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CHAIRMAN'S MESSAGE

Dear fellow members,

It's the time of the year for renewal of our IEEE memberships. One can do it on line with the help of International credit cards. Request those of you who have not yet renewed to please renew by mid Feb 2004,the cut off date.

IEEE has decided to introduce reforms so that it is more industry oriented and hence able to attract and service more and more members from Industries. As one of the steps towards this, IEEE has announced a separate category for Fellowship evaluation of distinguished members from Industry. With this we hope to bring in more Industry members into the IEEE Fellow category. From this year onwards all Fellowhip correspondence including recommendations by refrees can be made on line.

In India we have successfully established many student branches and this is a very good step towards the growth of IEEE world wide. We expect most of these student members to be our members soon. Having done this, we need to review the value addition local Sections are bringing in for the members. General lectures or once in a while seminars may not be adequate any more. We need to provide Life Long Learning (LLL) avenues in specialized areas to members locally in a Section. For this, one of the best methods is to use the Chapters of Societies in IEEE. I urge all of you to seriously explore the possibility of forming Society chapters in Sections. These Chapters can seek the help of the parent Societies to conduct in depth and specialized programs for its members. This way we can reach more value and benefits to our members.

The IEEE All India Students Congress (IAISC 04) is being hosted by the MEPCO Student branch in Sivakasi under Madras Section from 5 to 7 Feb 2004. Prof. Balakrishnan and team at Mepco has put in enormous efforts to make IAISC 04 a big success. More than 250 student branch volunteers are expected to participate. The Council wishes IAISC 04 all the best and hope that it would bring in deep awareness and role of IEEE to the student community. This foundation laying is a process that we should continue to do relentlesly every year.

The 224 plus student branches spread all over India needs attention and proper administration. Mr HK, a veteran volunteer of IEEE is working hard to create a data base of student branches in India. The Council needs the help of all Section SACs to provide the data of thier respective section student branches. With this we will go on line with an All India Student Branch Roster.

The IEEE Job Site http://www.ieee.org/jobs available exclusively to IEEE members can help you locate career opportunities easily and confidentially. Since many multinationals are setting up operations in India, members in India can really benefit from this. Most of the Companies are in the process of tying up with IEEE Job sites for their recruitment needs in India since top employers know that IEEE members are the most qualified electrotechnology and IT professionals in the World. Take a few minutes to register with the IEEE Job Site and check out your career options.

The Jan 2004 issue of IEEE Spectrum in its "Pundits ponder what 2004 portends" column states that according to Goldman Sachs India's economy will be a trillion US dollars by 2010 and by then india will be turning out half a million engineering graduates annually.

looking forward to your active participation in IEEE activities,
With best wishes and regards,
Mumbai 								R. MURALIDHARAN
1 Feb.'04							Chairman - IEEE India Council

r.muralidharan@ieee.org

Quote for 1st page:

◇The Wright brothers created the single greatest cultural force since the invention of writing. The airplane became the first World Wide Web, bringing people, languages, ideas, and values together◇ -Bill Gates

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◇From Battlefield to Boardroom◇ ◇ *Winning Management Strategies for Today◇s Global Business*

Book by: **Dennis Laurie**

Published by: PALGRAVE

The wars in business may be bloodless, but they are no less fierce than those actually fought on the battlefield. Whether a company is looking to expand or to maintain its place in the market, managers, like their military counterparts, must have a strategy.

Dennis Laurie identifies 10 winning military strategies that have been used successfully, from Ancient Greece to Desert Storm and beyond. Using events taken from business headlines, Laurie shows how these same strategies are enabling companies of all industries and sizes to succeed today. For example, by exploring Napoleon◇s failed invasion of Russia, Laurie details the strategy of patience. As Russian forces let the harsh winter defeat Napoleon, companies like Yahoo now let their competitors overextend themselves and then reap the benefits. When threatened by the London-based *Financial Times* in the United States, the *Wall Street Journal* retaliated by launching its own London edition.

