



President's Corner

Tariq S. Durrani
 President, IEEE Engineering Management Society



Tariq Durrani,
 President IEEE EMS

All's well that ends well, or all's well that metamorphs itself into something even better. This is the last column I write as President of the IEEE Engi-

neering Management Society. On 31 December I step down and the IEEE Engineering Management Society comes to an end. The IEEE Technology Management Council comes into existence. The EMS-TMC transition process has been carefully planned with our EMS members in mind. We encourage all 2007 EMS members to continue their active participation in TMC activities. Please see the next article "Your Future as EMS Transitions to TMC" by Gerard H. (Gus) Gaynor (TMC President-designate) for further information.

highlighted to all concerned, the immense opportunities that Chapters have in broadening their scope and activities, as EMS transitions to TMC.

Leslie Martinich has provided able oversight to EMS publications and to the Society Web-site. It is through the VP Recognition and External Relations, Joel Snyder's capable leadership that EMS has over the years consistently recognised the good and the great and talented individuals for their contributions to the field. Howard is stimulating educational activities in EMS including laying the foundation for a distinguish lecturer/speaker programme. Lou, with his diffident style and prudent management of the EMS finances, has ensured that the Society is in great shape and is leaving a substantial legacy to the TMC. Mary Reidy has performed an admirable task of providing support to the EMS Board of Governors and the Society Executive Committee.

It is Charles Rubenstein's perseverance that we now have a Management track in the highly prestigious International Conference on Communications (ICC-2008), to be held in Beijing in May 2008. ICC-2008 is the flagship conference of the IEEE communications Society, which regularly attracts leading experts, policy makers and senior industrialists. In addition, plans are shaping up for the first IEMC-Europe 2008 to be held in June 2008 in the fair city of Lisbon, Portugal, under the able guidance of Antonio Fernandes. Hope you would consider submitting a paper for IEMC-Europe 2008.

One of the last activities I attended on behalf of EMS was the Society's flagship

The past two years as President of EMS have been fun years. I have been very fortunate in working with some of the most talented and dedicated individuals who as a team have led EMS from success to success, represented by the Executive Committee of EMS, comprising Vice-Presidents Gus Gaynor, Charles Rubenstein, Celia Desmond, Leslie Martinich, Joel Snyder and Howard Wolfram, EMS Treasurer Lou Luceri and Mary Reidy, the Society Secretary. I am indebted to Past EMS President and current Division VI Director Irv Engelson, for his sage and witty advice, full of homilies and anecdotes.

Gus has been the mainstay of the transition of EMS to the Technology Management Council. He takes over as the first President of TMC and I wish him all the best in this new venture. Charlie Rubenstein with his inimitable charm has worked exceedingly hard to establish a very strong portfolio of international conferences and events. Celia has worked consistently with the EMS Chapter Chairs to stimulate activities and has provided advice, guidance and support, and

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conference- IEMC-2007 in July 2007, which was held in the tranquil surrounding of the Hyatt Regency Resort Hotel in Austin Texas. There were some very impressive keynote presentations, and a significant number of Panel and parallel technical sessions. The Conference scored a number of firsts- key amongst them were the pod-casting of several of the key note presentations. Another was the availability of two bulls on the premises -a typical Texan touch -and it was most entertaining to see distinguished delegates lining up to have their photograph taken while riding the bulls.

Most presentations were memorable, however four in particular had a lasting impression on me - A presentation on 'Meta-Design and Creativity' reflected the theme of the conference- Managing Creativity - where Professor Gerhard Fischer illustrated his talk on the need to harness creativity of the communities, and gave the basic message that the complexity and uniqueness of design problems transcend unaided, individual human mind; they require meta-design and social creativity; and how through his work, the city of Boulder has been able to harness the creativity of its citizens in devising new civic buildings, thus bringing about a greater involvement and ownership of civic projects by the local population. This was followed by a Panel presentation by representatives from the city of Austin who illustrated by word and deed how they had been able to rejuvenate the economy of Austin through close collaboration between industry, government and the University. This model of collaboration is rapidly gaining ground, where regional economic development agencies are leveraging the innovation in the universities and working with local industry to catalyse jobs and developments. Interestingly, on the other side of the world, the same theme was dis-

cussed at the Triple Helix VI Conference in Singapore in May 2007, which referred to the interaction between the three drivers -university-industry and academe. A future conference on the subject -Triple Helix VII- will be held in my home town of Glasgow, Scotland in 2009.

At IEMC-2007, a most entertaining and informative talk was given by Jim Kennedy, the recent Director of the Kennedy space Center- on the future of space flight and the attendant management challenges of bringing together large-scale long term projects, to take man to Mars and to probe distant planets within this century. Dan Heath co-author of the best -seller 'Make it stick' enthralled and entertained the audience with anecdotes and examples of management practice that have had an impact on everyday marketing and product promotion. I was particularly taken by the episode of the cleaning up Texas by appealing to the patriotic tendencies of the Texan 'bubbas' through the use of the slogan 'Don't mess with Texas'. Several colleagues from Texas worked long and hard on the organisation of IEMC-2007, I would like to make particular mention of Anthony Ambler the General Chair of IEMC-2007, Leslie Martinich the Associate Chair, and Walt Trybula the Program Chair for all their hard work and dedication. More details are included in a Report on IEMC-2007 elsewhere in this Newsletter.

It was good to note that several members of the EMS Board of Governors were able to attend IEMC-2007. The Society has been fortunate in attracting so many dedicated and talented individuals to its fold. I am personally indebted to each one of the EMS Governors for their help, support and advice during my term as President of the IEEE Engineering Management Society.

Following IEMC-2007 I had occasion to attend the International conference on Management science and Engineering (IMSCE) in Harbin China in August. This was a memorable occasion, made more so with the irrepressible company of Irv Engelson. The Conference has maintained its high standard of quality papers that were presented at the Conference. EMS is indeed fortunate in technically sponsoring the event, and in ensuring that the conference proceedings appear in IEEE Xplore under the EMS imprint, thus providing an important pathway for the excellent work, of colleagues in China to be accessible to a worldwide audience. In this context the efforts of Dan Wang and Dean Li Juin of Harbin Institute of Technology are well worth recording.

The Society has maintained an extremely high reputation as a source of original knowledge through its publications. Our Transactions are amongst the highest rated in the field. This has been achieved through the hard working Department Editors, most ably led by George Farris. The Engineering Management Review has established itself as one of the premier publications on the subject, achieved through the dedicated efforts and innovative reforms introduced by the Editor-in-Chief Wade Shaw.

Last but not least we all owe a debt of gratitude to our Newsletter Editor, Terrance Malkinson, who has ably and loyally produced this Newsletter over the last several years, meeting all the tight deadlines, giving us a flavour of EMS activities and those of further afield. I have always been impressed by his prowess both as an Editor and as an athlete par-excellence. Thank you Terrance.

