

SOCIETY of MANUFACTURING ENGINEERS

TORONTO CHAPTER 26

SEPTEMBER 2001



<http://www.sme-toronto-26.org>

YOUR IDEAS: WHO OWNS THEM?

Richard Parr, Bereskin & Parr

Wednesday September 19, 2001, 6:00 PM

*TALK LOCATION: By The Warf Restaurant,
1855 Dundas Street East, Mississauga
(West of the 427, east of Dixie)*

*905-625-5490 ** RSVP to Ken Kogej, below*

Light Refreshments at 5:30, Dinner at 6:00 pm, Talk at 7:00 pm

Rarely does an engineer have the opportunity to learn about intellectual property law from any other than the employer's perspective. Come to our September, 2001, meeting to get the low down on these important issues:

From an employee's perspective the issues are:

- Starting a job (what am I signing?)
- Typical confidentiality
- Assignment of patent rights

On the job

- Ideas inside my work scope. Who owns them?
- Ideas outside my work scope. Who owns them?
- Discoveries or inventions made away from work. Who owns them?
- How to handle inventions before they're filed.
- How to talk to suppliers about ideas.
- How to talk to customers about ideas.

Before exiting a job

- Can I work for a competitor?

Business papers at home. Trash or return?

Working for a competitor

- What knowledge do I own when I start work for a competitor?
- Is there a difference between quitting and being fired upon future work restrictions?
- Can I be restricted from working for a competitor?
- How long can any restriction last?

When is an idea patentable? Copyright? When should I keep it an industrial secret? How do you patent something?

We are on a mission to help engineers young and old to learn about "things my employer never told me."

Bereskin & Parr is considered by many to be the top legal firm for Intellectual Property Law in Canada.

We have reserved the Davey Jones Locker Room, cozy and beautiful, for this First-of-the-Season meeting.

Prime Rib, Broiled Salmon, Broiled Shrimp & Scallops, Chicken in White Wine Sauce all will be choices for this exciting kickoff event.

RSVP to Ken Kogej at 416-402-3146 or ken-dante@msn.com

SME Members: \$35, Non-members: \$40

SME Student Members: \$20

(includes full meal and talk)

This year a variety of talks, tours and topics - topical, of course!

IAI Tour Review

Sixth of June 2001. Our tour of IAI in Barrie on the 6th of June was a perfect conclusion of our Mechatronics Series. While it is smaller than ATS which we toured in May, it is building production systems with all the Mechatronics elements for international customers. They use Solid Works for mechanical design. They use CAD programs for electrical design and wiring. The systems use a wide variety of sensors including proximity, temperature, pressure, and light curtains. They use a variety of controllers based on the preference of the customer. They use a variety of materials to create systems which would not otherwise be possible.

Paul Tyndall and his staff did an excellent job of presenting their capabilities and enthusiasm for meeting customer needs. This shows that Mechatronics is not just for the big customers like ABB (which we toured in January) but also for single station automation or anything in between. Their Web address is www.innovativeautomation.com

Thank you Mr. Tyndall for an excellent tour and presentation.

George Heintzman
gheintzman@sympatico.ca

For information on books and links related to Mechatronics please see our Web site <http://www.sme-toronto-26.org/>

NOTE: Bulletin copy deadlines:
October Issue: September 8, 2001

Report on the Annual SME Convention

by Paul Ellis and John Camarda to chapter 26 on the 6th of June 2001.

Chapter 26 sponsored Paul Ellis and John Camarda to represent us at the annual convention in Seattle. They said they learned a great deal even though it was Paul's second conference. It seems the more you know the more you can learn.

John's report showed the power of a question. He introduced himself to a couple of blokes in the lobby of the hotel. It turned out they were engineers from Boeing. He asked "What do I have to put in my resume in order to get myself noticed - so my resume stands out from the rest?" They were willing to help and asked him a few questions. Then they asked for his resume. He had it on his lap top. They ended up offering him a job which he had to decline because he had just accepted a job in Toronto. (The fact that his girl friend didn't want to go to the US may have been a factor but John denies this)

The annual convention is a unique experience. The correct question has a lot of power. As Bruce Keeling says "If yer tellin' yer ain't sellin'."

THIS SEASON Topics & Schedule

1. Wednesday, September 19. Talk and Dinner. The talk will center around ownership of intellectual property - what YOU need to know!!
2. and subsequent: are in the planning stages. We are planning to offer a varied program of talks and tours. More later.

Some material from previous sessions is on the Chapter website at <http://www.sme-toronto-26.org>

Executive Meetings

NEXT MEETING:

Date to be decided

For additional information on next meeting phone 416-467-8298 or e-mail: gheintzman@sympatico.ca or Ken-Dante@msn.com.