In this book, the author offers, in practical format, business strategies that can help managers of all levels forge their own business paths to victory.

◇Corporate Politics for IT Managers◇ ◇ *How to Get Streetwise*

Book by: **Keith Patching & Robina Chatham**

Published by: Butterworth Heinemann

The book deals directly with the frustrations felt by many IT managers who believe that they are not being listened to. It is recognized in almost all organizations as important; but many IT managers feel personally undervalued. Their IT departments are also often poorly rated by users, despite the fact that they work hard, long hours. The book tells IT   managers how to:

- ◇ Deal with corporate politics
- ◇ Increase effectiveness as a leader
- ◇ Communicate effectively with non-technical people
- ◇ Promote and market the IT function
- ◇ Set a clear direction for IT within the organization
- ◇ Enhance the reputation as a senior business manager, and, above all,
- ◇ Stop doing the things which are getting in the way of one◇s success

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Technology *in brief*

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Flower to Detect Landmines

More than 100 million land mines have been spread out in 45 countries, hidden killers that often remain for years after a conflict is over, according to data compiled by Aresa Biodetection, a Danish biotech company

which developed a genetically modified flower that could help detect land mines. It hopes to have a prototype ready for use within a few years.

The genetically modified weed has been coded to change color when its roots come in contact with nitrogen-dioxide (NO2) evaporating from explosives buried in soil.

Within three to six weeks from being sowed over land mine infested areas the small plant, a Thale Cress, will turn a warning red whenever close to a land mine.

The problem of sowing the seeds in a potential land mine could be overcome by clearing strips through a field by conventional methods or by using crop planes.

Currently land mines are mostly removed by putting a stick into the ground to locate the mine, then removing it and detonating it. Dogs and metal detectors are also often used.

"We don't think our invention will completely replace other methods. The main target of this product is soil that will be used for different agricultural activities," Oestergaard, Chief Executive of Aresa said.

Although there are no official figures for the number of victims of land mines, peace activists say tens of thousands are injured, maimed or killed each year.

Aresa's invention, based on research at the Institute of Molecular Biology at Copenhagen University, uses a plant's normal reaction to turn red or brown when subjected to stressful conditions such as cold or drought, but has genetically coded it to react only to nitrogen-dioxide.

Aresa has succeeded in growing the genetically modified plant and hopes to launch restricted tests this year and to apply for field tests in Denmark and abroad after that.

The use of land mines was outlawed in the 1997 Ottawa Convention and more than 90 countries committed themselves last year to cleaning up the debris of war to reduce the number of civilian casualties from munitions left by armed conflicts.

Aresa's scientists were not the only ones trying to use genetically modified plants to detect land mines but its research was entirely independent from other projects. It hopes to use the Thale Cress also for detecting and cleaning soil contaminated by heavy metals such as lead, copper, zinc and chromium, a major source of pollution in many industrialized countries.

New Wireless Standard to Carry Cable TV Signal

A new wireless technology with enough bandwidth to carry cable television signals from a wall-mounted outlet to a TV anywhere in the home could be on the market as early as next year, the Multiband OFDM Alliance, an industry group which includes major chip makers like TI, Intel and others, announced recently. The underlying technology, Ultra Wide Band (UWB), operates at a lower power than the Wireless LAN standard, Wi-Fi, but is capable of handling much larger amounts of data, including streaming video. A cable or satellite set-top box, equipped with the technology and connected a cable outlet, would be able to transmit video to any nearby television equipped to receive UWB. Consumers may also be able to transfer images from a digital video camera to a PC in wireless mode. In corporate offices, UWB technology could replace wires in data centres. Existing wireless technologies like Wi-Fi, and Bluetooth serve similar functions, but can not handle large files like digital video. Some more details follow:

Ultra Wide Band and IEEE 802.15.3a - An Overview
UWB transmits data in short pulses, each of which spreads out over a wide swath of spectrum. Because the technology does not simply modulate a single frequency, UWB enjoys several potential advantages over single-frequency transmissions. One advantage is that it can transmit enormous amounts of data in a short time. Another advantage is that it can share frequencies that are used by other non-UWB applications because it transmits for extremely short periods only�periods that do not last long enough to cause interference with many other types of signals. Nevertheless, concerns about interference led the U.S. Federal Communications Commission (FCC) to limit power emissions of UWB devices. The result is high-bandwidth, short-range systems. One can expect data-rate throughput speed capability of 110 Mbits/s at a range of some 10 meters.

The FCC will allow five specific UWB applications, of which the home and office applications may be of greatest interest to wireless-communications industries. Notably, automotive applications of UWB may prove useful to communications industries concerned with telematics, and short-range radar applications of UWB may prove useful to wired-communications industries, such as for locating underground wiring.

An IEEE Wireless Personal-Area Network High-Rate Alternative working group began in December 2002 under the designation IEEE 802.15.3a to define and pursue development of a standard for home and office wireless-networking applications using UWB. An industry association, the WiMedia Alliance, will eventually be responsible for certifying interoperability of UWB-enabled devices and will promote a WiMedia brand similar to the current Wi-Fi product line. Currently, two competing consortia are vying to direct 802.15.2.a standards in two different directions. The Multiband OFDM Alliance led by Intel and Texas Instruments favors splitting the spectrum for UWB into either three or seven specific bands. The other standards alliance led by Motorola and Xtreme Spectrum favors use of continuous spectrum.

The FCC's current rules for UWB allow the following applications:
v   Automotive collision-detection systems and suspension systems that respond to road conditions.

These devices are able to detect the location and movement of objects near a vehicle, enabling features such as near collision avoidance, improved air-bag activation, and suspension systems with improved response to road conditions relative to that of existing technologies.

v   Medical imaging, similar to X-ray and CAT scans. A medical imaging system may serve for a variety of health applications to "see" inside the body of a person or an animal. Operation must be at the direction of, or under the supervision of, a licensed health-care practitioner.

v   Through-the-wall imaging for detecting the location or movement of persons or objects that are on the other side of a structure such as a wall. Operation is limited to law-enforcement, fire, and rescue organizations.

v   Construction applications, including through-wall imaging systems and ground-penetrating radar (GPR). Operation is restricted to law-enforcement, fire, and rescue organizations; to scientific research institutions; to commercial mining companies; and to construction companies (including builders of telecommunications infrastructure)

v   Communications devices, such as high-speed home or office networking, provided that the devices are for indoor use; outdoor use is restricted to handheld devices engaged in peer-to-peer operation only.

Companies that have expressed interest in developing technology or chips for UWB devices capable of carrying voice, data, and video include Xtreme Spectrum, Staccato Communications, Eastman Kodak, Fujitsu Microelectronics, General Atomics, Hewlett-Packard, Infineon, Intel, Lucent, Mitsubishi Electric, Motorola, NEC Electronics, Panasonic, Philips Electronics, Samsung, Sony, and Time Domain.

News - Scan

Driving & Mobile Phone

Motorists who use a mobile phone while driving are up to six times more likely to have an accident � even if they are speaking hands-free, according to The AA Motoring Trust. It is more dangerous than driving with a blood/ alcohol concentration above the prescribed limit. Controlled tests carried out show that having a hands-free phone conversation at the wheel dramatically reduces a driver�s ability to concentrate on the road ahead, which could have fatal consequences. On average, drivers are four times as likely to have an accident while on the phone, although in some cases the danger can increase six fold.

The brain capacity is stretched to its limit while driving, with 40% of brainpower taken by reading the road. Controlling the car, anticipating problems, navigating and time keeping use up the remaining 60%, meaning that virtually no space is left in the brain for having a phone conversation.