Farewell and Good bye

Editor's Note

Terrance Malkinson BSc.; B.Tech.; C.E.T
Editor: IEEE Engineering Management 2003-2007

On behalf of the Board of Governors and members of the IEEE Engineering Management I would like to express our appreciation to Dr. Durrani for his visionary leadership on our behalf not only as President for the past two years but also for the many other IEEE activities he has undertaken. Leadership of change is never easy. Tariq has proven to be a gentleman, scholar, and excellent leader. He has shepherded us to this transition point with grace and dignity. I first met him in his role as chairman of IEMC-2002 held at St. Johns College in Cambridge, UK. Tariq, it has been an honor and privilege to learn from you

and I hope that our paths will cross again in the future.

As this is the final newsletter of the Engineering Management Society I would like to express my appreciation to Tariq and to the EMS global members for their support over the past three years. In particular I would like to thank those who took the time to submit articles for publication in the newsletter. It is through involvement that you obtain best and full value for your IEEE membership fees. It is through involvement that your career will benefit. I would encourage all members to become involved in the IEEE in whatever activity and to what-

ever level that you wish.

Terrance Malkinson BSc., B.Tech., C.E.T.

Editor: IEEE Engineering Management 2003-2007

Governor: IEEE Engineering Management Society

Vice-Chair: IEEE-USA Communications Committee

Senator: University of Calgary

Associate Editor: IEEE Canadian Review

Alumni: Outward Bound Canada and Outward Bound Singapore

Ironman Triathlete

Author of over 330 publications and international speaker

Your Future as EMS Transitions to TMC

Gerard H. (Gus) Gaynor
TMC President-designate

The IEEE Engineering Management Society (EMS) will transition to the IEEE Technology Management Council (TMC) beginning 1 January 2008 and current EMS Chapters will be converted to TMC Chapters at that time. All current (2007) EMS members will be grandfathered, so all your benefits will continue undiminished, for the year 2008, whether you belong to a Council Member Society or not. The only requirement is that you continue your IEEE membership, and pay the same subscription fee of \$30.00 for 2008 as you paid in 2007.

When you receive your 2008 IEEE renewal notice, you will be billed automatically for the \$30.00 for the two journals, the REVIEW and TRANSACTIONS, as before. The important point is that by continuing to pay the \$30.00 fee you will continue to receive the same benefits in an uninterrupted and transparent manner, including Chapter membership. No special or unusual action will be

required from current 2007 EMS members.

The following information is provided in case you missed the announcements in the Newsletter or in correspondence from EMS President Tariq Durrani or from the Council Transition Committee.

The IEEE Engineering Management Society Board of Governors was moving into new IEEE governance territory when it made the decision to transition to the IEEE Technology Management Council. Many IEEE leaders congratulated us on having taken this new initiative. While it has been a common practice for Societies to unite and form a Council this transition is the first time that a Society has transitioned to a Council.

An IEEE technical council operates the same as an IEEE society, with one exception. Whereas the membership of a society is composed of individual

IEEE members who choose to join a Society, a Council has IEEE societies as members. Therefore the Council has a much wider outreach to IEEE members than does a society. In the case of TMC, the following fourteen (14) IEEE Societies have already joined the TMC effective in 2008: Aerospace & Electronic Systems, Broadcast Technology, Circuits & Systems, Communications, Computer, Electron Devices, Industrial Electronics, Lasers and Electro-Optics, Professional Communication, Reliability, Signal Processing, Solid State Circuits, Systems Man and Cybernetics, and Vehicular Technology.

The EMS-TMC transition process has been carefully planned with our EMS members in mind. We encourage all 2007 EMS members to continue their active participation in TMC activities. TMC will continue to publish the two EMS publications, the Review and the Transactions. The Review will continue to provide you with the best of what's published

from a practitioner perspective. The transactions will inform you about the latest research occurring in the academic community. Our publications will be guided by the same policies and you can be assured that the high standards established by these two publications will continue

under the TMC. Our flagship conference, the International Engineering Management Conference, will become the International Technology Management Conference and bring you the information you need to succeed in your profession. As you renew your IEEE membership, we

encourage you to expand your interests in engineering and technology management by continuing your subscriptions to the Engineering Management Review and the Transactions on Engineering Management. Please direct your questions to Gus Gaynor at g.gaynor@ieee.org.

IEMC 2007: A Huge Success!

*Leslie Martinich
Vice-Chair, IEMC 2007*

Would you like to know how to inspire future generations to be more innovative? Or how to deliver messages in a way that helps your audience to retain them? Or how to find the innovative ideas that have an exceptional chance at becoming the next big thing?

Participants at the IEEE International Engineering Management Conference 2007 (IEMC), held at the Hyatt Lost Pines Resort and Spa 29 July through 1 August, learned all that and more. Typical comments included "I've learned more at this conference than at all the others I've attended combined!"

Outstanding Speakers!

Gerhard Fischer enlightened the group with his ideas about how social networks contribute to design efforts, and described the effects of the rise of social networks. Jeffrey Phillips provided insights into how organizations can position themselves for innovation success. Jim Kennedy inspired the entire group with his thoughts on leadership and space exploration. Jim Swartz dazzled the audience with his powerful talk on the steps that innovative leaders take to find and seize huge opportunities. On Wednesday, the final day of the conference, Dan Heath wowed everyone with his insights about how to make ideas stick in the minds of listeners.

Tutorials

Conference attendees learned about "Managing Your Intellectual Property" from Don Jarrell, "Outsourcing: How

to Get it Right from the Start" from Joyce Statz and Debbie Yedlin, "Maintaining the 'Edge': Managing Complex Project Through Teams" from David Hancock, and "Engineering Ethics" from Thomas Darwin. The tutorials, ranging from two to eight hours, provided an opportunity for depth of learning for all participants.

Panel Discussions

IEMC 2007 included several valuable discussions, including panels on the work of Peter Drucker, "How to Publish Your Research," "Innovation," "Creating a Technology Center," and "Making the Transition from Engineer to Manager." The panels were well attended and spiced with lively discussions.

GOLD Participants

GOLD (Graduates of the Last Decade) participants from around the world, led by Dr. Irena Atov from Australia, had a terrific presence at IEMC. The GOLD Track included Jim Kennedy's inspiring talk on "Leadership and Space Exploration," Jim Swartz's talk on "Seeing David in the Stone," a panel on "Making the Transition from Engineer to Manager" with Gus Gaynor, Mary Reidy, Margaretha Ericsson, Celia Desmond and Leslie Martinich, as well as a break out session with Celia Desmond. The GOLD Poster Session was outstanding, with GOLD members from all over the globe attending to present their research and results. The GOLD finale included a trip to Austin's famous music scene and a surprise test on "How Many Engineers

Does it Take to Put a Van Door Back On, After Your Group Has Accidentally Shoved it Right Off the Van!" And all that with a police car circling to see what this unusual group was doing at 2am. Fortunately, this intrepid group managed to replace the door and lived to tell about this adventure!

