



Dr. Irving Engelson,
President, IEEE EMS

President's Corner

Dr. Irving Engelson, President, IEEE EMS

This is my last message as president of EMS. I am completing my second term and I am not eligible to serve a third. Our EMS bylaws, however, call for the past president to continue on the Board of Governors and Executive Committee for several years, and provide support as an elder statesman. I look forward to continued strong involvement with EMS in this role.

While I will miss the more active involvement with EMS that I experienced as your President, I fully agree with term limits. In volunteer positions we should avoid tenure-type behavior. IEEE societies should assure turnover in volunteer positions regardless of performance. The societies benefit from the involvement of different people with different strengths and ideas. I continue to encourage you to volunteer for society positions. Volunteers strengthen our societies and can derive great personal satisfaction from their efforts.

I am very pleased that our Executive Vice-President Prof. Tariq Durrani was elected to take over the presidency in 2006. Dr. Durrani has many years of IEEE volunteer experience, and is exceptionally well qualified for the job. Also, Mr. Gus Gaynor, who served EMS in many positions over the years, was elected as 2006 Executive Vice-President. This year EMS had its periodic review by IEEE. I am pleased to report that we received high marks. Both Dr. Durrani and Mr. Gaynor played very active and important roles in preparing the extensive report for the review. These two individuals will form a most effective leadership team. Together with the other newly elected officers, they will assure that EMS sees continuity and success with our major programs.

Finally, I want to thank our Board of Governors for their support and assistance and for their contributions to the society. I wish them and you all, Seasons Greetings and a very happy new year.

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2005 William W. Middleton Distinguished Service Award Recipient

Louis A. Luceri
IEEE Long Island Section, Region 1

“For significant contributions and service in advancing IEEE Regional Activities, through excellence in sustained leadership and professionalism with the development of goals, strategic & operational plans for use within Region 1 and the IEEE.”

The purpose of this award is to honor an individual, who over a long and sustained period of leadership contributed in an exem-

plary manner to the Regional Activities Board (RAB), its activities and achievements and the attainment of its goals and objectives. The accomplishments of the candidate should be of “significant performance,” and have made a distinguishing contribution to IEEE. The award is named for William W. Middleton, who for over thirty years has been associated with and contributed to the growth and maturation of RAB through service on it and



its various Committees and Task Forces and was chosen to be the first recipient. William W. (Bill) Middleton had a long history of dedicated and

distinguished service in IEEE and one of its predecessor organizations, the American Institute of Electrical Engineers (AIEE). In 1990, the Regional

Activities Board (RAB) created the William W. Middleton Award for Distinguished Service as a means to honor his achievements.

New Senior Members

Mina Danesh	Montreal	Kit Fai Pun	Trinidad & Tobago
Thomas A. deBoisblanc	Buenaventura		Subsection
Richard A. DeMillo	Atlanta	Li TianNorthern	Virginia
Robert M. Queenan	Eastern Idaho	Laurie E. Lasseter	Fox Valley Subsection
Anthony Bainbridge	U.K. & Republic of Ireland	Edson L. Leal	Bahia
Hanns-Juergen Grosse	Germany	Deborah J. MacKay	Lexington
Loc B. Hoang	Santa Clara Valley	Nabil Nasser	Lebanon
David Hoff	Twin Cities	Alton D. Romig	Albuquerque
Ronald A. Hopgood	Puerto Rico & Caribbean	Francesca Schuler	Northwestern Subsection
	Section	Surender K. Sood	Delhi
John P. Nance	Central Tennessee	Lawrence E. Todd	Oregon
Joseph O. Palmiter	Twin Cities		

IEMC 2005 – a Resounding Success

The 2005 International Engineering Management Conference (IEMC 2005) held September 11-14 in St. John's, Newfoundland and Labrador, Canada, was a resounding success according to all involved. With 180 papers on a variety of topics, the conference offered a wide ranging view of the state of Engineering Management in the early years of the 21st century.

The conference venue was St. John's (<http://www.stjohns.ca/index.jsp>), North America's oldest city and simultaneously the capital of Canada's youngest province, Newfoundland & Labrador (www.gov.nl.ca). A relatively small city of approximately 125,000 inhabitants, St. John's is a city steeped in historic significance. The location of such engineering "firsts" as the first transatlantic telegraph cable and receipt of the first transatlantic wireless communication, it was particularly appropriate for an engineering management conference. St. John's is also the headquarters and nucleus of leading edge multi-billion dollar resource development projects in mining and offshore oil and gas.

The conference began on Sunday, September 11, with a series of well attended tutorials on a variety of highly relevant topics, including "Getting Your Point Across: Essential Communications for Engineers", "Leading an effective engineering organization", "New trends in project management", and "So you want to be an entrepreneur/management consultant". An opening reception on Sunday evening featured welcoming remarks from Dr. Irving Engelson, President of the IEEE Engineering Management Society (EMS); Dr. Anthony Bainbridge, Chairman of the IEEE Engineering Management Professional Network; and Dr. Charles Randell, Conference Chair.

Of course, any engineering venture is subject to unforeseen mishaps, and the conference was no exception. Monday morning, delegates awoke to find no running water in the hotel, as the City's water system had failed in the immediate vicinity of the hotel, and as it turned out, water service was not restored until quite late that evening. This minor catastrophe was met with equanimity and good

humour by all, though, and the conference commenced.

The keynote speaker, Dr. Stephen Dorgan, opened the conference with a thought-provoking presentation on the topic, "Management matters". Dr. Dorgan's central thesis was that proper management practice can have a positive effect on an organization's productivity, certainly a timely topic in an era of increasing global competition. The complete PowerPoint version of Dr. Dorgan's presentation may be found at www.iemc2005.org.

Once the keynote address was complete, the conference paper presentation sessions began, featuring five parallel sessions and 75 papers, on a diverse array of topics from "Entrepreneurship" to "Business strategy" to "Technology management". After the sessions had ended for the day, conference participants and their guests were treated to complimentary tours of Signal Hill (http://www.pc.gc.ca/lhn-nhs/nl/signalhill/index_e.asp), site of Marconi's historic transatlantic radio transmission in 1901, as well as the Johnson Geocentre ([2](http://www.geo-</p>
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centre.ca/), a magnificent facility which highlighting Newfoundland and Labrador's fascinating geologic heritage. Those hardy souls tough enough to brave Signal Hill's gusty winds and cool temperatures were rewarded with the outstanding view from the summit.

On Tuesday and Wednesday, the technical sessions continued, with a vast array of topics, and presentations that literally spanned the globe, coming as they did from Southeast Asia, Africa, the Middle East, as well as all over Europe and North America. A total of 189 papers made it to the final program, from almost 300 abstracts received initially. Truly the conference lived up to its international reputation; it certainly did not suffer from the relative isolation of St. John's compared to larger centers. Attendees traveled from all over the world, some only staying long enough to give their presentation and board another plane to return home.