(Website: www.mja.com.au)

Quotes:

� The frog does not drink up the pond in which he lives� � Native American proverb

�The deepest sin against the human mind is to believe things without evidence�

-Thomas H. Huxley

� When you were born, you cried and the world rejoiced. Live your life so that when you die, the world cries and you rejoice� �Cherokee Expression

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IEEE NEWS & EVENTS

New IEEE Fellow Category- Better value for IEEE members from Industry

An IEEE Fellow category has been created specifically for professionals in industry who work in such areas as process or production engineering, quality control, and systems integration. Read more at http://www.theinstitute.ieee.org/portal/index.jsp? pageID=institute_level1_article&TheCat=2202&article=tionline/legacy/inst2004/jan04/1w.newsfellow.xml

Message to Section Chairs

Mr. Michael J. Buryk, Business Development Manager, Recruitment
Advertising, IEEE Media has requested us to reach the following message to
all our members in India. I am sure each of our sections has a majordomo
based group e-mail facility which can be used for this.
This message is very important since many US based multinationals like Sun,
Qualcomm etc are recruiting for their India operations and the IEEE Job site
is being used by them for recruitment.
I am sure you all will agree that this is another value addition to our
member benefits.

Thanks and with best regards,
R. Muralidharan
Chair - IEEE India Council

Message

The IEEE Job Site, available exclusively to IEEE members, can help
you locate career opportunities easily and confidentially. Just
complete a profile of your qualifications and requirements, and
you'll be notified by email when a suitable job becomes available.
Major global technology companies are interested in speaking with
IEEE members now about positions in India.

IEEE Job Site was recently named one of the top online recruitment
sites by Weddle's Guide to Employment Web Sites. And top employers
know that IEEE members are the most qualified electro-technology and
information-technology professionals in the world. Take a few minutes
to register with the IEEE Job Site and check out your career options
today!
<http://www.ieee.org/jobs>

8th International Conference on Electromagnetic Interference and Compatibility (INCEMIC 2003) - A Report

INCEMIC 2003 was organized by the Society of EMC Engineers (India) in technical co-operation with the IEEE EMC Society during December 16-19, 2003 at Chennai. The Ministry of Communications & IT, DoS, DAE, DRDO and several private industries sponsored the various programmes.

Workshop

A two-day Workshop that preceded the Conference was inaugurated by   Dr.K. Venkatesh Prasad of the Infortronics Research & Advance Engineering Ford, USA, at a function presided over by Mr.K.R. Kini, Director, SAMEER. Mr. K. Williams, the IEEE EMC Society President-elect for the year 2004, addressed the gathering. While Mr.S. Karunakaran, Convenor�Conference, welcomed the gathering, Dr. Sisir K. Das, Convenor-

Workshop, proposed the vote of thanks. Eminent professionals were on the faculty of Workshop, in which five important topics were covered, as under:

Topics		Faculty
High frequency interconnect	-	Prof. Madhavan Swaminathan
Design to meet the EMI control specification	-	Mr. Oren Hartal
EMC in power electronics	-	Prof. M.K. Gunasekaran
The principle of path of least inductance in circuit and grounding design	-	Mr. Elya B. Joffe
Harmonic & flicker and bulk current injection (BCI) testing	-	Mr. Siegfried Klezar

Conference

The Conference inaugurated on 18th December 2003 was presided over by Dr.V.P. Sandlas, Distinguished

Scientist, DRDO.   Mr.V.R. Katti, Chairman, SEMCE(I), addressed the gathering. Mr.K.K. Jaswal, Secretary to Government of India, Ministry of Communications & Information Technology, delivered the inaugural address and released the Conference Proceedings

During the function, Best EMC Engineer Awards were given away. Dr.Sisir K. Das received the award for the year 2003 and Mr. PNAP Rao for the year 2002.

The following papers were presented with best paper Award.

