

## IEEE India Bulletin Vol. 13 No. 9 September 2003

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### CHAIRMAN'S MESSAGE

#### **ACE 2003 in Pune on 12, 13 & 14 Dec. 2003 with the theme "Emerging Technology Trends"**

The IEEE India Council is very thankful to all the members of the Bombay Section for having kindly agreed to host ACE 2003 in Pune on 12, 13 & 14 Dec 2003 at a short notice. ACE is a very prestigious and the single most important activity of the IEEE members in India and hence we all should put in the best efforts to ensure that it turns out to be a big success. The theme of "Emerging Technology trends" is interesting and will be informative. Please watch the web sites of India Council or Bombay section for ACE 2003 details.

Prof. Gupta, the VC of Student Activities will soon be releasing the details of the MV Chauhan Student Paper Contest. The other important student activity is the Students Congress 2003 which will be hosted by the IEEE Student Branch (29861) of Mepco Schlenk Engg. College, Sivakasi falling under Madras Section from 9 to 11 October 2003.

India has over 220 student branches but we do not have an accurate data base of counsellors and office bearers. HK is putting in great efforts to compile the Data Base. Those of you who have latest information especially the Section SACs please share it with HK at [hkalyan@ieee.org](mailto:hkalyan@ieee.org)

Best wishes to Kolkata and Madras sections for the Silver jubilee year. Kolkata section is planning for a grand celebration in November 2003.

It's again the time to vote for the IEEE President Elect. Very important that all of us in India exercise our right to choose the office bearers. Statistics show that only a few among us vote and hence may be the right candidate does not get chosen. The ballot papers for the 2003 President Elect might have reached many and I once again appeal to all of you to vote. You may peruse the ballot papers and will notice that one of the candidates is Cleon Anderson. He is a good friend of us and if you find him worthy please vote for him.

Looking forward to your active participation in ACE 2003 and casting votes in time,

**R.  
Muraleedharan**

Mumbai  
 Chairman, IEEE India Council  
[r.muralidharan@ieee.org](mailto:r.muralidharan@ieee.org)

1 Sept 2003

### EDITOR'S DESK

#### **"Hiding behind the pillar- to escape from work"**

When a new project was received, the management called for a meeting of the people at various levels to discuss the plans to implement it in a time-bound manner. When each task was taken up, some people voluntarily came forward and offered to undertake the challenge. But among them were others who conveniently positioned themselves behind the pillars in the hall as they wanted to escape eye-contact with the people in charge of affairs. Finally, they came out with a sigh of relief, as they could return to their complacent way of working – of just doing the routine jobs.

In today's highly competitive business environment, the highfliers with their preparedness to take risks and attempt seemingly impossible tasks will be noted. They will be quick in executing the jobs in their hands, many a time ahead of schedules and make themselves free to do more. Obviously, they will be tipped for higher assignments, whenever opportunities come up.

There is lot of potential lying dormant and un-utilised in most of the people. It is even stated that, on an average, only 20% of the capabilities in human beings are tapped generally. But, the highfliers exploit them to the maximum extent to produce commendable results. It is only natural then that they get noticed and pushed up in the ladder. Others can continue to remain as **also ran**, so long as the organisation is doing well.

But then, would it not be wise to see the emerging trends and move into an overdrive phase which will unleash the full potential? Could **over-deliver** be our new mantra?

Trivandrum,  
1 Sept 2003

e-mail:del@vsnl.com

**N.T. Nair**  
Editor

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***"You cannot endow even the best machine with initiative; the jolliest steam-roller will not plant flowers"***

**Walter Lippman**

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This issue is sponsored by

**IEEE UP SECTION**

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**IEEE NEWS & EVENTS**



***Dr.Subrata Mukhopadhyaya (3<sup>rd</sup> from left), Delhi PES-IAS Chapter Chair receiving PES Outstanding (Large) Chapter Award from PES President Mr.John W. Estey (2<sup>nd</sup> From right) during Award Luncheon of 2003 PES General Meeting held in Toronto, Canada while Award Nomination Committee Chair Prof.Noel N.Schulz (extreme right) reads citation. Prof. Sarma Maruvada (PES Outstanding Educator Award recipient) and Prof.Raymond Findly (immediate-past President of IEEE) are also seen on the dais (sitting from left)***

## IEEE CALCUTTA SECTION

announces its

### **SILVER JUBILEE CELEBRATION PROGRAM (SJCP : 1978-2003)**

on **NOVEMBER 6 and 7, 2003**

at **HYATT REGENCY KOLKATA, JA-1, Salt Lake City, Sector-3, Kolkata 700098**

#### **On the Occasion of the SJCP' 03, the Section organises the following:**

1 Workshop on '**Mobile Network Technology : 3G and Beyond**'

2. Tutorial on '**Wavelet Transform & Fractal Analysis in Pattern Recognition**'

**Arranged jointly with the Power Engineering Chapter of Section**

3. Tutorial for students on '**Optical Fiber Communication & Its Future Trends**'

1 Participation open to all interested persons on Pre-Registration Basis. Students are encouraged to register early.

1 **Registration Fee per person:** Member IEEE = Rs.400; Student Member IEEE = Rs.200; Nonmember = Rs.600; Student (non-member) = Rs.300