The conference banquet keynote speech on Tuesday night, delivered by Dr. Wally Read in his down to earth

style, featured a humorous look at the Newfoundland lexicon, a unique linguistic heritage that is fading in the face of relentless pressure from television and global communications. As well, Dr. Engelson used the banquet as a venue to announce that a Memorandum of Understanding had been reached with Harbin Institute of Technology in Harbin, China to co-sponsor the 2006 International Conference on Management Science and Engineering (ICMSE), to be held in early October 2006 in Lille France. Further details will be provided as they are available.

For those of us used to hearing how the small size of St. John's negatively affects our ability to host events such as this, it was a welcome sight. It was with no small sense of relief that the organizing committee members saw the arrival of September 11 and the conference attendees, as two years of work culminated in what turned out to be a highly successful conference. It would be remiss not to specifically thank the members of the organizing committee:

Dr. Charles Randell,
Conference Chair
Dr. Wally Read,
Honorary Chair
Dr. Sam Salem,
Program Co-Chair
Dr. Anthony Bainbridge,
Program Co-Chair
Dr. Charles Rubenstein,
EMS VP - Conferences
Mary Booton,
Local Arrangements
Kathleen Chafe,
Secretary
Gerard Dunphy,
Publicity & Promotion
John Evans,
Sponsorship
Lori Hogan,
Website Design & Maintenance
Geoff Holden,
Publications
Dr. Dennis Peters,
Publications
Paul Ryan,
Local Arrangements
Doug Squires,
Treasurer

Reflections on IEMC 2005

Celia Desmond
Vice-President – Member Relations

I had the opportunity to attend the IEMC conference in Newfoundland. I arrived Saturday, in order to give a tutorial Sunday, before the conference sessions started Monday.

In the evening, the conference General Chair, Charles Randall, had kindly invited the people from the Society Board and the conference committee to a reception at his house. Here we learned a little of the history of Newfoundland, along with a lot of the wonderful hospitality of the province. Since Charles wife is a wonderful cook, we all left the party having eaten more than we should have!

Sunday there were five tutorials running, and these appeared to be well

organized and well run. A number of people who had registered for my tutorial did not show up, but there was no information available yet as to why this happened.

Following the tutorial I went to the pre-function area to set up the Engineering Management Society booth, as this was the main purpose for my attendance. The space was excellent, right beside the registration booth, and in one of the main traffic areas. IEEE had provided us with some IEEE and membership brochures and copies of Spectrum to give out, as well as a terminal to display XPLORE. Thanks to the IEEE Marketing department for helping to make our booth a really attractive place for the attendees to

visit. Also, a huge thanks goes out to Mary Booton from the conference committee for all her help and support in setting up and managing the booth during the three days.

Sunday evening the conference reception was held in an open area of the hotel with a waterfall and lovely plants. By this point many of the attendees had also arrived.

Monday morning I arrived at the booth to find a good crowd already looking at the material. We had four back issues of EMS publications to give out as samples, along with the IEEE material, and the EMS brochure, so the booth looked good and was a center for people to gather.

During the three days we did demonstrate XPLORE to many people and had a good chance to promote the Society and the 2006 conference in Brazil.

The keynote speaker Monday morning from McKinsey, was very interesting, speaking about the link between productivity, profitability and management practices. The luncheon speaker from a Newfoundland company Fortis was also excellent. In the evening the conference sponsored a bus that took people to Signal Hill and the Geo-

center. Since it had been raining for a few days, I think people were happy to have the opportunity to see something of St. John's.

Tuesday the sessions continued, generally well attended. The morning keynote speaker was Irv Engelson, President of the Society. In the evening the conference banquet was held. Wally Read, the banquet speaker, a local who is also a past IEEE President, spoke about the language spoken in Newfoundland. It was a hilarious speech, where we all learned some

new words and expressions.

Wednesday sessions proceeded in the morning. The conference ended at 12:30. By this time we had given away all the material from the booth. The material that was not picked up by the attendees went home with three people to be used as promotional activities at more than 5 additional events. Overall this was a very successful experience, with lots of good publicity for EMS, and excellent networking and learning opportunities for the attendees.

The IEEE Engineering Management Society's Annual International Engineering Management Conference - IEMC 2006

*Engineering Management: The Human-Technology Interface
17 – 20 September 2006. Salvador, Bahia, Brazil*

The IEEE Engineering Management Society's annual International Engineering Management Conference – IEMC is a wonderful opportunity to find out about the most recent developments in management and meet engineers and managers from all over the world to exchange knowledge and experience.

We are very pleased to host IEMC2006 in Salvador, Brazil. The City of Salvador, the "Land of Happiness" was founded in 1549. Located in Brazil's Northeastern region, it is the capital district of Bahia State and was the first capital district of colonial Brazil. It holds three million inhabitants and is the third largest city in Brazil. Visitors arrive on direct flights from many countries or by 2-hour connection flights from Rio de Janeiro or Sao Paulo. The land is caressed by a soft breeze and the climate is mild, with an annual average temperature of 27C (80F). Ours is a special city where culture is everywhere. What really makes Salvador so special are its inhabitants who involve all those that come here with their cordiality, congeniality and joy.

The IEMC2006 organizing and program committees invite papers and proposals for special sessions and tutorials which will summarize on-going and future efforts in understanding the underlying processes of management and knowledge changes. IEMC2006 expects to include but not limit presentations to the following management topics:

- Human Side of Globalization
- Leadership Development
- Risk Assessment
- Quality Management
- Environmental Management
- Engineering Careers
- Continuous Innovation and Entrepreneurship
- Global Project Management
- Knowledge Management
- Intellectual Properties
- Sustainable Growth
- Outsourcing R&D

Important dates:

- Full papers submitted for Review
1 March 2006
- Paper acceptance
15 April 2006
- Author registration

1 May 2006

- Early registration
15 June 2006

Important addresses:

Conference website:

www.iemc2006.org

Conference hotel information:

www.iemc2006.org/hotel

Tourist and City information:

www.emtursa.ba.gov.br,

www.bahia.com.br

For general information, email us at info@iemc2006.org

Conference Chair: Antonio C Bastos (Brazil); chair@iemc2006.org

Program Co-Chairs: Leizer Schnitman (Brazil), Sameh Salem (USA), Anthony Bainbridge (England);

Organizing Committee (Brazil): Clotilde Pimenta, Moacyr Doria, Edson Leal, Marcelo Carvalho, Cesar Teixeira, Carlos R Carvalho

IEMC 2006 Co-Sponsors

IEEE Latin America / Region 9

IEEE Bahia Section

Technical Co-Sponsor

IEE Management Professional Network

Is Management a Profession?