U of T Faculty Advisor Changing

A Note from Ron Venter:

"Just a brief note to thank you and all members of the SME for your tremendous support in working with our students to establish the SME Chapter at the University of Toronto. I thought it appropriate to inform you that I have taken on the position of Vice-Provost, Space and Facilities Planning at the University of Toronto in the past few months and as such I will step down as the SME Student Advisor. Professor Wallace, Chair of our Department, will be appointing someone from the Department to undertake these responsibilities for the future. Again, many thanks for the support and encouragement which you and your colleagues have provided. It is greatly appreciated."

Professor Ron Venter
University of Toronto

Congratulations and many thanks to Professor Venter. The Chapter is waiting to hear from the Chair of the Department, Professor Wallace, as to who will be taking over as Faculty Advisor for this energetic group.

PROGRAM COMMITTEE

Programs, Bruce Keeling, AFV Multimedia, 416-239-2811
bandi@sympatico.ca

Robert Hope, R.B. Hope Industries Inc., bob@rbhope.ca

Advisor, Joe Benedetto, JRB Enterprises, 416-267-2102
jrbene@attglobal.net

EXECUTIVE LIST

Office	Name	Company	Phone	E-mail
Chair	George C. Heintzman	Systems Consultant	416-467-8298	gheintzman@sympatico.ca
Chair Elect	Ken Kogej	Houghton Canada Inc.	416-402-3146	Ken-Dante@msn.com
2nd Vice-Chair	John Wagner	Hamond Industries	905-761-9094	dovmargiewagner@home.com
Secretary	Paul Ellis	Compact Mould	905-851-7724	paulellis7@hotmail.com
Treasurer	Robert Tecson	Applied Physics Specialties	416-445-1870	robtec@chalktv.com
Past Chair/Education	Peter J. Morgan	MURO North America Inc.	905-451-7667 X233	pmorgan@muro.com
Executive Advisor	Joe Benedetto	JRB Enterprises	416-267-2102	jrbene@attglobal.net
Programs	Bruce Keeling	AFV Multimedia	416-239-2811	bandi@sympatico.ca
Program Advisor	Robert Hope	R. B. Hope Industries Inc.	416-465-7603	bob@rbhope.ca
Tours	Loris Giuricich	Celestica Inc.	416-448-2225	Lgiurici@celestica.com
Phone Ctte/Membership	Tim Lucas	Bobrick Washroom Equip	416-298-1066 X 156	tdlucas@idirect.com
RP Liaison	Vesna Cota	Tyco Electronics Canada Ltd.	905-474-5541	vcota@amp.com
Bulletin & Web Editor	Jenny Ono Suttaby	Jentek Company	416-761-1810	jono@jentekcompany.com
George Brown Stu Advisor	Franz Aschwanden	Professor	905-775-3759	sfasch@netcom.ca
U of Toronto Stu Advisor	Ron Venter	Professor	416-978-1904	
Ryerson U Stu Advisor	Farrokh Sharifi	Professor	416-979-5265	fsharifi@acs.ryerson.ca

Our continuing thanks to Professor Mark Fox, U of T, for hosting the Chapter's web site on his server at <http://www.novator.cm>

What will we be making?

The goal of our SME society is to assist our members who are employed in manufacturing to achieve their absolute best and be competitive on the world stage. Manufacturing engineers are interested in how things are made. But in order to give focus to our education and reading it is important to ask what will we be making.

The pattern has been for new sectors to emerge and then as we figure them out and productivity kicks in for employment in those sectors to drop as a percentage of total employment. (Of course you will notice I have assiduously avoided service and government sectors which together are well over half our consumption.) So our members might want to position themselves to be suppliers to the new growth industries.

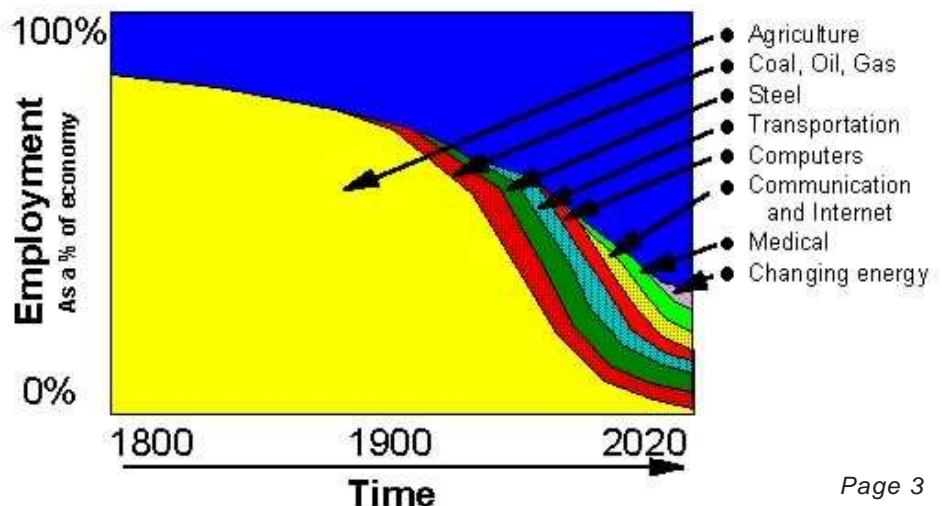
The next big growth industry will be disease specific medicines. Our knowledge of the structure of disease (Bacteria, viruses, prions, cancer, hormones, and genetic problems) is expanding very rapidly. In the first part of this century we identified the role of vitamins and minerals. Then came sulfa and penicillin. Today we have hundreds of drugs. But a new revolution is coming. Disease specific medicine. Chemo therapy is a giant hammer that kills everything - sometimes stuff it isn't supposed to touch like the brain. By contrast in California they are experimenting with an altered cold virus which attacks only prostate cancer; nothing else; no side effects. Antibiotics such as penicillin do not touch viruses. Our knowledge of the structure of viruses with computer modeling is

