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Wish you a new year of happiness in life, professional achievements and peace around the world

A NEW YEAR RESOLUTION

�Resolve to be tender with the young, compassionate with the aged, sympathetic with the striving, and tolerant with the weak and wrong. Sometime in life you will have been all of these� -Dandy Lion

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CHAIRMAN'S MESSAGE

Dear fellow members,
Seasons Greetings and best wishes for a very happy, prosperous and creative new year 2004. Hope IEEE activities & membership reach greater heights in 2004.

Glad to inform you all that ACE 2003 went off very well in Pune from December 12 to 14. The tutorials and technical conference were very much appreciated by all. The council expresses its sincere thanks and appreciation to Bombay section and Pune sub section for putting up a wonderful show at a very short notice. Had it not been for the hard and sincere work put in by the Pune sub section volunteers, ACE 2003 would not have been possible. A million thanks to all those who made it a big success.

We are proud to inform you that this was the maiden effort of Pune sub section, the youngest entity in the whole of IEEE. PadmaSri Dr Vijay Bhatkar was the chief guest and Mr S Ramadorai, CEO of TCS delivered the keynote address. The Council is grateful that Section Executive committee members of Gujarat, Bangalore, Kerala, UP, Calcutta and Bombay along with MP and Pune subsections participated in this ACE.

A hard copy of the Souvenir of ACE 2003 was formally released by the chief guest. The souvenir carried the abstracts of the papers presented at ACE 2003. The full papers were made available to all delegates on a CD.
Thanks to TCS for the GOLD sponsorship and Tata Telecom for the co-sponsorship of ACE 2003.
The annual conference of IEEE in India will now onwards be �INDICON� rather than ACE. INDICON 2004 will be hosted by Kharagpur Section at IIT Kharagpur in Dec 2004. The Call for Papers is already out.
IEEE Standard 802.11g that combines the bandwidth of 802.11a and the reach of 802.11b won the Popular Science magazine Mega award for 2003. This indeed is a commendable achievement of IEEE and amply demonstrates its role in creation of standards for the benefit of Society at large.

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 all to renew by end of Jan 2004 since the cut off date is mid Feb.

The 224 plus student branches spread all over India needs attention and proper administration. Basic issue is we do not know whom to contact in a Student branch. Mr HK, a veteran volunteer of IEEE is working hard to create an initial data base of student branches in India. With this we will go on line with access control. Student counselors should be able to update student branch information on line with appropriate passwords just like member data. This might help streamline student branches.

Looking forward to your active participation in IEEE activities,

With best wishes and regards,

R. MURALIDHARAN
Chairman - IEEE India Council

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EDITOR'S DESK

◆Technolust or Luddite ◆
Switch roles according to situation◆

Scene: IEEE Sections Congress at Anaheim, California. The Master of Ceremonies, a veteran IEEE volunteer, kicked off the activities with an inspiring welcome speech, highlighting the IEEE initiatives in fostering knowledge exchange, comraderie etc among the members spread around the world. Finally, he concluded by making a down-to-earth request to the 500 plus members assembled there: he lifted a small whistle hung from his neck and blew it loudly. There was pin drop silence, at once. He requested every one to honour his whistle for the next 3 days of the Congress. He will blow it once tea-break or lunch time is over, signalling all to re-assemble for the next session. And it worked excellently well- in controlling one of world◆s most techno-elite crowd, the IEEE members. Normally, being an IEEE function, a high-tech gadgetry for such crowd management would be the expectation.

In this technology-driven era, we are required to embrace the new technologies springing up everyday, as otherwise we will be rated as obsolete. But that doesn◆t mean that we should remain a ◆Technolust◆(obsessed with technology) always, when simple solutions will do. Many a time, a not-so-hightech way of doing a job may be cost effective, simple to handle and even environment-friendly. The whistle-solution is one such case of simplicity and there will always be many avenues to practice this in daily life. However, being a Luddite (one who is opposed to technological change), can not obviously be the chosen way of working for the technical personnel.

A judicious blend of both the options according to circumstances would be the right approach.