Anthony Bainbridge CEng, FIEE, MIEEE

I have been an avid reader of Peter Drucker's writings since the mid-eighties. No other thinker on management has a greater claim to philosopher status. No other writer has succeeded in pinning down quite as effectively as he the issues which must exercise managers and executives in enterprises which have the will to survive. For over 50 years a stream of books and papers has captured the essence of the manager's task and pinned down the essential features of the world of work for those of us who call ourselves managers.

A collection of his finest papers was published by the Harvard Business School in 1998, under the title 'Peter Drucker on the Profession of Management.' I cannot commend this collection too highly. All the same, it seems to me that the title begs a series of questions. Is management truly a profession? How would we know? If it is, how must we behave?

The Management Professional Network operates as an integral part of IEE. As professional engineers we are therefore bound by ethics and codes of practice which are well understood. For most practical purposes we understand that engineering is indeed a profession. But management ...? Managers can and should behave professionally; but whoever heard of a 'professional manager'?

A couple of years ago the Royal Society of Arts ran a project called 'Can the Professions Survive?' Useful questions were posed. What distinguishes a profession from any trade or business? What does the public need or expect of the professions and what culture should they promote in order to 'raise the bar' - to increase success and promote public value and utility? During the discussions and lectures it was noted that there is no modern definition of professions. Increasing num-

bers of occupational groups claim professional status, often supported by the granting of a Royal Charter. Professional services, like other aspects of modern life, have become mass and depersonalized. This damages justice and deepens customer exclusion, increasing complaints and eroding professional values. This is what George Bernard Shaw was pointing to in his remark that 'All professions are conspiracies against the laity.'

One of the authors of a useful paper given during the course of the RSA project offered the following description:

What I mean by 'a profession' is firstly, an activity based on the application of a defined area of knowledge and study but which is essentially practical in nature, involving an experienced judgment about how knowledge should be applied to achieve an objective for the client or customer. Since the activity depends upon judgment, there may not be any 'right' answer to any problem presented to the professional nor, since practical experience is involved, will the professional always be able to explain precisely why a recommended course of action will necessarily achieve the desired purpose. It follows that there may be an information imbalance between the professional and the client, who will be unlikely to be able to assess the quality of the professional's advice and must therefore have some degree of trust in the professional's judgement.

Secondly, I will use the word 'profession' to mean an organisation consisting of people who undertake such an activity and intended to achieve some advantage for its members through gaining recognition or standing for them and, if possible, some control over the activity. Typically, such organisations attempt to achieve their ends by imposing rules upon their members with the objective of ensuring standards of com-

petence and conduct which they can then demonstrate to the marketplaces which their members serve. Initially this may simply serve the employment interests of their members by providing a demonstration of competence. But in time these organisations may also seek governmental recognition as a way of achieving commercial advantage for members by controlling the market for their services.

How does any of this relate to our role as managers? Working through the above description, I suggest that a professional, in the eyes of the man in the street, will have some or all of the following characteristics (using 'he' as the usual convenient abbreviation for 'he or she'):

- he has engaged in a probably arduous course of learning, leading to a recognisable qualification;
- he takes steps to ensure that he remains abreast of developments in his field;
- he will often be, and indeed may be required to be, a member of some 'professional' governing body which may regulate and support his practices;
- his activities take place in a context governed by ethics and codes of practice.

Admittedly these are descriptions of the professional individual, rather than constituting a definition of the word 'professional,' but this may be the best we can do. None of this addresses the issue of whether professional bodies are desirable, or whether professions may sometimes behave like closed shops. Let us at least assume for the time being that these four elements are in themselves valuable, and we could agree that professions such as the law, medicine, accountancy and (in the main) engineering fit this pattern.

How does management fit in here?

The evidence suggests that it does not. The great majority of managers have no formal qualifications for the role. The history of British human relations in industry suggests that basic ethical principles are not always in evidence. Developments in the field of management studies are unacknowledged by most managers. And few if any managers seek to belong to any kind of parent body.

This is not to say that most managers are incompetent. In fact, in view of the complexity of most management situations, and the regulations imposed upon management practice, the evidence is that many managers do as well as can be expected, and some do exceptionally well. But the social barriers in British society suggest that culturally we are, as I have written elsewhere, 'locked in a Stone Age of mutual incomprehension.'

Take an honest look at the management of many industrial and commercial enterprises. Is the gulf between the manager and the managed being

actively bridged? Are cultural barriers being torn down? Is the stultifying boredom in many jobs being tackled by enrichment? Is teamwork effective? Is the structure flexible enough both to get the jobs done and meet the needs of those who do them? Does anyone in the organisation take a long and dispassionate look at what goes on from day to day? What proportion of work time is spent firefighting or at useless meetings?

Don't take my word for it; ask around. I have never yet addressed a group of supervisors or managers who feel that they are in control of circumstances at their place of work. Most managers acknowledge that firefighting, addressing other people's problems, unprogrammed events and simple serendipity control them, not the reverse. Chaos reigns in many contexts. How then can continuous improvement be engaged in and given more than half a chance? It is not that good managers are not willing; it simply that they are not in charge.

It seems to me that three elements are

missing from almost all managers' contexts. One is any sense of formal continuous improvement. A lawyer, an engineer or doctor must remain abreast of their disciplines, taking account of the latest and best practices and of advances in knowledge. Indeed, they would be unemployable without them. But almost no managers take this line. Secondly, training in management skills in most companies is an afterthought. And thirdly, the application of new skills in day-to-day situations is rendered difficult, if not impossible, by the sheer disorder in most managers' schedules.

So I am forced to conclude that management is not a profession. This hurts. I would like to believe that there is something out there called 'management improvement,' that it was widely sought and demanded, and that exercising it would improve our chances of success in whatever sphere of action we had chosen. The evidence does not yet support the description in Peter Drucker's title, and we can have little assurance that it ever will.

(Un) Written Rules of Engineering Management

Sue Dorward

You may have seen Business 2.0's cover story in July 2005 on the latest hot management guide, Swanson's Unwritten Rules of Management. It's so hot even Warren Buffett requested copies to give to business associates, something he rarely does. And yes, Buffett had to request the copies, not purchase them, because this book is not for sale. You can only order a single copy, for free, on the Raytheon web site. Raytheon did not even intend for the world to see this book: as it started out as a graduation speech, with tips for graduates entering the work force! It then became a management talk, and so many people requested copies of the slides that Raytheon printed over 10,000 copies.