allowing us to develop medicines that attack specific viruses. What all this means is that the number of medicines is about to explode. There will be much more specific and effective with vastly reduced side effects. A specific medicine for each disease. Thousands of them. This is starting to happen now. This wave will last about 15 years.

In about 15 years people will start to get serious about energy. Consider the impact of shifting PST and GST off of all goods and putting it only on fossil fuels. At the same time remove all taxes from wind power, solar power, and biomass power. Imagine the change in consumption this "tax neutral" change would make. If we don't make this change because of global warming we will have to make it when we run out of fossil fuels. This change will mean we will have to manufacture new products to use energy, produce energy, transmit energy, store energy, and conserve energy.

These changes will offer tremendous opportunities for our members if they recognise them and ride them.

But as Bruce Keeling says "They will still need tool steel."



Many Thanks to our BULLETIN PUBLICATION and WEB SITE SPONSORS:



A & M HEAT TREATING LTD.



Novator & Co.

Information and links at: <http://www.sme-toronto-26.org/>

Treco

High Precision Machining

The Nature of Work is Changing

The first machine tools I saw were being run by people who turned handles and pressed buttons for each operation; today I see most production of that type is done on NC machines with a tool changer. The first stamping machines I saw were manually fed; today they all have sophisticated automatic feeders like the ones we saw at ABB. When I went down in a mine at Inco in Sudbury the machines were being run by people; today these are being driven remotely from the surface which means the workers don't have to go down in the mine to work. This is faster, safer and healthier. This evolution will not stop. This productivity has let us produce more / consume more: pensions, health care, travel, entertainment - a higher standard of living.

A friend of mine just sold his factory. The factory he sold is very different than the first factory I saw. He makes tooling and dies for the automotive industry. His machine tool operators don't just run the machine; they manage the whole work cell. They have push dollies to move and organize the pallets in their area while the machine is running. They do their own tool set up while the machine is running. They program the next job while the machine is running. They check and are responsible for the quality of all work produced at their work center; while the machine is running. If it makes it to the cover of Time magazine it is old news; i.e. it is popular enough and widely enough understood for the masses to read it. The July issue of Business week had three pages devoted to the impact of XML on manufacturing. That probably means it is being implemented. What these articles stress is the capability for information to be available any where and therefor for machines to be operated from anywhere.

But this should not surprise us. Dave Simpson in his presentation to us back in February pointed out that the European Union had forced a high level of standardization. For controllers this has meant that many sensors, controllers and motor drivers are now standard bus connected commodities. This has driven the price down. It also means that processes can be operated from any place on the planet. All XML does is bring these standards to the software world which will greatly speed up the implementation of truly electronic factories.

It seems the time of big factories with rows of machines run by men is finished. Now we have a wide variety of

Why Join and Participate in the SME?

SME offers benefits to all manufacturing interests:

- * Our sponsors
- * Companies whose employees are members
- * Members

Our sponsors

Our sponsors receive:

- * A management membership in SME
- * Logo on our Bulletin
- * Logo on our Web page
- * Hot link from our Web page to their Web page
- * Access to chapter developed materials and presentations

Companies whose employees are members:

Employees are kept up to date on manufacturing processes.

Participants in our executive

Participants in our executive improve their effective personal leadership skills and see a variety of business styles.

Members

- * SME magazine
- * SME program of lectures and tours (see our web site <http://www.sme-toronto-26.org/>)
- * Monthly bulletin
- * Access to SME technical resources
- * Networking with other professionals
- * Monthly plant tours and seminars
- * Opportunity to serve on the chapter executive and develop your leadership skills

specializations working in our factories. We have people who design integrated factories. Programers who hook them together. Remote operators who feed them and run them. Specialists who understand and get the most out of new and old processes. And generalists that fix them. If we can see farther, we are better able to choose. Choose! (That's an imperative as in "You choose.") The job of our society is to position you so you can make better choices. If you have any suggestions or requests for program please let us know. That's why we publish the e-mail addresses of our executive in the bulletin.

George Heintzman