N.T.Nair

Trivandrum   Editor
1 Jan.◆04   e-mail : del@vsnl.com

IEEE NEWS & EVENTS

IEEE India Council Membership

Membership Development Report by Prof. K Rajgopal, Vice Chair- Membership Development,
India Council (As on 16 Dec 2003 - Section-wise and
Overall)
ι Total membership in the India Council including all grades is 20029 down from January 2003 of 26116.
ι Student and Higher Grade Membership is 47.925% (59% in Jan) and 52.075% (41% in Jan) respectively
which can be considered as a good distribution. However, this ratio is widely different among the sections.
ι Madras Section has the lowest percentage for Member Grade and Higher Grade Membership followed by
Kerala closely behind.
ι Bombay Section has the highest number of Student (3612, 5554 in Jan) and Higher Grade
Members (2803, 2258 in Jan) followed by Madras (2474, 1419) (3969,1600 in Jan).
ι Bombay Section constitutes 32% (31% in Jan) of India Council strength followed by
Madras at 19.4% (21.3% in Jan). Together the two sections constitute 50% (52.3% in Jan)
of the IC strength.
ι Delhi has highest number of SM (137, 140 in Jan) followed by Bangalore (116, 97 in Jan), both
crossing hundred mark.
ι SM grade percentage should be between 5-10% (IC-3.17%) of total membership. Kharagpur Section has
highest at 21.7%. Among other sections, Delhi leads with 7.8%.
ι Fellow Grade percentage should be 1% (IC-0.13%) of total membership. No section is anywhere
close to this figure.

Targets and suggestions
IC should aim to cross 1000 mark in 2004 for SM membership. Fellow grade target of 60 (currently 30)
should be achieved in next 5 years. IC should identify potential members for Fellow
nomination very seriously with help of current Fellows and Senior Members.
To improve the student activities, training programs, technical and educational

activities and services, the sections should make a conscious effort and a working
plan for the year. This will help in graduation of student members to higher grade members. In particular,
the sections having very large student membership and number of student branches,
I recommend formation of a team in the executive committee under student activity chair
(one per 1000 student members or one per 20 student branches) and divide the activities.
I recommend initiating a new program under each section to target 12th standard/II PU
students and expose (expose them to new research tools and technologies at the cutting edge)
 them to research culture with the help of our distinguished Fellows and Senior Members.

Calling IEEE members in India to register with the IEEE Job Site

In 2004, the IEEE Job-site is to make a special marketing effort to attract companies with electrical engineering and IT jobs to fill in India.

The IEEE Job Site invites IEEE members to visit the IEEE Job Site (http://www.ieee.org/jobs) for the latest engineering jobs, and IEEE Spectrum Online Careers http://www.spectrum.ieee.org/careers/careers.jsp) for informative career-related editorials, and many other special features. There is no cost for IEEE members to register with the Job Site.

Many multinational companies are likely to use the IEEE Job Site for recruitment in India. This site is today considered to be the Internet�s premier career site for executives, managers and professionals. In late summer of 2003, the site has acquired a new look and feel and it now provides a variety of service enhancements for members.

ı Greater ease of navigation ıSimplified process to upload job resumes & profiles ıMultiple job search agents to fit different skills and career goals ıGeographic radius search that locates all jobs within a fixed distance from your home in increments from 10 to 50 miles ı Easily remove yourself from the Job Site data base as necessary ıIEEE Web Account single-sign-on enables member to log in once from any IEEE permissioned Web site using SiteMinder technology (Computer Society applications, WEBI, Spectrum Online, etc.) and access the Job Site without an additional log in.

Don�t delay and register with the Job Site today!

For IEEE Student Members, the IEEE India Council�s Computer Society Chapter is trying to design another site (http://www.ieeevidyarthi.org) with the help of Student Members. We need volunteers from IEEE Student Members and IEEE Officers responsible for Student Activities in the Indian Sections for completing the job. If you are willing to donate your time for the job, please write to Dr. Akshai Aggarwal at aka19@hotmail.com.

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ics and Information Technology Exposition�2004

by **DEPARTMENT OF INFORMATION TECHNOLOGY (DIT),**

GOVERNMENT OF INDIA
26-27 APRIL, 2004

at **India Habitat Centre, Lodi Road, New Delhi**

The theme : �Technology Vision : India in 2010�

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Department of Information Technology (DIT) has been funding research and development projects in the areas of electronics and information technology at various institutions. To disseminate information among the users and the industry on Technologies/Products developed and the services/infrastructure created through DIT support, the Department organizes ELITEXs annually. The industry has very enthusiastically responded and participated in the event with the same zeal.

The Hon�ble Minister for Communications & Information Technology, Shri Arun Shourie has kindly agreed to inaugurate the exposition on April 26, 2004 at 0930 hrs. The Seminar during ELITEX-2004 will cover the state-of-the-art technologies and will provide special focus on the theme of ELITEX.

The scope of the ELITEX-2004 has been enlarged to include official participation from all Countries. The official delegations from these countries will focus on the commercial potential and tie-up possibilities on the technologies/services available from India in a separate session during the seminar. Efforts are made to have all the member countries of Asia Electronics Info-Communications Union (AEIU) participated.