For Bill Swanson, Raytheon's CEO, this little grey notebook - weighing in at a mere two ounces - distills a lifetime of management experience into 33 pearls of wisdom, each described succinctly in

a single page. For me, "Unwritten Rules" is the first popular management book I've heard of that was written by an engineer. Not only does Swanson lead a major engineering company, but he also has a degree in industrial engineering from Cal Poly and spent over thirty years working his way up Raytheon engineering's corporate ladder. Finally, I thought, here's something that may actually cut through the fluff and hype and give me something that works in an engineering environment.

So I went online, ordered a copy, and smiled as I ripped open the package that arrived a few weeks later. Within thirty minutes, I'd read through it, and was pleased. Swanson's tips are common sense, but as I read them I could think of numerous instances when people (including myself) went directly against his advice, with a range of negative consequences. I looked through the

book again, this time to find those tips that, based on my experience as a manager and coach, I thought would be most useful for engineering managers.

Rule #1 - Learn to say, "I don't know." If used when appropriate, it will be used often.

I still remember getting stumped by an interview question: "What would you do in a client presentation if the client asks you for information that you do not have?" My answer was to give whatever relevant information I could. The right answer is "I do not have that information, but I will get that for you after the meeting." Admitting that you don't know, and then doing something about it, is better than trying to hide your ignorance and then doing nothing about it!

Rule #4 - Look for what is missing. Many know how to improve

what's there; few can see what isn't there.

It is so easy to get caught up in the details in front of us, and to focus on refining them, that we forget to step back and ask "What's missing?" Some people are great at this, and often get pulled in to provide a fresh set of eyes and help a team regain that big picture perspective. As Swanson points out "This is what leaders are looking for in individuals who are coming up in the organization. ... This is a rare quality that few people have. It can and should be developed."

Rule #7 - Constantly review developments to make sure that the actual benefits are what they were supposed to be. Avoid Newton's Law.

"For every action, there is an equal and opposite reaction." We all know managers who ask for or decide something without thinking through (or caring about) the implications. In some cases, people put in long hours to do something that is really not worth the effort or does not achieve the intended goal. Carefully defining the goals and benefits and monitoring progress help identify whether a project is on track or needs adjustment. Swanson describes how program managers at Raytheon have process disciplines for this, but warns that "it is essential that the manager use the disciplines to gain insight into his or her program and its progress, and not simply as a way to 'check the box.'"

Rule #11 - Confirm the instructions you give others, and their commitments, in writing. Don't assume it will get done!

Given the nature of today's work environment, we are awash in miscommunication and competing priorities. We have distributed project teams that meet virtually, many engineers who speak English as a second language, and non-technical business leaders struggling to understand engineering jargon. Not only does a written follow-up serve to clarify the work, it also improves the accountability of team members. Swanson suggests keeping written instructions "clear and crisp so as not to bureaucratize the process."

Rule #17 - Promises, schedule and estimates are important instruments in a well-run business. You must make promises - don't lean on the often-used phrase: "I can't estimate it because it depends on many uncertain factors."

Some engineers are great at estimating: they think through the work first, ask questions to help refine the estimate, and are consistently on target with delivering results. Others seem to want to build first, and estimate later! Their inability to estimate comes back to bite them as the deadline looms, they are behind, and need to explain to management why it's late. This experience makes them hate estimates even more!

What to do? Some managers pad their engineers' estimates. Others disregard even careful estimates and demand shorter timeframes. In my experience, these games just cloud the issue and make projects less manageable. Help your engineers improve the accuracy of their estimates. Use estimate and delivery data from past projects to better estimate future projects. Different engineers need different amounts of time, so identify the project team and include them in the schedule-creation process. Finally, the entire team needs to be accountable for the schedule, to ensure that it is both reasonable and followed, so consider including estimation and on-schedule delivery as factors in performance reviews.

Rule #21 - Don't get excited in engineering emergencies: keep your feet on the ground.

I worked in a dot-com environment that for a while was plagued with emergencies. One engineer complained that her manager became "a deer in headlights," unable to act in a crisis. Swanson advises, "It is precisely when things go wrong that your leadership skills will be most tested. If you help the team solve the problem in a calm, professional manner, you will inspire confidence. The members of the team will believe in you and in each other."

Rule #27 - Beg for the bad news. As a manager, you want to know about potential problems sooner rather than

later. For example, if an engineer sees that a deadline is in jeopardy, you don't want to find out about it the day before the deadline. "The leader must create a climate in which it is understood reflexively that bad news, while never pleasant, must be shared. And the sooner the bad news is aired, the better," says Swanson. Nobody will tell you the bad news if they believe that you'll bite his head off for it. If the engineer is being proactive, telling you soon enough that you can take corrective action, then you may actually want to publicly praise him, to encourage the kind of climate that Swanson describes.

Rule #29 - You can't polish a sneaker.

I had previously heard this one as "you can't polish a turd." Make sure that what you have is solid before you get side-tracked working on bells and whistles. We are often tempted to continue working with a flawed system, rather than take the time to fix it, or abandon it and start over. Fred Brooks' sage advice in *The Mythical Man Month* is to plan to throw out a pilot system and rebuild it (you'll end up doing it whether you plan to or not). I'm sure that we can all think of software programs where we wish that the vendor did this, but it rarely happens.

Rule #30 - When facing issues or problems that are drawn-out, "short them to ground."

Swanson blames his engineering background for this one! The basic idea is that if people seem to be spending a lot of energy on a problem and not making progress, work to find the quickest path to the solution, one that avoids delays and any activity that doesn't add value.

In summary, Swanson's Unwritten Rules are insightful and practical, but often not followed. Given Swanson's background, his advice is highly relevant for engineering managers. It's worth the few minutes it takes to read, as it's an investment that's sure to pay off. Even Warren Buffett thinks so.

Sue Dorward is a tech management coach based in New Jersey. She can be reached at sue@sudocoaching.com.

Your EMS Case Study Project

by Terrance Malkinson, Chair, Case Study Leadership Team

We have been extremely pleased by the interest expressed by many EMS members to participate in the Case Study Project. Many have expressed the opinion on how important and needed this real-life applied information will be in their day-to-day workplace activities. Over the past few months the EMS leadership team for this new initiative has been developing an action plan for moving forward.

The leadership team for this project consists of:

Terrance Malkinson

malkinst@telus.net

Gus Gaynor

g.gaynor@ieee.org

Lois Peters

peterl@rpi.edu

Mary Reidy

mary.reidy@us.ngrid.com

Purpose of this Project

Cases have played a central role in education for many years and are a powerful tool for helping us in our day-to-day work activities. They help us understand, and apply the knowledge gained; enhancing both the success of our organizations' and our careers'. The benefits are not limited to reading the case.