Family Track

IEMC 2007 included a track for families. A huge issue for the future concerns keeping children interested in careers in math and science, and IEMC provided an opportunity for hands on exploration through a Legos® MindStorms® activity, hosted by Cheryl Tulkoff, and a talk on young people and creativity by Gerald Wagner. Both events were well attended and very popular.

Papers

Dr. Walter Trybula organized the paper sessions. Authors from countries around the world contributed to very successful paper tracks on Technology Management, Creative Management, Successful Change, Management Challenges, Tools for Change, Growth, Product and Project Management, Management Issues in China, Small Company Growth and Companies, Governments, Management Controls, and Managing Change.

Awards

IEMC 2007 offered an opportunity to acknowledge some of the best research in engineering management. EMS President Tariq Durrani, EMS VP

Awards Joel Snyder, and IEEE Transactions on Engineering Management editor George Farris presented awards for the Best Paper of 2006 to:

- Satoshi Iwata, Sam Kurokawa and Kenzo Fujisu, "An Analysis of Global R&D Activities of Japanese MNCs in the US From the Knowledge-Based View," IEEE Transactions on Engineering Management, Vol. 53, No. 3, August 2006, pp. 361-379. 2006 Best Paper Award.
- Eitan Naveh and Sharon Link: "Standardization and Discretion: Does the Environmental Standard ISO 14001 Lead to Performance Benefits?" IEEE Transactions on Engineering Management, Vol. 53, No. 4, November

2006, pp. 508-519. 2006 Best Paper Award Honorable Mention.

- Ali E. Akgün, John C. Byrne, Halit Keskin and Gary S. Lynn, "Transactive Memory System in New Product Development Teams," IEEE Transactions on Engineering Management, Vol. 53, No. 1, February 2006, pp. 95-111. 2006 Best Paper Award Honorable Mention.

Joel Snyder also announced the Engineering Manager of the Year, 2007, award, which will be presented in 2008, to Mr. Charles Nils Smith of Southwest Research Institute, who was present at the IEMC Awards Banquet.

Congratulations to all!

It was very gratifying to honor these worthy engineering managers, educators and researchers!

Noteworthy

The participants and their families truly enjoyed the riverfront venue, the Hyatt Lost Pines Resort and Spa. We were treated to fantastic food, including an outdoor evening on the river, great music and dancing by many enthusiastic participants, and a great water park. The conference committee worked hard to put together a great conference!

I hope you will join us next year for IEMC-Europe 2008 in Lisbon, Portugal for the next big IEMC event!

Technology Management Council's 2008 Conferences

Charles Rubenstein
Vice-President Conferences

Under the continued stewardship of EMS Vice President Conferences Charles Rubenstein, your new Council is already working on a local mini-conference model that will allow shorter, more focused topical conferences that will supplement rather than substitute for a single annual International Engineering Management Conference.

Plans are well under way for IEMC-China 2008, a mini-conference track within the IEEE Communications Society ICC2008 Conference on May 19-23 2008 in Beijing, China (<http://www.ieee-icc.org/2008/conference.html>). We are honored that Prof. Dr. Xudong Gao of the renown Tsinghua University (Beijing, China) has agreed to serve as the Technical Program Committee Co-Chair along with 2008-2009 TMC Vice President for Conferences Prof. Dr. Charles Rubenstein from Pratt Institute (New York, USA). We are currently in the paper review stage of this conference and are referring late submissions on to our IEMC-Europe 2008 mini-conference sponsored by

your TMC and the IEEE Portugal Section on June 28 - July 1 2008 in Lisbon, Portugal under the Organizing Committee leadership of Conference Chair Prof. Dr. Antonio Fernandes, (<http://iemceur08.tagus.ist.utl.pt/>).

These are the first of what we expect to become regularized local conferences, and tracks in TMC Society Member conferences, administered by TMC with the help of local TMC Chapter leadership.

TMC is also co-sponsoring several other conferences in 2008 as financial or technical sponsors. These include ICMIT2008, probably in August in Bangkok, Thailand (<http://www.icmit.net>); IEMC-Japan 2008, joint with Japan Society for Science Policy and Research Management (JSSPRM) and the Engineering Association of Japan (EAJ) on October 12-13 2008 at the prestigious Shibaura Institute of Technology in Tokyo, Japan and are negotiating the continuation of a new engineering management conference taking place after the WiCom Conference.

We are also delighted to continue our long standing technical co-sponsorship of ICMSE2008 with the Harbin (China) Institute of Technology being held August 4-5, 2008 in Long Beach, California (<http://icmse.hit.edu.cn/english>). For additional information please contact Dr. Irving Engelson, Conference Liaison.

Regrettably, as happens sometimes in any business, although in planning for several years, we recently realized that IEMC2008 in Adelaide, Australia was scheduled in October 2008 at the same time as the Engineers Australia Conference. To avoid any conflict with this IEEE Sister Society, the EMS Board decided to cancel IEMC2008. Tim Ferris, Conference Chair, is preparing a new proposal for a TMC conference in Adelaide in the near future.

Beginning in 2009 it has been decided that we will be rebranding our conferences. The annual IEMC conference will become the IEEE International Conference on Technology Management (ICTM) and the mini-confer-

ences and collocated tracks will become the IEEE Technology Management Conference (TCM) typically followed by their venue designation; e.g., TMC-China, TMC-Europe. Clearly increasing our conference product line will require additional structure and volunteer support.

Are you interested in being a technical program committee reviewer, tutorial provider, or organizing/steering committee member? Do you have a venue for a conference? If so please contact TMC Vice President for Conferences Charles Rubenstein <c.rubenstein@ieee.org> and see our web site for additional infor-

mation on hosting IEEE Conferences.

Charles Rubenstein
<c.rubenstein@ieee.org >
Pratt Institute School of Information
& Library Science

IEMC-Europe 2008 Launched

J Pedro Mendes

As announced in the Q1 Newsletter issue, IEEE Technology Management Council has started a series of annual regional conferences. The first of these, titled *Managing Engineering, Technology and Innovation for Growth* will be at Estoril, Portugal, in June 28 to 30 <<http://iemceur08.tagus.ist.utl.pt/>>.

Estoril is a charming place in the Atlantic Coast and also a world-famous resort, with wonderful cosmopolitan nightlife and infrastructures for a summer centre — beaches, excellent hotels, golf courses, a casino and even a motor-racing circuit. The location is very close to the picturesque villages of Cascais (2 km) and Sintra (15 km,) and about 25 kilometers from Portugal capital city, Lisbon. Climate is usually exceptionally mild.

The Conference will be held at Estoril



Congress Centre. This is a modern, well-equipped facility located within walking distance from the Casino and from the Hotels reserved for the participants. The picture shows the casino in the foreground, with the adjacent Congress Centre and some hotels in the background.

IEMC-Europe 2008 welcomes full-paper contributions from researchers, educators, managers and students of engineering management describing results of research activity, case studies,

or best practices. All must shed light on the theory or practice of engineering, technology or innovation management and consider the strategic objective of economic growth. As detailed in the Call for Papers, topics include Decision Analysis, Technological Change and Management of Innovation, Operations and Supply Chain Management, and additional Cross-functional Emerging Domains.