**Sponsorship:** (a) Rs.5000/- (2 Free Delegates); (b) Rs.10,000/- (5 Free Delegates)

1 **Contact Persons:** \* **Prof. R. Nandi** (robsilverju@yahoo.co.in), Convenor-SJCP & Section Chair, Fax: +91-33-2412-7905; \* **Prof. D. K. Basu** (dipakbasu@hotmail.com), Past-Chair of Section, Tel : +91 33 2473 4861; \* **Mr. R.N. Lahiri** (rnl@tcsca.co.in), Section Professional Activity Chair, Tel: +91 33 2357 4449( Ext. 3201); \* **Mr. K. K. Mallik** (kkmallik@ieee.org), Joint Convenor - SJCP; \* **Dr. K. Bhattacharya** (kesab@ieee.org), Section Secretary Tel: +91 33 2414 6948

#### **For Registration details & Payments -Contact:**

**Prof. C. K. Sarkar** (phyhod@yahoo.co.in, Section Treasurer, Tel : +91 33 2414 6217

**Dr. Salil K. Sanyal** (s\_sanyal@ieee.org), Jt. Convenor- SJCP & Section Vice-Chair

Tel: +91-33-2414-6006 (O)

1 **Visit** <http://www.ewh.ieee.org/r10/calcutta> 1 **Registration Closes on 31 October 2003**

1 **All payments by Cheque/DD, made payable to 'IEEE CALCUTTA SECTION'**

### **Top 12 IEEE Student Sections in the world**

**(By Student Members Strength as of 31 December 2002)**

Region	Section	No: of Students
10	Bombay	5854
10	Madras	3756
10	Bangalore	1445
8	Turkey	1356
9	Colombia	1297
8	UK & Rep. of Ireland	1237
3	Atlanta	1016
6	Santa Clara Valley	995
10	Hyderabad	990
8	Germany	941
5	Houston	930
10	Kerala	851

(As of 31 December 2002, there were 72,238 student Members around the World in 298 Sections)

Compiled by: **H. Kalyanasundaram**

### **Managing Your Subscription to The Institute Online Alert**

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If you have questions or comments about The Institute Online Alert, please send a message to:

<mailto:tialert@ieee.org>

"It was naïve of the 19<sup>th</sup> century optimists to expect paradise from technology – and it is equally naïve of the 20<sup>th</sup> century pessimists to make technology the scapegoat for such old shortcomings as man's cruelty, immorality, greed and sinful pride"

**-Peter Drucker**

### **Technology in brief**

#### **Finger print of living person only accepted**

A German inventor, Stephen Marksteiner of Munich won a patent for a method of verifying that finger prints are from 'living human skin'. This invention will make sure that it is not possible to obtain access authorization with fake fingers or cut-off fingers. It is therefore essential to check, together with the fingerprint, that the person with this finger print is alive.

The invention is based on the fact that living human skin has a characteristic layer structure. These layers of the skin have clearly different electric conductivities. The method is to read signals that bounce off skin when fingers are placed on a surface embedded with electric conductors. In the case of a cut-off finger, since the skin tissue is dying off, the pattern of signals received will be different from that of a live finger.

#### **HP reinvents the integrated circuit with molecular components**

Hewlett-Packard demonstrated the highest-density electronically addressable memory reported to date. The laboratory demonstration circuit, a 64-bit memory using **molecules as switches**, occupied a square micron of space. That's an area so tiny that more than 1,000 circuits could fit on the end of a strand of a human hair.

The bit density of the device is more than 10 times greater than today's silicon memory chips. It combined, for the first time, both memory and logic using rewritable, non-volatile molecular-switch devices. The lab fabricated the circuits using an advanced system of manufacturing called nano-imprint lithography, essentially a printing method that allows an entire wafer of circuits to be stamped out quickly and inexpensively from a master.

#### **Nanotechnology advances in coming years**

Science and technology author William Illsey Atkinson has come out with a list of life-altering nanotechnologies that are imminent –

##### **Some highlights-**

##### **Two to five years from now**

- | Car tyres that need air only once a year
- | Self-assembly of small electronic parts based on artificial DNA
- | New artificial semiconductors based on proteins
- | Instant, error-proof pregnancy tests
- | Complete medical diagnostic laboratories on a single computer chip
- | Go-anywhere concentrators that produce drinkable water from air

##### **Five to 10 years**

- | Erasable and rewritable paper for programmable books, magazines, and newspapers
- | Powerful computers you can wear or fold into your wallet