Benefits also emerge from the experience gained in preparing the case. The yield from this project will be yet another benefit of being a member of the EMS. We believe that the sale of the cases will provide revenue to our EMS that will allow us to grow other products and services that will benefit your career.

What is a Case Study?

In general, a case consists of a narrative of real events that provide the reader with information to evaluate alternative courses of action. The unique differentiator for this EMS project is that we are offering our valued EMS members an opportunity to share their real-life work experiences

with others. In addition, all EMS members will gain insight from the every-day situations provided in these cases; benefiting their career.

Our intent is not to do what has been done before.... our cases will go where no one has gone before and be immediately applicable to your practice of Engineering and Technology Management.

How do you Begin?

Each of us as we have journeyed through our career has experienced situations in which we have learned. We have all thought to ourselves "if someone had only told me I would have handled the situation differently" This is your opportunity to share your experiences with others. Contact any member of the project leadership team and tell us your idea for a case. We are friendly people just like yourself and will work with you to help develop your case. We plan to recruit an experienced case writer to help you, and to use peer-review to ensure that your case is of the highest quality.

Cases can span management to business fundamentals:

Management Fundamentals

Dealing with People

Goal Setting

Team Building

Scope Creep

Financial Analysis

Reaching Agreement

Ethics and Leadership

Diversity in the Workplace

..... and much more

Business Foundations

Technology Strategy

Innovation and Entrepreneurship

Technology Policy

Technological Leadership

New Market Creation

Decision Science

Emerging Technologies

Building New Businesses in Mature

Companies

..... and much more

Writing the Case?

We offer two case study write-up scenarios for you – short cases and long cases. These are guidelines only. Each case is unique and so may include characteristics and information specifically relevant to it.

Short Cases

These will fall within the range 1000–1500 words. An introductory paragraph will introduce the problem, issue or question and stimulate the readers' interest. A second paragraph will describe the basics of the management and technological domain that is the focus of the problem, issue or question. The third paragraph will provide background on the company, business, group, organization, or entity that is the subject of the case. Following this is the body of the document that should provide the real-life story, situation, or scenario for case discussion. The short case will end with a situation/question, or paradox that will encourage the reader to think critically about what to do next and require them to come up with alternatives for action.

Long Cases

The long cases should not exceed 2500 words and may include attachments of relevant information for the reader followed by:

- An introductory paragraph will introduce the problem, issue, question, keeping in mind the teaching objective or main take home point of the case. This statement of the problem is key to developing a successful case. What is the objective of this case?
- Background information about the company, group, organization, or entity that is the subject of the case. This could include information about key individuals, origins of the organization, operating culture, ranking in its industry base, and relevant issues that impact the conclusions.

- A description of the basics of the management and technological domain that is the focus of the case study in terms of the management and business considerations.
- Empirical information related to the case such as competitive position, data interviews or statements about the issue that show different perspectives or attitudes towards the issue both inside and outside the organization, implications/roadmap to the future, and financial data.
- Full description of the lessons learned
- End your case with a situation, question, or paradox that will encourage the reader to think critically about what to do next and require them to come up with some options for action.

Creating a Professional Document

We will help you with ethical guidelines, protection of sensitive informa-

tion, informed consent, and/or releases. Your document will fall under the IEEE copyright policy.

Other Guidelines

- Take time to define the purpose or objective of your case.
- It is critical to capture the readers' attention with a good introduction, follow up with a middle section that provides all the details, and end the case by posing the critical questions.
- There should be a sense of story to the presentation
- Use natural divisions in the narrative; each preceded by a heading.
- The narrative should be written so that the reader experiences the situation as it unfolds.
- Create your case mindful of the larger business/industry climate.
- The case writer is not an analyst – maintain your neutrality and objectiveness.
- Include decision points in the case that provide the readers with the opportunity to choose among alternative courses of action.

- The objective is not necessarily to provide a predetermined conclusion but rather guide the reader along a path of discovery.
- Include relevant dialogue and/or quotations.
- Provide lessons learned. Cases should be educational.
- Include questions for further discussion.
- Avoid irrelevant information.

Your Case Study Leadership Team and the EMS Board of Governors are all very excited about the potential of this project to benefit you, the members of the IEEE Engineering Management Society. We welcome any questions that you might have and invite you to participate as a provider of a case. Employers value employees to actively contribute to the profession. We are here to help you in any way that you might need.

This is a continuing project. We plan to publish the cases in groups of 20 with the first release in mid-2006.

Call for Case Study Proposals on Managing Engineering, Technology, and Innovation

The IEEE Engineering Management Society (EMS) is embarking on an exciting project that involves developing a unique repository of cases related to managing engineering, technology, and innovation.

AN INVITATION

This is your personal invitation to help build an educational program that will provide a real-life educational resource for managers, engineers, and scientists challenged with the goals of creating new businesses and better business practices and processes through integrating technological and business knowledge in a competitive global economy.

You are invited to participate. This project will result in a unique, exciting, and valuable product for the professional development of practicing managers, technology specialists, and engi-

neers, as well as students looking toward meeting the challenges of technological change and management of innovation and technology. There are benefits both for those who relate their experiences in these educational cases and for those who study them and apply the insights in their daily work.

REAL WORLD EXPERIENCES

These new cases will provide a technology and management based body of knowledge by integrating the elements of engineering, technology, innovation, and management.

The cases will:

- Reflect the “real life” issues that we all encounter in our daily work
- Be created by practicing engineers, managers, and innovators
- Meet the needs of managers across all disciplines in technology inten-

sive environments

- Meet expectations and produce results in complex and uncertain requirements.
- Lay the foundations for integrating technical and business knowledge
- Bring real-world experiences to all managers from entry level to those in positions with responsibility for the organization's future

Your experiences can be developed into a case study. We invite you to submit a short treatment of a case that you would like to develop as a means of passing on your experiences. Upon acceptance an experienced case writer will be assigned to help develop the case. All cases will be peer reviewed in order to maintain quality. You will have the privilege of having your name listed as the case originator.

Gaining Support for Your Project

Leslie Martinich
Chair, Central Texas Chapter

Engineers are often surprised when others do not recognize their ideas as “great.” An engineer who has worked hard to solve a technical problem arrives at a solution, announces the “great idea,” and encounters lack of enthusiasm at best, or resistance or nay-saying at worst.

How can engineers and their managers avoid such situations and set up their projects for support and success? Remember that not everyone is as smart as the engineer who solved the technical problem. Others may need *education* about the issue. Remember to *test your assumptions*. Do others share the same objectives? Perhaps the engineer worked hard to solve a problem that others in the organization assign a low priority to. Perhaps some fundamental assumptions have changed, rendering this particular problem irrelevant.