Important Conference dates are:

Papers submission deadline
25th January 2008
Notification of acceptance
28th April 2008
Early registration deadline
8th May 2008
Normal registration deadline
23rd May 2008
Conference dates
June, 28 to 30, 2008

China adventure - ICMSE 2007 Successfully Closes

Dan Wang

Harbin Institute of Technology, China.

The International Conference on Management Science and Engineering 2007 (ICMSE2007) was successfully held in Harbin, China during August 20- 22, 2007. Scholars from China, Russia, Italy, UK, USA and Pakistan, etc. attended the conference.

ICMSE is an annual conference hosted by the School of Management, Harbin

Institute of Technology, China, with the State University of Management, Russia as the co-sponsor and IEEE Engineering Management Society as the technical co-sponsor. The aim of the Conference is to provide a forum for scholars and practitioners to exchange ideas and up-to-date concepts, theories and practices on management science and engineering. ICMSE originated from the Sino-Russian Symposium on Management

Science and Engineering which was jointly sponsored by the School of Management, Harbin Institute of Technology and the State University of Management, Moscow in 1993. It changed to its present name in 1995. Since then, the Conference has developed into a significant international event with attendees from over 20 countries. The technical co-sponsorship from IEEE Engineering Management Society started in 2006 with

unanimously approval from EMS Board of Governors earlier in 2005. The other sponsor of the conference is the National Natural Science Foundation of China (NNSFC) that provides financial supports. The Proceedings of the Conference are included in the IEEE Xplore database.

The Opening Ceremony of ICMSE 2007 was chaired by Prof. Yijun Li, Dean of the School of Management, HIT. EMS President Dr. Tariq S. Durrani made a speech at the occasion, where he emphasized the importance of research in management science and engineering and international cooperation; and extended his best wishes for a successful conference. HIT Vice President Prof. Fuping Wang and Prof. Leonova Tatiana, the Vice Rector of the State University of Management, Russia also made opening speeches. Prof. Tienan Wang from the National Natural Science Foundation of China has also delivered a congratulatory speech at the Opening Ceremony.

Dr. Tariq Durrani and former President of the Society and current IEEE Division VI Director, Dr. Irving Engelson, were members of the Academic Committee. Both made keynote speeches during the Conference that attracted great interests from the attendees.

The Conference Program comprised plenary sessions where keynote papers were presented and three parallel sessions that covered paper presentations



on Management Science and Engineering, Business Management, Macroeconomic Management. Thirteen keynote speeches were delivered during the Conference. In addition to Dr. Engelson and Prof. Durrani, keynote speakers included an Academician of the Chinese Academy of Engineering, professors from Harbin Institute of Technology (China), Salford University (UK), University of Rome, Tsinghua University (China), the State University of Management (Russia), China Renmin University, City University of Hong Kong, etc. These speeches were very informative and inspirational and led to vigorous discussions. It was good to note that attendees extensively exchanged views and research findings during the Conference, reflecting the vitality of debate and a critical appreciation of the presentations.

Prof. Yijun Li, Dean of the School of Management, HIT declared the close the conference. According to him, 400 papers have been selected out of some 1386 and published in the conference proceedings after peer review. At the end of the closing ceremony, he also announced that ICMSE 2008 would be held on August 4 to 5, 2008 at Long Beach, California, USA. On behalf of the organizing committee, Dean Li extended their warm welcome to ICMSE 2008.

Important dates to note are:

- Paper submission deadline
April 30, 2008
- Notification of acceptance
June 10, 2008

Further information on ICMSE 2008 is available at: <http://icmse.hit.edu.cn>

Reflections on EMS Chapters

Celia Desmond

As the last EMS Vice-President for Membership, I am pleased to have had the opportunity to interact with so many of our members and Chapter executives. I am sorry that we will no longer have the membership flavour as a Society, but I hope that with the new Council arrangements we'll be able to continue with the same feelings of connectedness that many have enjoyed thanks to participation

and membership in this Society.

Many places have been active in forming new Chapters recently and many others have run frequent and interesting Chapter meetings. These can and should continue, as the Council will also have Chapters. The opportunity to meet others with common interests will still be there after the transition to a Council, and in fact, the Council

environment opens the possibility to meet a much larger and more varied set of people as the Chapter memberships will expand from including only the current members of EMS, to adding also the members of the participating Societies. So locally, we'll have more Chapter members than we have ever had before. Also the conferences will continue, offering excellent opportunities to network with others

from around the world.

We held a few Chapter Chairs workshops over the past few years, and there have been short reports on these in the newsletter. Many people who met at these workshops continue to correspond and interact with each other. Hopefully our Chapter Chairs will continue to interact and to support each other. One such continued interaction took an interesting twist

recently when one Chapter representative, Georg Glatz from Vienna, moved to Beijing to study Mandarin. He arrived in Beijing during a period when I was on a working assignment in Beijing for a few weeks, and we had lunch with Ning Hua, the Director of the IEEE office in Beijing. IEEE continues to bring people together in the world, and I hope that our Chapter Chairs and members will continue such interrelationships.

I wish the new Chapters well in the future, as they interact with their new, expanded membership base.

Editors Note: Celia Desmond received the Wallace S. Read Outstanding Service Award for "outstanding service to IEEE Canada and the Institute", at the IEEE Canada Awards Presentation Ceremony in Vancouver Canada April 23. Congratulations Celia!

New Faces of Engineering Recognition Program

Chris McManes
IEEE-USA Senior Public Relations Coordinator

The IEEE and IEEE-USA are seeking nominations for the 2008 Engineers Week (EWeek) "New Faces of Engineering" recognition program. The campaign recognizes engineers new to the profession with outstanding educational and career accomplishments, and is open to IEEE members worldwide.

An annual event since 2002, the EWeek "New Faces" program promotes the importance of technical education, celebrates engineering careers and recognizes significant contributions to the engineering profession and society. Each year, the EWeek Web site (www.eweek.org) features the photos and biographies of five notable young engineers from each EWeek sponsoring society. In addition, a full-page USA Today ad that runs during EWeek recognizes the top individual nominee from each society. EWeek 2008 is 17-23 February.

The EWeek "New Faces" criteria for recognition are:

- Engineers must be 30 or younger as of 1 December 2007.
- Nominees must have a degree in engineering from a recognized U.S. college or university, or from an equivalent international educational institution. Degrees in engineering technology, science, computer science and similar disciplines do not qualify; a degree in computer engineering is acceptable.
- Nominees must be a member of a sponsoring EWeek partner.