- | Bullet-proof armour based on nano-biomimicry of mother-of-pearl
- | Light, efficient ceramic car engines
- | Intelligent hearing aids that duplicate the ear's ability to distinguish speakers
- | Drugs and drug-delivery systems that turn AIDS and cancer into lower level, manageable conditions
- | Smart buildings that self-stabilize during earthquakes or bombings
- | Pharmaceuticals tailored to the individual

### **10 to 15 years**

- | True artificial intelligence too sophisticated for you to tell if you are communicating with a human or machine
- | Paint-on computer and entertainment video displays
- | Guyed structures 20-100 miles high for satellite launches and direct communication
- | Instant and automatic heating, cooling, and materials sorting at zero-energy cost from semi-intelligent devices that sort single molecules
- | Elimination of invasive surgery, since bodies can be monitored and repaired almost totally from within

## **News - Scan**

### **Linux invades consumer electronics industry**

Linux, currently a software system mostly used to power big servers and PCs, is also emerging as a small set of computing code to drive devices like mobile phones, remote controls and TVs.

Low cost and freedom to tweak the software are reasons why a number of world's largest consumer electronics majors like Sony, Matsushita, and others have set up an alliance recently to develop and promote Linux for consumer electronics products. Linux should also create a common standard to connect products from different manufacturers which currently build various proprietary systems into their devices.

Linux's key advantage over other operating systems is that the core software is freely available and widely embraced. In the cut throat electronic business where profit margins are very low, every saving is welcome.

The consumer electronics makers sell millions of devices while their profit margins are extremely thin. If they don't have to pay royalties, it works directly through to their bottom line. Linux's core software, also known as kernel, which drives the chips and other basic functions of a device, can be as small as one Megabyte if embedded in a consumer electronics product. A single high quality digital picture or one minute of MP3 music can be stored on one Megabyte of memory.

Motorola has launched Linux mobile phone for the Chinese market, while Philips has a remote control running on Linux for all the electronic devices in a home.

## **IEEE ACE 2003**

**29<sup>th</sup> Annual Convention and Exhibition of IEEE India Council**

**Theme: EMERGING TECHNOLOGY TRENDS**

**12, 13 AND 14 December 2003, Hotel Le Meridien, PUNE**

**Watch the India Council website for further details.**

**[http://www.ewh.ieee.org/r10/india\\_council](http://www.ewh.ieee.org/r10/india_council)**

## **Library Scan**

**The Global Information Society"**

*Book by: Wendy Currie*

*Published by: **John Wiley & Sons, Ltd***

The book offers a detailed treatment of the major issues confronting individuals, organisations and society as we move into the next millennium. The growth and development of Internet commerce, management innovation and change panaceas, IT outsourcing and capabilities, and skills for the global information society and the major topics covered.

**“Strategic Outsourcing”-  
A Structured Approach to Outsourcing Decisions and Initiatives**

*Book by: **Maurice F. Greaver II***

*Published by: **American Management Association***

Do it right, outsourcing can be a powerful tool for achieving competitive advantage. Do it wrong, and it can lead to plummeting morale, lost business opportunities etc.

To ensure success, outsourcing must be a strategic decision- not a mere life preserver or short term revenue-booster. The book discusses everything one will need to effectively outsource any activity, function, or process in the organisation. Tools for measuring benefits and risks, guidelines for implementing the process, and tips for helping employees make the transition etc are covered.

**2003 IEEE Annual Election**

All voting members are requested to cast their votes by returning the Postage-paid return envelope. Please be informed that the return envelopes are International Business Reply Mail and *no Indian stamps are to be affixed*. This has been verified with the PMG in Bombay. Kindly return the envelopes by end September itself to ensure that they reach IEEE Election office by 3 November 2003.

**An Appeal to Readers**

The editorial board solicits the help of readers in getting feedbacks about the contents of IEEE India Bulletin. We welcome constructive comments from all readers about each section like library scan, technology in brief, news scan, quotes etc. Please e-mail your views to: [ntnair@hotmail.com](mailto:ntnair@hotmail.com)

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*"Children have never been very good at listening to their elders, but they have never failed to imitate them."*

*"The man who removes a mountain begins by carrying away small stones."*

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**K P P Nambiar Honoured**



**K P P Nambiar**, who pioneered IEEE movement in Kerala and was the founder Chairman of IEEE Kerala Section, was honoured recently at Trivandrum by IEEE Kerala section and other professional societies on his 75<sup>th</sup> birth day. Mr. Nambiar held several prestigious positions some of which include CMD of KELTRON and also of Indian Telephone Industries (ITI), Secretary, Dept. of Electronics etc

***IEEE India Council offers its best wishes to Mr. K.P.P. Nambiar***

**“We, the members of the IEEE... do hereby...agree to treat fairly all persons regardless of such factors as race, religion, gender, disability, age, or national origin”**  
Ethics **– IEEE Code of**

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**Administrivia:**

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**Send your comments about this page, to :** [s.gopakumar@ieee.org](mailto:s.gopakumar@ieee.org)

**This page, developed and maintained by:** S.Gopakumar