Whether other stakeholders need education or your goals need realignment with the organization’s goals, a conscious effort to gain support for your projects and ideas can help.

Engineering managers are rarely told that part of their job is to gain the support of others for their projects. And their failure to gain such support can easily lead to project failure. We’ll consider **what** is involved in gaining support for a project, **why** it is important and **how** to do it. And, as a side note, consider that this same thoughtful approach works well in your personal relationships, too.

What’s Involved in Gaining Support

Gaining support has two aspects: acquiring the emotional or psychological commitment from all stakeholders, and acquiring the financial resources necessary to complete your project.

It is easy to stay focused on your current project, managing the schedule and budget, prioritizing and resolving

technical issues, and finding the right resources. And in staying “heads down,” engineering managers sometimes overlook the other stakeholders. Who are they? Do they include the CEO of your firm, various vice presidents and directors, managers of technical support, quality assurance, documentation, training, manufacturing, IT, marketing, and sales, project managers, customers, end users, suppliers and liaisons to standards bodies such as IEEE?

When you have the commitment of these stakeholders, acquiring the financial resources will be considerably easier.

Why Gaining Support is Important

You might think that getting commitment from all these stakeholders is outside the job description for engineering managers. Perhaps you think that it is the job of the project manager or the product manager. Successfully completing your project, however, is clearly within your job description. And very often, having the support of these stakeholders is essential to the successful completion of your project.

Very often engineering projects involve or will result in change. Resistance to change can jeopardize your project’s chances for success.

In addition, the process of acquiring support and the habits associated with a communication plan will help you to learn when you need a course correction. In listening to others, you will have ample opportunity to discern when your project or ideas are not aligned with the organization’s goals. The process of gaining support provides you with important information.

How to Gain Support for your Project

Gaining support for your project involves three steps: first, identify all

stakeholders; second, plan your communication approach with each stakeholder; and, third, execute your plan.

Step 1. Identify your audience. Consider members of the executive team, peers, individual contributors, other engineers, project managers, testers, trainers, documentation writers, systems engineers, support staff, customers, end users, sales and marketing.

Step 2. Construct a matrix. Use the audience names across the top as column headings. For each person in your audience, consider a broad variety of preferences and issues, including

- Change. How does this project represent a change to this person?
- Goals. What are this person’s goals and objectives?
- Fears. What fears does this project present for this person?
- Communication preference. Does this person want the big picture, face-to-face meetings? Or does this person prefer lots of data and time to mull it over?
- Needs. What are your needs with regard to this person? Do you need cooperation, resources, commitment, or an understanding of how this project fits into this person’s plans for the company?
- Shared interests. What areas of common interest do you share with this person?
- Format. What format will your communication take: weekly meetings, training classes, quarterly presentations, focus groups?
- Feedback. How will you get feedback from this person?

You do not need to fill in every cell of your matrix, but the more information you have up front, the better planning you’ll be able to do. As you learn more from each individual, you’ll be able to fill in more information.

Imagine that you are the engineering manager in charge of a new project to

create a system that will monitor and optimize routing for delivery and repair truck drivers. Imagine further that you are working closely with Pinocchio Pizza, which has agreed to test your systems. Your system will include a GPS device installed in the pizza delivery trucks and a routing console for the dispatcher.

Figure 1 shows an example of the matrix that you construct.

Constructing a communications plan

Audience	CEO	Manager of Project B	End User	Sales Person	Customer
Change	New product puts us into a higher end business	Project B will have to share some resources	Routing software limits the driver's autonomy on the delivery route	Will need to learn a new technology	Switch from a manual process to an automated system
Goals	Market leader in constraint-based routing	Continued support for B	autonomy	Maximize commissions	Efficiency
Fears	The project may take too long or cost too much.	Project B may lose some of its glory	Big brother		Reduced employee satisfaction
Communication preference	Lots of data . Time to think.	Big picture, verbal		Lots of data .	
Needs	Understanding of how this project fits into the company's long-term strategy. Funding for development. Help to meet with customers.	Cooperative use of limited lab resources	Buy in. Understanding of what decisions the end user makes during the course of work.	Commitment to sell this product. Understanding of what the customers want.	Understanding of how their manual processes work so that we can make the automated system effective for their needs.
Shared interests	Want organization to succeed.	Have worked together for seven years.			
Format and Feedback Mode	Ask for quarterly review of plans	Go out to lunch weekly	Focus Group, Usability Study	Focus Group; Quarterly Presentation and Question Session	Focus Group

Figure 1: Communications plan for routing optimization system.

can be a team activity. With your team, you'll have a greater diversity of insights into who needs to be included and what their preferences are. In many cases, you might want to ask your audience how best to work with them. It is useful to incorporate a variety of communication methods into your plan.

As you gain insight into what is important to each individual, you will be able to determine the most appropriate form of communication,

whether it is a meeting, weekly email, a focus group or a training program.

Step 3. Execute your plan. Hold your meetings, send your email, listen for the feedback that will help you to take corrective action in order to keep your project aligned with corporate goals.

You can adapt this communication plan to fit your needs, and you may want to incorporate back-up communication channels such as a web site where stakeholders can obtain information about your project or submit comments, questions, and feature and enhancement requests.

In communicating with each member of your audience, consider their goals, fears and communication preferences. Use your shared interests up front to solidify your relationship. In the process of getting feedback, explain your reasoning, plans and project, and ask others if you have missed anything or if they have a different view.

How has your team been successful at getting support for your projects and ideas? I am genuinely interested in hearing about what has worked for others. Send your stories to me at lmartinich@ieee.org.

Leslie Martinich was recently elected to the IEEE Engineering Management Society Board of Governors. As a practicing engineering manager, she has mentored many engineers in their careers. She is the founder of a consulting company, Competitive Focus, in Austin, Texas.

Set the Calibration on Your Brain

E. Roselyn Elford, BAPhysEd, MEdPsych

A wise engineer always calibrates his or her machinery, be it survey equipment, measuring devices, or other apparatus, before embarking on any project. In a similar way, the mind can be recalibrated to increase full brain function – ready to perform its best on the job.

The process has been developed in the area of Educational Kinesiology and has been utilized by Ralph Faste, a former director of the Product Design Program in the Department of Mechanical Engineering at Stanford University. His intention in using targeted movement activity was to devel-

op the students' visual and creative skills through the integration of abilities and awareness. "...he encourages his engineering students to learn to utilize all of their kinesthetic, visual, and symbolic talents and capabilities in the problem-solving process" quotes a Brain Gym Journal article,

8(3). Professor Faste realized that similar understanding of the brain; function of learning, and creativity in the world of engineering took on different vocabulary. However, he goes on to say that engineers must learn to use simultaneously the digital style of problem solving typical of the left brain and the analog style of the right brain, in order to be effective visual thinkers who can solve the complex problems they face today. He believes that without the kinesthetic component of brain clarity, that the engineer can intellectually understand a concept, i.e. a joke, without really “getting it”.