IEEE nominations can be submitted through IEEE regional directors, section and GOLD chairs, or independently, and should be directed to Helen Hall at h.hall@ieee.org. The deadline for all IEEE nominations is 9 November 2007. The nomination form and more information is available at: <http://www.eweek.org/site/Engi->

[neers/newfaces2008/nomination.shtml](http://www.eweek.org/site/Engineers/newfaces2008/nomination.shtml)

Dr. Carlos Cordeiro was the IEEE / IEEE-USA's "New Face" for 2007. He was featured in IEEE-USA Today's Engineer Online: <http://www.today-sengineer.org/2007/Mar/new-face.asp>

For more on all the 2007 "New Faces" honourees, go to: <http://www.eweek.org/site/Engineers/newfaces2007/index.shtml>

Sponsored by more than 100 engineering, science and education societies, as well as major corporations dedicated to increasing public awareness and appreciation of engineering, EWeek is celebrated annually by thousands of engineers, engineering students, teachers and leaders in government and business. The IEEE served as lead society during EWeek 1993 and 2004. IBM and the Chinese Institute of Engineers-USA are serving as EWeek 2008 co-chairs.

Keep Your Professional Edge with Innovative Courses from IEEE

Marilyn G. Catis,
EA Promotion Manager IEEE, Educational Activities

Staying technically current in today's ever-changing workplace is a career must if you want to maintain your professional

edge or your P.E. license as required by more than 30 states in the US. IEEE offers an innovative new product called Expert Now as well

as a growing service, Education Partners Program to help meet your continuing professional development needs.

Expert Now is a collection of over 65 one-hour long, interactive online courses on topics such as aerospace, circuits & devices, communications, computing, laser & optics, microwave theory & techniques, power, reliability, signal processing and software. Presented by experts in the field, each course brings to your desktop the best tutorial content IEEE has to offer through their technical meetings that take place worldwide. Continuing Education Units (CEUs) can be earned upon successful completion of the assessment. To review the course catalog visit: <http://ieeexplore.ieee.org/modules.modulebrowse.jsp>.

For those looking for a more robust educational experience, more along the lines of a longer online course or a more traditional classroom setting, the

IEEE Education Partners Program can prove helpful in your search for continuing professional development opportunities. Exclusive for IEEE members, it provides access to more than 6,000 online courses, certification programs and graduate degree programs at up to a 10% discount from academic and private providers that IEEE has peer reviewed to accept into the program. To review the current list of partners participating in the program visit: <http://www.ieee.org/web/education/partners/eduPartners.html>

Another way to browse for a course or educational events taking place in your area is through the courses registered with IEEE to offer CEUs. To review what's available in your area visit": <http://www.ieee.org/web/education/ceus/index.html>.

IEEE is an Authorized provider of CEUs through the International Association for Continuing Education and Training as well as an authorized provider of CEUs for the Florida State Board. IEEE CEUs are also accepted by the New York State Board and can easily be converted into PDHs. One CEU is equal to 10 contact hours of instruction in a continuing education activity. IEEE CEUs readily translate into Professional Development Hours (PDHs) (1 CEU = 10 PDHs).

For more general information on IEEE's Continuing Education products and services, visit <http://www.ieee.org/web/education/home/index.html>. Specific inquiries can be directed to Celeste Torres via email, c.torres@ieee.org or by phone +1 732 981 3425.

Almost 600 Million Views by US Local TV News Audiences Tallied for Mini-News Reports about IEEE Technologies

*Pender M. McCarter
IEEE-USA Senior PR Counsellor*

Almost 600 million views by U.S. local TV news audiences were tallied by Nielsen Media Research for 28 IEEE technology-related mini "Discoveries & Breakthroughs" news reports aired between July 2006 and July 2007. In addition, at least 17 other brief news reports produced during the same time frame for "Discoveries & Breakthroughs" ("D&B") mentioned "engineering," "engineers," or "bio-engineering."

Since 2005, IEEE-USA has helped to underwrite more than 300 local television news reports on engineering and science in collaboration with the American Institute of Physics (AIP) and other technical professional organizations. IEEE-USA's Board of Directors has approved \$30,000 for the program in 2008 -- its fourth year of involvement with "D&B" -- in order to promote technological literacy and engineering awareness.

The AIP news service delivers a dozen vetted 90 second spots (in English and Spanish) to 110 local TV stations (including 30 Spanish stations) with a potential reach of 75 million TV viewers and an estimated 41 million online views per month. "D&B" is also distributed to seven Transit TV Networks on buses from Atlanta to Los Angeles, as well as to countries around the world through the Voice of America and online video networks, and through a Web-based syndication network.

Stories about IEEE technologies released in October 2007 include:

- High-tech patient identification ("Information Technologists Design System to Recognize Palm Vein Patterns");
- Helping patients walk again ("Biomedical Engineers Use Electrical Stimulus to Help Patients Lift Their Feet");

- Kids creating computer games ("Computer Scientists Develop New Kid-Friendly Programming Language");
- Recycling without sorting ("Engineers Create Recycling Plant that Removes the Need to Sort");
- Stopping sink holes and street floods ("Engineers Design Sensor that Detects Leaky Pipes from the Inside");
- People-free parking ("Engineers Build Automated Parking Garage")
- Kidney exchange ("Computer Scientist Invents Software to Arrange Matches for Kidney Transplants").

IEEE-related technology stories have their own Web site at: <http://www.aip.org/dbis/IEEE>

AIP invests more than \$1 million annually in "D&B" in order to reach the 44 percent of the U.S. public over

18 years of age which, according to the National Science Foundation, chooses local TV news as its top source of science and technology information. In a study involving 900 participants, University of Min-

nesota communications researchers found that the more “D&B” segments viewers watched, the more likely they were to agree with statements that showed support for engineering and science.

For an overview of IEEE-USA’s involvement in “D&B,” see the October issue of “IEEE-USA Today’s Engineer Online” at: <http://todaysengineer.org/2007/Oct/DBIS.asp>

First IEEE-USA Innovation Forum Coming to Washington Area, Tech Leaders Tout Importance of U.S. Innovation

Chris McManes
IEEE-USA Senior Public Relations Coordinator

IEEE-USA will host its first Innovation Forum (<http://www.innovation-institute.org/dcforum/>) at the Fairview Park Marriott in Falls Church, Va., on 6-8 November. The event is designed to promote the innovation process, highlight new technologies and trends, and help high-tech professionals improve their innovation skills.

Current and future leaders from industry, academia and government are among those who should attend. Participants can earn 1.5 CEUs or 10 PDHs.

The forum is part of the IEEE-USA Innovation Institute (<http://www.innovation-institute.org/>). IEEE Fellows Norm Augustine and Joseph Bordogna serve on the institute’s advisory board.

“In the global economy, there are but two choices: innovate or evaporate,”_said Augustine, retired chairman and CEO of the Lockheed Martin Corp. “The IEEE-USA Innovation Institute is a leader in assuring that America, its firms and its citizens are among those who do the former innovate.”_

Unlike programs offered by and for business school graduates, the IEEE-USA Innovation Forum is grounded in the experience of successful technology innovators. Attendees will have the opportunity to learn from a distinguished faculty that includes:

- Mike Austin, who has served as president and CEO of numerous U.S. steel companies.
- Alain Rostain, co-founder and principal of Innovation Styles, Inc., a strategic innovation consulting firm.
- Mauro Togneri, a former president and senior executive of U.S. companies with R&D, sales and manufacturing operations around the world.
- Steve Walker, an entrepreneur and former Defense Department engineer who helped develop the ARPAnet packet switching system that evolved into the Internet.