1. Dr.Mukhopadayay Best paper award: �Electromagnetic Modelling of switching noise in on-chip power distribution networks� *Jifeng Mao, Woopoung Kin, Suna Choi and Madhavan Swaminathan, Georgia Institute of Technology, Atlanta, USA and James Libous and Daniel O�Connor, IBM, New York, USA.*

2. Best student paper award: �Numerical differentiation based parameter measurement algorithms for sinusoidal signals in noises�, *J.K.Wu, J.Long, J.X.Wang, Y.Liang and F.He, Electrical Engg. College, Guangxi University, P.R. China.*

3. Best student paper award: �Characteristic of operational transconductance amplifier circuit in the microwave frequency range�, S.Jambulingam, O.Rodrigues, A.Bangle, A.Venkatachalam, J.Mody and P.Gosh, Syracuse University, Syracuse, USA.

The conference concluded with a panel discussion on �EMI/EMC Scenario in India and global challenges� chaired by Mr. N.K. Agarwal, VSSC, Trivandrum.

IEEE Senior Members

IEEE India Council congratulates all the following 17 distinguished members who have been elevated to IEEE Senior members in Jan 2004.

R. Muralidharan

Chair - IEEE India Council

Pune Subsection	**Rashida Suhail Ansari**	*Bombay Section*
Pune Subsection	**Sitesh Chandra Dey**	*Bombay Section*
Hyderabad	**Sarat Nelaturu**	
Kerala	**Chitharanjan Damodaran**	*Kerala Section*
Kerala	**Kethavarapu L. Prasad**	*Kerala Section*
Kerala	**Ashok Sankar**	*Kerala Section*
Kharagpur	**Partha P. Chakrabarti**	
Kharagpur	**Pallab Dasgupta**	*Kharagpur Section*
Kharagpur	**Jayanta Mukhopadhyay**	*Kharagpur Section*
Madras	**Sundaresh Subramaniam**	
Delhi	**Parameswar Banerjee**	
Delhi	**Om Vikas**	
Gujarat	**Deepak Mathur**	*Gujarat Section*
Gujarat	**Himanshu S. Mazumdar**	*Gujarat Section*
Bangalore	**Sriganesh**	*Bangalore Section*

Bangalore	**Madhvanath**	*Bangalore Section*
Bangalore	**Partha Ray**	
Bangalore	**Sushil K. Soonee**	*Bangalore Section*

Code of ethics:

�We, the members of the IEEE� do hereby� agree to reject bribery in all its forms�

-IEEE Code of Ethics

EDITOR'S DESK

"Clarity - The R&D Mantra"

Those who are engaged in Research and Development would vouch that they can not proceed with any work until utmost clarity is there about the activities to be carried out. Whether it is a hardware product or software module or a full system, the features are to be well understood without any grey areas to go about with the development. The developer being the originator or creator, is ultimately answerable. Of course, valuable inputs are always taken from marketing, service, production and all related personnel to close-in on the final features; but, still, the onus of ensuring that the product/ system works exactly as per specifications agreed among all the stakeholders, is fully on the R&D team . Hence the necessity of understanding the needs with absolute clarity, as put forth by all those who may also involve in the commercialisation activity, finally.

If, however, there is any shortfall in mutually agreed performance levels at the end, all the fingers will point towards the developer, who will find himself with his back against a wall. In other words, he can not fall back on any body else, to share the responsibility and hence the   need to be meticulous in collecting the inputs from all concerned. Clarity is the catchword here.

But R&D has its own charm, and the professional satisfaction and enjoyment one could get when seeing his baby -the product or system- is serving a third person efficiently and effectively, are immense. Let our R&D experts come out with more and more innovative systems to make the life of every one in society better and enjoyable.

Trivandrum

1 Feb. '04   N.T.Nair

                                                                                                         Editor

                                                                          e-mail: del@vsnl.com

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This issue is sponsored by IEEE Delhi Section