To comprehend at a deeper level than the symbolic, he reiterates that the right brain, having been given a bad rap in some circles, considered less valuable than the left hemisphere of the brain’s logical, linear, and rational functions, needs to be integrated into supportive function through targeted movement by the individual. (Think of it this way; the brain tells the body to move a specific part. Conversely, by moving in a specific manner, an area of the brain can be targeted, renewed, stimulated.)

New ideas start on the right side of the brain and their viability depends on the capacity to move them to the left hemisphere for breakdown and development. Ideally, there develops an oscillation in the integrated brain that allows for the easy association between right and left hemispheres of the cerebral cortex, back to front movement from stored information to communication areas, and up and down activity ensuring survival, emotional awareness, and learning, in a less stressful manner.

Professor Faste utilized differing ways of experiencing the world, including the specific movements of Educational Kinesiology a.k.a. Brain Gym®, to enable his students to use the two brain hemispheres in concert effectively for problem-solving challenges. In order to see beyond the words, he suggested one needs to drop in processing levels, out of the symbolic to the areas of hearing, seeing, and movement. Einstein apparently described this thinking as his “muscles tingling”.

Switched on Management and Switched on Selling are two courses, developed by Dr. Jerry Teplitz, based on Educational Kinesiology movements to enable business people, engineers included, to engage their full brain power, calibrated to readiness and function.

Roselyn Elford, APhysEd, MEdPsych., based in Calgary, Alberta, is a certified instructor of both courses. Teaching movement classes, for her, evolved out of an interest in developing specialized curriculum for children who lacked innate skills for physical activity. From there, she took programs to encourage sedentary, recovering, and older adults to begin to move, thus not only increasing their range of motion, strength, and flexibility, but also keeping their brains active and alert. Now, Ms. Elford has evolved in knowledge and training to the business community and travels and teaches Educational Kinesiology to a broad range of clients. For more information regarding Switched on Management and Switched on Selling, Ms. Elford can be reached at eroselyn@telus.net.

Chapter News

Southeastern Michigan Chapter

Mark Ciechanowski, P.E.

At our chapter’s third meeting of the year on August 30th, Liang Downey reported on her trip to the EMS 2005 Chapter Chairs Workshop in Quebec City. She shared with us her meeting of other EMS members including the EMS Board of Directors. We had a first-hand account of the presentations, and a great deal of useful information was shared about how to add value to our chapter activities.

Our final meeting will be on Wednesday, November 9, 2005. Our Chapter will host Dr. Euge Greenstein (egreenstein@twmi.r.com) who will speak on “PLM Tools are Necessary but Not Sufficient”. Dr. Greenstein is the retired Director of Ford / Visteon Engineer-

ing/IT Integration. This talk will take place at the Southeastern Michigan Fall Section Conference and Dinner at Fairlane Center, University of Michigan-Dearborn, Dearborn, Michigan. The evening will conclude with dinner and the keynote speaker, Jack Casazza, talking about the impact of the power industry and the August 2003 mid-west power blackout. Our Section hosts this conference twice a year as a benefit to our members – this is not a fund raiser – it is a service to our membership.

The Chapter officers and I are also looking forward to another great program next year. Our chapter is always seeking suggestions for topics and speakers. Ideas for topics include: Ethics and Management; Competitive and Business Intelligence in the Fast Changing EE Profession; People Culture vs. Process Culture; Hiring by Skills vs. Hiring by Talent;

Managing Agile Software Projects. Please let me know whom you would like to hear speak on what topics.

I encourage your participation in becoming a volunteer. As Kimball Williams, EMC President and fellow Southeastern Michigan Section member says, “volunteering benefits you as much as it benefits the chapter”. When you volunteer, you increase your return on your investment in IEEE. When you are ready, send me a note at mark.ciechanowski@ieee.org.

Fort Worth Chapter Ed Safford

Growth and relevance are high on the agenda. In 2005, our focus has been on learning what our members wanted from a

local chapter. To put things in perspective we have had joint meetings with the Project Management Institute societies, met with and asked for guidance from our GOLD engineers, and supported the development of new services from the society and the section – such as PE ethics training sessions in the Fort Worth Section sponsored MetroCon.

In 2006, our focus will be to experiment with new ways to differentiate ourselves from the offerings of other IEEE chapters and other management organizations. We are planning for meetings that will include more PACE related material and to extend our college outreach to include not just the engineering department, but also those who may have acquired the foundations of engineering while majoring in other departments such as business and architecture. We will of course continue to explore new ways to network with those who have similar interests through modern communication channels such as blogs as well as through the more traditional face-to-face meetings.

Recognizing the challenge of attracting and holding the attention of “time constrained” and “frequently harried” engineering leadership, we will continue to seek advice on the most relevant meeting topics and continue our pursuit of absolutely excellent guest speakers. While our past experience has indicated that “relevance of subject” is the single most important factor in improving meeting attendance, it appears to be followed closely by “quality of program”. Finally, to provide more “value added” for our emerging engineering leaders we will continue to seek out ways for individuals to share with each other their ideas, their plans, and their failures along with their successes. This issue of the EMS newsletter just seemed a good way for us to start.

Boston Chapter *Dave Delman*

The Boston Chapter’s September 2005 meeting was led by John Sharp, Environ-

mental Safety Manager for Tera-dyne, Chairman of the IPC Committee on Material Declaration and a regular IPC Internet presenter on this M.D. topic to the industry. You have likely heard by now, that the European Union (EU) adopted directives titled Restrictions on Hazardous Substances (RoHS), and Waste Electronic and Electrical Equipment (WEEE). RoHS eliminates or significantly reduces the use of certain substances from electronic products “put on the market” beginning July 1, 2006. This Materials Declaration Update covered the activities, standards, and guides already completed and in-process by the various US and international groups from The Joint Industry Guide (US, Europa, Japan), IPC, iNEMI, UK-Department of Trade and Industry (DTI), , - . This presentation made the participants feel as if they were sitting on the “current hour” as John included information and agreements that was being voted on internationally as we met.

Special Issue of IEEE Transactions on Engineering Management **Theme: University Technology Transfer**

Co-editors:

Albert N. Link-University of North Carolina at Greensboro (al_link@uncg.edu)

Frank T. Rothaermel-Georgia Institute of Technology (frank.rothaermel@mgt.gatech.edu)

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Overview

The recent increase in university technology transfer, via patenting, licensing, research joint ventures, incubators, science parks, and NSF-sponsored Engineering Research Centers and Industry-University Cooperative Research Centers has important managerial and policy implications. We seek papers from scholars in management (e.g., strategy, entrepreneurship, human resource management, and technology/innovation management), economics, sociology, political science, public administration, and engineering

that explore these implications. Both quantitative and qualitative papers are welcome. All papers will undergo double-blind, peer review.