Why is innovation important to the U.S. economy? Because the conversion of ideas and inventions into useful and affordable products, services and processes spurs economic activity that drives wealth, creates high-paying jobs and improves our standard of living. Bordogna, former deputy director and chief operating officer at the National Science Foundation, said new knowledge is the fuel for innovation.

“Robust innovation brings us to a dimension beyond competition, raising our prospects for an economy of great magnitude,”_said Bordogna, the Alfred Fittler Moore Professor of Engineering at the University of Pennsylvania. “Talent, discovery and innovation are the pillars of 21st-century progress; integrated they offer potential for an era of breathtaking transformation.”_

Howard Lieberman, founder and CEO of the Silicon Valley Innovation Institute, will deliver the keynote address. Lieberman invented new technologies at the Bose Corporation, Apple Computer and each of the five companies he founded.

Forum attendees will learn to innovate in a team setting and work through real case studies. Group discussions and exercises will focus on:

- Leadership and culture’s impact on innovation
- Large vs. small organizations as foundations for innovation
- The innovation process and how to leverage your style to promote innovation
- Innovation project management

The event begins on 6 November with an opening-night reception and dinner. The forum starts the next day with a full day of teaching and includes breakfast, lunch and breaks. It will conclude with a half-day program that includes breakfast and a morning break. The cost is \$795 for IEEE members and \$950 for non-members.

Following the forum, all attendees become members of the institute’s online innovation community, which provides access to ongoing, real-time collaboration, discussions, networking and mentoring.

The Effective Engineering Manager - Part II

Leslie Martinich

In a recent article, I proposed that effective engineering managers understand three things very well. They understand themselves, their relationships, and their organizations. In this article, we'll address some additional things you need to understand about yourself in order to be effective.

Previously, we discussed understanding your strengths, what you are supposed to contribute and how you best perform.

This time we'll discuss: how do you communicate and how do you solve problems. These two topics alone are the stuff of many books and even more articles. We will just touch on them here, and in future articles, we will explore additional resources to help you.

1. People communicate in many different ways. Some communicate indirectly, some directly. Some like the big picture, some like lots of data and details. Some people prefer face-to-face communications and spontaneous discussions; some people prefer written communications with time to think about their responses.

It is important to understand your own preferred style. But it is even more important to understand what it is the preferred style of your audience. Does your audience want lots of details or the big picture? Does he or she want to have time to ponder

your message before responding? Or does your audience like to have spontaneous discussions where issues are worked out on the spot?

No matter what your preferred style is, it is always possible for you to adjust to the needs of your audience, and flex your skills. And if you do not know the preferences of your audience, you can use multiple communication approaches. And you can simply ask, "Do you prefer a face-to-face conversation or would you like me to email you the details of my proposal?"

Whatever your style, it is important to remember to be respectful of your audience.

2. How do you best solve problems? Some engineers I have worked with solve problems very deliberately, learning everything about a given situation or design, and then carefully analyzing the problems and coming up with a proposed solution.

Some engineers jump right into a problem without knowing much about the background. They push, poke and prod until they figure out some things about the problem, and then they take that to the next level, figuring out the next layer.

And some engineers like to analyze problems, consider multiple solutions

and return with three different solutions, and perhaps a proof of the viability of some of those solutions.

Most engineers will exhibit a combination of these styles. But I have worked on teams with people representing each of the extremes I described above.

Here's a huge win for you, if you have people of all these sorts on your team: when you have a particularly difficult problem to solve, put those people together. The three different approaches will yield breakthroughs that are not possible with just one approach! The cowboy will get the analyzer "unstuck" when she hits an impasse. The person who generates three approaches will help develop alternatives that the other two had not considered. (Caveat: these people must respect each other in order for this to work!)

And here's another huge win for you: if you understand your own style, ask someone with the opposite approach to help you when you do get stuck!

In future articles, I'll discuss different learning approaches, different planning approaches, understanding your relationships and understanding your organization.

Write to me if you have questions! My email is lmartinich@ieee.org.

Engineering Leadership

Leslie Martinich, VP Publications, IEEE EMS, Chapter Chair, Central Texas EMS

What do you do when you have two engineers who have completely different styles? One is a hacker and one is a careful analytic detail-oriented problem-solver. Answer: When you have a tough problem to solve, you put them together. The hacker will get the analytic "unstuck" when he or she encounters a new difficulty, and the analytic will get the hacker through some wasted explorations.

These and many, many other useful insights were part of the recent take aways from the Engineering Leadership Institute. The Institute offers a one-week boot camp immersion course, followed by three 2-day follow on sessions to:

- quickly get managers up to speed to manage technical projects;
- improve cost efficiency; and
- participate in results-based learning

that provided applicable tools.

This institute is taught by award-winning faculty and industry leaders. The next course begins in April 2008. Sign up now to reserve a spot.

Resources/Training Sources:
Engineering Leadership Institute:
<http://www.engineeringleadershipinstitute.com>

Central Europe Chapter Report

Harald Ackerlauer
Secretary IEEE EMS Central Europe

We organized a further very attractive event this quarter which focused on the topic "Innovation Management - between process and creativity." This time it was hosted by voestalpine AG, a leading European processing group with their own steelmaking facilities and headquarters in Linz, Austria.

After an opening statement by Peter Ackerlauer, member of the managing board of voestalpine Stahl GmbH, we followed a highly appealing presentation of the innovation processes at voestalpine by Dr. Peter Schwab, head of research and development.

Next we came to the highlight of the evening, the panel discussion with Univ.-Prof. Dr. Richard Hagelauer (rector of the Johannes Kepler University Linz), Hr. Lindorfer (Head of Corporate Innovation at Siemens VAI), Bruno Wöran (IEEE EMS CE Treasurer, DANUBE Managing Director) and of course VP Ackerlauer and Dr. Schwab of voestalpine.

We concluded with a small "World Café," where we invited the guests to form small groups and discuss the three best and the three worst ways to foster creativity in innovation processes. Thus we closed with many interesting views on the topic, which were further discussed in the infor-

mal ending of the evening.

The main messages were:

- Innovation is about people: Innovators should be recognized and treated as highly valuable assets within the organization.
- Innovation is about networking (internal and external): the challenge is to find the right balance of how much to invest in which relationship in order to maximize the effectiveness.

All in all we had a very exciting event with great professional experience exchange, and thus a further success in the growth strategy of our chapter.

Dallas Chapter

Robert Bishop

Members of the Dallas Chapter are looking forward to the change to the Technology Management Council January 1, 2008, when we will greatly expand our chapter membership to cover some 13 societies.

