviewed and documented, or after being documented (producing photos and notes to go on the Wiki site), offered to other entities with similar heritage interests. A copy of the donation agreement is available at the Heritage Committee web site.

click HERE to return to table of contents

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Brian D. Gerbrandt, P.Eng.
Cyril H. Howard, P.Eng.
Clarence D. Kent, P.Eng.
Robert B. Minchin, P. Eng.

Closing Notes

By Michael Gregoire, P.Eng.

What the **Mayans** knew

If you have been listening to followers of New Ageism, 2012 marks the coming of the apocalypse. For those of you who have not heard about this theory, it is based on ancient Mayan calendars. The linear calendar set by the Olmec and continued to this day by the Mayans was not written beyond the date 13.0.0.0.0. For those keeping track, this is equivalent to December 21, 2012 on our calendar. According to followers of New Ageism, since the calendar ends, it must mean the end of time. Cue Hollywood music.

For us Professional Engineers and Geoscientists, this logic (or failure thereof) is clearly without merit. We are professionals because we have the ability to evaluate a situation, apply logical deduction, and come to our own conclusions. It is the existence of this ability that causes shock to my system when I hear how some of our professionals react to the new Continuing Professional Development (CPD) Program.

Truly, you would be shocked at some of the misconceptions that have come to my attention. One of the most common misconceptions is that the CPD Program will force our members to incur new costs. One member even explained to me that the CPD Program (as introduced in 1998) would require each member to pay $3,000.00 annually to the association. Surely, to most of you, this is clearly not the case.

The CPD Program does not require members to do more CPD activities than they have already been doing. I have yet to encounter a member who has looked at the six categories available and who was not already meeting the targets of the program. In fact, everyone who calls me to discuss the new CPD Program ends the conversation with the comment, "Oh, that is easy."

The misconception about the added cost imposed on members is likely due to one of the other most common misconceptions. Many members falsely assume that our CPD Program requires members to take formal training. They think that the intention of 'those Association employees' is to force engineers and geoscientists to sign up for courses at the university. Anyone who has read the CPD Program outline (*www.apegm.mb.ca/pdf/CPDProgram.pdf*) knows that this is not true. Formal training fits into one of the six categories of professional development. (btw, please, if you have not read the document yet, please do so (yes, I said please twice – I want it that bad).

My quotations above raise one of the other misconceptions regarding the new CPD Program, but also speak to a larger problem. There are many members who view the APEGM as some unknown, abstract entity composed of people who are not 'real' engineers. As a self-regulator, APEGM has its direction given and most of its work produced by real-life engineers. Council provided the direction for the CPD Program and they are comprised of practising engineers and geoscientists elected by engineers and geoscientists. The committee that now oversees the CPD Program, the Continuing Competency Committee, is a large group of practising professionals who have volunteered their time to ensure that the CPD Program runs smoothly.

So, for those of you keeping track, the CPD Program does not impose a cost of training on members and does not require formal training. In fact, we expect that the

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vast majority of members do not (and will continue to not) sign up for formal training. Most members meet the targets of the CPD Program by acquiring 150 hours of credit in the Professional Practice category (doing what they do at their job), 90 hours in the Informal Training category (self-directed study like reading trade journals), and a couple of hours in one of the other four categories.

Grant Koropatnick, has referred to the CPD Program as "fun and easy". I am not sure many would agree with him about the 'fun' descriptor, but it is definitely easy.

So why, then, did we, as a professional collective, decide to implement the CPD Program? There are a few reasons. One is that it gets each of us to start thinking about our CPD activities. If you do not know where you have been, you cannot know where you are going. One of the other reasons is that this type of proactive evolution of regulation ensures public confidence and maintains our right to self-regulate.

Another reason, unfortunately, is that there is a very small handful of members who are not currently doing ***any*** professional development activities. The CPD Program is not intended to 'catch' those individuals. It is more of a message to them that the time to start professional development is now. Hopefully this will avoid future mistakes on their part that come hand-in-hand with a failure to develop continuously, which we have unfortunately seen in the past.

Fun? Maybe. Easy? You bet. However we choose to describe the CPD Program, I can guarantee you that it is not the end of times. If you do not believe me, ask members of APEGGA who have been complying with a similar program for more than ten years. Or, contact me and I will gladly remove the Mayan curse from your soul.

"The misconception about the added cost imposed on members is likely due to one of the other most common misconceptions. Many members falsely assume that our CPD Program requires members to take formal training. They think that the intention of 'those Association employees' is to force engineers and geoscientists to sign up for courses at the university. Anyone who has read the CPD Program outline knows that this is not true."

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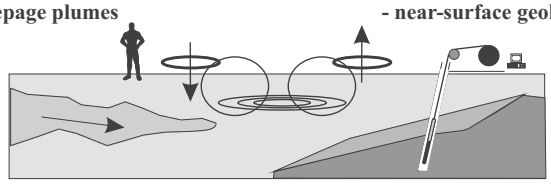

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