Research Questions

Some research questions that might be addressed in this IEEE-TEM special issue are:

- Evaluation of institutions and programs involved in university technology transfer
- Differential performance within and across institutions (e.g., universities, incubators, science parks)

- Relationships between university and industry (e.g., intellectual property rights)
- University start-up and incubator firm differential performance
- The role of human resource management practices in university technology transfer
- Importance of strategic alliances and social networks in technology transfer
- Trade-off between commercial or applied research and basic research
- Effects of technology transfer on the educational process

- Effects of technology transfer on management, especially on engineering management,
- Conflicts of interest between scientists and universities
- Formulation of technology transfer strategies by universities or industry
- Implementation of technology transfer strategies by universities or industry

Proposed Time Frame for the Special Issue	
Stage	Date
Deadline for papers to be submitted electronically at IEEE Manuscript Central (http://tem-ieee.manuscriptcentral.com) indicating that they are for the special issue on university technology transfer.	March 31, 2006
Authors receive initial editorial decision	June 2006
Special issue workshop at Georgia Tech for papers that are invited for revision	late September 2006

Third IEEE International Conference on Management of Innovation and Technology - Managing Innovation in Emerging Markets

21-23 June 2006, Singapore

ICMIT2006 continues a series of international conferences (ICMIT2000, ICMIT2002 and IEMC2004) devoted to the area of innovation and technology management first initiated by the IEEE Engineering Management Society Singapore Chapter. These conferences aim

to provide a platform for international scholars to meet and exchange ideas in exciting locations within Asia.

All interested persons should submit one page abstracts (500-750 words) through the conference website (www.icmit.net). Each sub-

mission will be peer reviewed for technical merit and content. Papers accepted for presentation will appear in the Conference Proceedings provided at least one author registers for the conference. The full paper shall have to be IEEE Explore compliant.

Topics for the conference include but are not limited to the following:

- | | |
|----------------------------------|---|
| Technology Management | New Product Development |
| Innovation Policy and Management | Entrepreneurship |
| Managing IT and E-Commerce | Organizational Culture |
| Human Resource Management | Intellectual Property and Patent Strategy |
| Knowledge Management | R&D and Risk Management |
| Project Management | Six Sigma and Quality Management |
| Supply Chain Management | Corporate governance |
| Sustainable Development | Business Strategy |

Deadlines

- | | |
|-----------------------------|-----------------|
| Submission of Abstract: | 1 January 2006 |
| Notification of Acceptance: | 1 February 2006 |
| Camera-Ready Copy: | 1 April 2006 |

For further information, please contact:

ICMIT2006 Secretariat
 C/O Integrated Meetings Specialist
 1122A Serangoon Road, Singapore 328206
 Tel: (65) 6295 5790, Fax: (65) 6295 5792,
 E-mail: icmit2006@inmeet.com.sg

THE ROLE OF TECHNOLOGY IN OUR ECONOMY

7th ANNUAL IEEE-UT ENGINEERING MANAGEMENT CONFERENCE

August 10-11, 2006

Austin, Texas

Today's technology-driven economy has spurred thousands of innovations, while also introducing quality, customer service, supply chain, and work-life balance issues, to name a few. Engineers are forced to reach further and deeper, while working faster, smarter, safer, and most cost-effectively with no relief in sight. Bring your contributions to EMC 2006 by submitting a paper proposal for this important conference. <http://www.ieeeutemc.org>

CALL FOR PAPERS

The program committee seeks proposals on a wide range of exciting topics to help in the creation of another outstanding technical program. The list of suggested topics includes:

- Digital convergence
- Hybrid technology
- Innovation
- Supply chain operation
- As technology moves us toward seamless mobility what role will the virtual office have in the new economy?
- As mobile devices have expanding capabilities and allow for a constant connection to the office, how is this affecting work-life balance?
- What new industries will arise to address the growing work-life balance concerns of American workers?
- How has technology reshaped our

customer/vendor relationships and expectations?

- In a world of ever increasing speed, has technology devalued the virtue of patience?
- As people demand ever cheaper goods, is U.S.-based manufacturing doomed?
- Can automation and technological innovation compete with low-cost manufacturing abroad?
- Industrialization abroad is further raising the demand for oil, what impact will this have on the U.S. economy that is entrenched in fossil fuel consumption?
- Computerized ERP systems transforming the supply chain operation.
- As systems grow increasingly complex and time to market shrinks, how do companies ensure quality in the technologies that they are releasing?

Abstract submission deadline:

January 15, 2006

Notification of acceptances:

February 1, 2006

Paper submission deadline for accepted abstracts: April 1, 2006

All Abstracts should be submitted electronically to the Program Chair at eric.cowan@motorola.com

EMS Members

The Workplace Health and Wellness Theme Section of the First Quarter

2005 EMS Newsletter included the article *Yoga* that dealt with Yoga as a physical exercise. The authors made the statement: "Many mistake Yoga as being a religion. It is not." An IEEE and EMS member informed us that the article failed to disclose that Yoga has a Hindu religious component. The authors mentioned the eight limbs of Yoga but failed to disclose that four of the eight limbs of Yoga described in the article apparently contain spiritual guides for the Hindu religion.

It was not our intention to mislead our readers in any way or minimize the spiritual component of Yoga as a religious practice. We accept the fact that Yoga has a spiritual component, but it also has a secular component in the field of physical development which was the primary intent of the article. IEEE EMS publications do not knowingly become engaged in religious discourse or publish religious material since religion is not in our technical Field of Interest.

While it was not our intent to minimize the spiritual component of a religious practice, or to highlight it in any way, we sincerely regret the inadvertent use of the phrase that Yoga is not a religion and the mention of the spiritual components in it.

Gerard H. (Gus) Gaynor
EMS Vice-President Publications

Board of Governors

Your Board serves the interests of the Society and promotes Excellence in Engineering Management. The EMS Board needs your input to help determine if the Society meets your needs. Please contact any Board member for additional information, for expressing opinions, or raising issues that need to be addressed by the Society.

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Newsletter Deadlines

Issue	Deadlines
First Quarter	15 January
Second Quarter	1 April
Third Quarter	1 July
Fourth Quarter	1 October
Terrance J. Malkinson, Editor <malkinst@telus.net> Paul Doto, IEEE Newsletter Coordinator <p.doto@ieee.org>	

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