We plan to continue meetings the Second Friday of each month. Here are the future Fall 2007 Engineering Management Dallas Chapter meetings:

Friday, October 12, 2007:

Manuel Guerrero will speak on the need for COMPOUND STOCK EARNINGS.com Why people invest, Current methods of investing, CSE results vs. others results. Compounding - 8th Wonder of the World, CSE approach, covered Calls for income, how CSE does it, why CSE is different. What a person needs to be a successful investor, how covered calls work, comparing covered calls to real estate in generating consistent monthly income. Using CSE methods and CSE Toolbox, discuss and show examples of how to

generate income. Provide directions to CSE website and remain available after meeting to discuss any additional questions on a one-on-one basis.

Friday, November 9, 2007:

Steve McCluer will speak on the need for our infrastructure to keep up with technology such as virtualization. Can we really live with Moore's Law? Revisiting the role of "Future Shock" when the constantly accelerating pace of change leads to unintended consequences.

Futuring and the Engineering Manager

Terrance Malkinson

Those of you who are familiar with me will understand the importance that I place on being proactive when managing your journey through life. Success favors those who take the time to be aware of the lessons of history, respect the present, and speculate with judgment about the future. Very few people are successful “by accident”. Rather success is the product of good judgment, planning and hard work.

This article is particularly relevant as the Engineering Management Society transitions in a few weeks to the IEEE Technology Management Council. The leaders of your Society have taken bold and decisive action to point your Society to new ways of serving your needs best...and they will continue to do so as our profession evolves to meet the challenges of the future. Your input and participation as a member is important to us.

We all need to become informed, think futuristically and plan as best as possible so that we can achieve success. Even in a world that is in constant change and so seemingly unpredictable it is still possible to muse about the future. There are a number of strategies that you can use that will assist you in proactively thinking about the future. This article discusses one of these. It introduces the engineering manager to some sources of futuring information in the published literature. It is not meant to be comprehensive but simply a starting point. Information is provided as an annotated bibliography to point you to the journal source of the information for you to access should you be interested. Most journals now offer an online article downloading service for a modest charge per article. Should you be an alumni of an educational institution it is often possible to obtain enhanced online library services for a modest annual fee.

When searching out information in the published information it is also important to consider information published before the “digital revolution”. A considerable wealth of valuable information is available only in hard copy. Those of us who are somewhat “long in the tooth” find it interesting and in some cases disturbing and disrespectful to our history to see so much redundant information and research currently being published “as new”, when in fact similar material was published in the past and not so distant past. The digital age author simply did not take the time to research the subject as thoroughly as should have been professionally done.

Articles referenced are range in length from four to ten pages, are factually practical in approach, and reader-friendly. In your own futuring research you might consider literature such as *The Futurist*, (www.wfs.org); *Business 2.0*, (www.business2.com); *Educause Review*, (www.educause.edu); *Training and Development*, (www.astd.org); *Entrepreneur*, (www.entrepreneur.com); *Inc Magazine*, (www.inc.com); and national newspapers. Enjoy, and then take some time to proactively plan your future.

Personal Futuring: A Step-by-Step Guide

Verne Wheelwright. *The Futurist*. 40(3): 22-29. May-June, 2006

The author who is a graduate of the school of Studies of the Future at the University of Houston conducts research into the methods of personal futures. He presents an easy-to-follow methodology and tools such as scenario planning, probability, impact analysis, and life-cycle mapping for analyzing and assessing trends and creating scenarios of the future. He also provides information on strategies that you can achieve to achieve your goals. An interesting inset is a table of life stages and the characteristics of that stage of one's life. He discuss-

es six foreknown forces that appear in every person's life and that influence our actions that will in turn affect your future. There are also summarized in a table of activity domain and life stage. A sample life goals worksheet is provided as a resource to guide you.

Thinking Ahead: The Value of Future Consciousness

Tom Lombardo. *The Futurist*. 40(1):45-50. January-February, 2006

As engineering managers we need to develop our “future consciousness”. Future consciousness refers to the psychological abilities, processes, and experiences that we use in order to understand the future. Some of these include foresight, goal setting, planning, decision making, and problem solving. The author examines the ethical, philosophical, cognitive, and pragmatic features of future consciousness. An interesting table is provided summarizing major cognitive processes involved in future consciousness and other insets provide you with information on how to develop the thought processes, and the benefits to you of enhancing future consciousness.

The Future of Work

BusinessWeek. The McGraw-Hill Companies

The Future of Work is the topic of a special issue of the August 20-27, 2007 (#4047) issue of *BusinessWeek* (www.businessweek.com). Twenty-two articles, over 53 pages, are essential reading for everyone; students, job seekers, and those who have what they believe to be a permanent job. The nature of work has changed considerably over the past decade and change will continue. Just because you may feel that you are in a secure position today does not mean that you will be in the same secure position tomorrow. An excellent group of articles for the

career savvy individual that will get you thinking about making your future successful. Titles of a few of the articles include; “Ten Years From Now”, “Which Way to the Future?”, “Managing the New Workforce”, “The Changing Talent Game”, and “Technology on the March”.

Vital Signs: The Trends That are Shaping Our Future

World Watch Institute

An annual book authored by the World Watch Institute www.worldwatch.org and published by W.W. Norton & Company, 2007 ISBN13:978-0-393-32872-1. www.wwnorton.com. The Worldwatch Institute offers a leading source of information for you. Their research is funded primarily by donations from private foundations and individuals. As stated in its mission statement Worldwatch provides “compelling, accessible, and fact-based analysis of critical global issues, Worldwatch informs people around the world about the complex interactions between people, nature, and economies. Worldwatch focuses on the underlying causes of and practical solutions to the world's problems, in order to inspire people to demand new policies, investment patterns, and lifestyle choices.” Key indicators include trends in Food and Agriculture, Energy and Climate, Economic trends, Transportation and Communications, Health and Social, and Conflict and Peace. In the 2006-2007 edition special feature are provided on the environment and on the economy and social issues. At the end of the book you are provided with a listing of previously published special features.

Outlook

The editors of *The Futurist*. World Future Society

Published annually in the November-December issue “Outlook” provides a roundup of thought-provoking forecasts, trends and ideas from the past year. Summaries are drawn from articles and news stories originally appearing in *The Futurist*. Each year since 1985, the editors of *The Futurist* have selected the most thought-provoking ideas and forecasts

appearing in the magazine. Over the years, Outlook has spotlighted the emergence of such epochal developments as the Internet, virtual reality, and the end of the Cold War. Many of the articles included in this annotated bibliography are from *The Futurist*. *The Futurist* is published by The World Future Society www.wfs.org a nonprofit educational and scientific organization that has about 25,000 members and subscribers in 80 nations. The Society publishes widely, holds an annual conference and has local chapters in many regions. Outlook 2008 will provide you with well-written extremely important information on forecasts that will be valuable to you in managing your journey through life. The Outlook 2008 report is being released as part of the November-December 2007 issue. An individual report can be obtained from the World Future Society for \$5 in both print and online PDF format. Information on subscriptions to the magazine can be obtained from the World Future Society, publisher of *The Futurist*.

The New Careers

Michael Copeland and Kevin Kellener. *Business 2.0*. 8(4): 81-86. May, 2007

New technologies and products often result in new job classifications. In “www.business2.com] discuss five new occupations that you might consider. These include: Robot Programmer, Information Engineer, Radiosurgeon, Second Life Lawyer, and Disease Mapper. When managing your career it is important to think futuristically. Obtain a good education, scan the environment, make good decisions, take risks, and you will find success. Immediately preceding this article is another entitled “The Best Jobs in the Hottest Markets” (Paul Kaihla, pp. 70-78). The author provides you with information on which regions in American to look at for the best employment possibilities.

Technologies Promise

William Halal. *The Futurist*. 40(6): 41-50. November-December, 2006

The author provides you with highlights from an ongoing study of technology forecasts by leading experts.

The TechCast’s online research methodology is provided. The Technology Forecast project, has for more than a decade enlisted insights from technology specialists to “forecast significant breakthroughs, estimated time of mainstream penetration, and level of certainty of the forecast.” A selection of topics includes; alternative energy, desalination, quantum computing, virtual education, smart robots, artificial organs, life extension, automated highways, and space tourism. An interesting graphic provides you with an overview of technology forecasts and their year when they will enter the mainstream between now and the year 2030. Another interesting set of graphics provides the relationship between the experts’ confidence of a technology forecast and the year it is most likely to enter mainstream. The article concludes with a decade-by-decade scenario of how the “technological revolution” may unfold through 2050.

The 50 Who Matter Now

The Editors. *Business 2.0*. 8(6):56-65, July 2007

An annual compilation of *Business 2.0*’s ranking of the people, products, trends and ideas that are transforming the world of business. A glimpse of each of the “50 who matter now” and why it is not possible to ignore them. It is people who create the future and this article provides you with valuable insights into successful futuristic thinking people.

The 17 Greatest Challenges of the Twenty-First Century

James Martin. *The Futurist*. 41(1): 20-24, January-February, 2007

The author begins with the statement “By some estimates, humanity has only a 50% chance of surviving the next hundred years. It will be the job of today’s young people to put the odds in our favor.” Following this are seventeen brief but effective interlinked and mutually reinforcing challenges. The author believes that solutions exist to most of the serious problems that we will face in the decades ahead and it is the role of today’s teenagers as the “Transition Generation”

to get humanity through the coming instability as quickly and safely as possible.

Eight Supertrends Shaping the Future of Business

Karl Albrecht. *The Futurist*. 40(5): 25-29, September-October, 2006

The author provides a discussion of eight developments that are altering the dynamics of business and where it is going in the next five to ten years. The business environment is changing. Rather than strategic planning, business needs strategic evolution. A selection of the eight supertrends includes: Microsegmentation, Value targeting, Chinafication, and CyberMobbing, and Counter-Americanism. In his conclusion the author suggests that these trends represent both treats and opportunities. And that enterprises that “want to avoid the slow slide into irrelevance will need to respond proactively to these findings”.

Creating the Future of IT

Rob Abel. *Educause Review*. 42(2): 13-30. March-April, 2007

Over the past decade there has been considerable growth in the evolution of the application of technology to support learning. The author discusses information technology strategies as applied to the future of education. How should our centers of advanced education position themselves to take advantage of new technologies while staying true to the core purposes of each learning institution? Should IT leaders be involved in planning and policy discussions about institutional assessments and outcomes? The article concludes with a discussion on the challenges and opportunities in the application of technology to learning.

Building a More-Humane Economy

Robert Atkinson. *The Futurist*. 40(3): 44-49. May-June, 2007

This article focuses on the authors belief that new policies are needed to help ensure that the increased productivity resulting from new information and communications technologies generates not just economic growth, but also

improved lives and facilitates more-satisfying workplaces. The article discusses the challenge of now creating a society that satisfies our deeper human needs and wants. Interesting information is provided by a discussion of five things that will need to happen to technology for it achieve its full promise. In his conclusion the author makes the important point that a human economy and a productive economy are not in conflict, rather they are mutually supportive.

Four Scenarios for the Future of Education

Robert Sanborn, et al. *The Futurist*. 39(1): 26-30, January-February, 2005

Four authors provide four distinct snapshots of the future of education as an enriching, lifelong experience accomplished through increased home schooling and the use of advanced technologies. Scenarios discussed include: Direct Education, Homeschooling, Generations Left Behind, and Experiential Schools. The scenarios might exist at different points-in-time in the next 20 years.

Training Tomorrow's Workforce

Janice Ware, et al. *Training and Development*. 61(4): 58-60. April, 2007

The workforce is changing in response to the current retirement of “baby-boomers”; globalization, national diversity, and the changing employer-employee relationship. One change of particular significance is the multigenerational workforce. The authors discuss how workplace training and technology will need to be adjusted to fit both the learning styles and lifestyles of a multigenerational workforce. In another article in the same issue “Flexible Work Policies Mean Business” (pp. 32-36) Paul Harris discusses how flex time and other work-life initiatives are increasingly being used as retention tools in a tight talent market.

SportsCast: 10 Controversial Issues Confronting the Sports Industry

John Sweeney. *The Futurist*. 41(1): 35-39, January-February, 2007

Sports are an integral and important

part of society. Sports have the ability to locally, nationally, and internationally, promote-unite communities understanding and develop skills important in life such as teamwork and leadership. John Sweeney examines ten trends all-of-shaping the future of the sports industry. The author discusses those which are important and some of which are controversial. An earlier article “Play Ball! How Sports Will Change in the 21st Century”. (*The Futurist*. 39(1): 31-36, January-February, 2005) Robin Gunston provides scenarios on what athletics might look like in the coming decades.

10 Imperatives for Peace

John Richardson. *The Futurist*. 40(6): 14-17. November-December, 2006.

Based on Sri Lanka's ongoing civil wars the author, an international development scholar outlines ten practical "imperatives" for preventing deadly conflict and terrorism. Although based on the Sri Lankan experience the principles apply to the many conflicts that exist or have future risk potential.

About the Author

Terrance Malkinson, B.Sc., B.Tech., C.E.T., SMIEEE is a proud Canadian, an elected member of the University of Calgary Senate, a Governor of the IEEE Engineering Management Society, Vice-Chair of Communications for IEEE USA and Editor-in-Chief of a number of leading journals. He is a graduate of the University of Calgary and was a founding member and a senior research technologist of the Faculty of Medicine for over 25 years. He then completed his Bachelor of Technology degree and worked for General Electric; providing professional support to their sales and technical operations throughout North America. He is the author of over 325 publications, has presented the results of research at numerous international scientific conferences, and is the recipient of many peer reviewed awards for his work. He is an alumni of Outward Bound Canada and Outward Bound Singapore; and an accomplished Triathlete.

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