Another session will focus on presentations from the States in India. These Governments are requested to exhibit the available/proposed e-governance facilities and the status of IT industry in their respective States. These Governments will also be requested to ensure the dissemination of information generated through the ELITEX-2004 in their respective States.
 The exhibition will focus on the technologies/know-how developed at various institutions under DIT. The participating institutions will get an opportunity to highlight their technologies/management services and other activities that can be offered to the industry and public at large.

ELITEX-2004 would provide a unique opportunity

ı   For industry to pick a product/technology for commercial exploitation

ı   For R&D institutes and academics to identify industry needs

ı   Sharing your views and experience with other experts

ı   Interaction with commercial attaches and delegates of other countries

ı   a forum for interaction among the technology developers and
      technology users.

ı   Electronics industry, R&D and academic institutions and users are invited to participate.

The entry to the exhibition is **FREE.** Participation in Seminar will be on request. On-line webcasting of the entire event will be available. For further details, and free online registration please visit: **www.elitexindia.com** *or contact* **Dr. R.G. GUPTA**, Director, Dept. of Information Technology. Tel No. 011-24363095(O), Fax No. 011-24365404 e-mail : guptarg@mit.gov.in

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IEEE INDICON - 2004

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IEEE INDIA ANNUAL CONFERENCE-2004, IIT KHARAGPUR, INDIA, DEC. 20-22, 2004

PRELIMINARY CALL FOR PAPERS

Organizer Conference

IEEE IndiaCouncil has been holding a conference (ACE � Annual Convention and Exhibition)every year at different locations in India. In 2004, this conference,rechristened as IEEE INDICON will be held at IIT Kharagpur. The conference willprovide a forum for the scientists, engineers and technologists to meet andexchange their work and ideas. Some pre-conference tutorials are also beingplanned. There will be invited as well as contributory paperpresentations.

Broad Areas

Computers, Control,Communications, Signal Processing, Microelectronics, VLSI, Power & Energy, Nanotechnology, Information Technology, Bioinformatics and other areas withinthe scope of IEEE

Papers Solicited

Original papersreporting research and development results, practical implementations, and applications are solicited on topics covered under the broad areas. Authors are requested to send their 4-page contributions preferably by electronic media (pdfformat). However three hard copies should also be submitted. The paper shouldcontain the title, author�s name(s) return addresses, email, phone, fax nos., a50 word abstract, text and references. They should be typed in single space anddouble columns on one side only of A-4size sheets with about 2.5 cm margin on all four sides of every page using atleast 11pt. font size. Accepted and registered papers will be printed in theConference Proceedings. More than 4-pages will require extrapayment.

- **Papers should be submittedto**

    Prof. AjitPal

    Dept. of Computer Science and Engineering

    IIT Kharagpur, Kharagpur -721302

    Email : indicon@cse.iitkgp.ernet.in

- **Important Dates**

    Paper submission   : July 31, 2004

    Acceptance Notification   : Sept. 30, 2004

    Receipt of camera ready copy   :   Oct. 31, 2004

- **Location**

Kharagpur isabout 120 Km. From Kolkata. It is on the S.E. Rly and has direct trainconnection with many major cities in India. It has a moderately cold weather inDecember (Min. 15^0C - Max.25^0C)

- **IEEE Kharagpur Section**

    IEEE India Council

- **Conference Co-Chairs**

    IEEE India Council Chairman

    IEEE Kharagpur Section Chairman

- **Technical Prgramme Committee Co-Chairs**

    Prof. Ajit Pal

    CSE Dept. IIT Kharagpur

    Prof. S.L. Maskara

    E&ECE Dept, IIT Kharagpur

- **Organizing Committee Co-Chairs**

    Prof. Rajib Mall

    Prof. Amit Patra

- **Convenor**

    Prof. Somnath Sengupta

- **Address**

    IEEE Kharagpur Section

    IIT Kharagpur, Kharagpur - 721 302

- **Website** (Under development)

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Technology *in brief*

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CAR ENGINE RUNNING IN DIFFERENT FUELS

Engineers working in the technological centre of Delphi, one of world�s largest vehicle-component makers of Brazil, have now made it possible for Brazilian motorists to choose the cheapest fuel in an ever changing fuel market- be it petrol or ethanol or any mixture of the two.

Many people dream of replacing petrol with ethanol. Because ethanol is made from plants, and plants draw their carbon from the atmosphere, burning it would eliminate a source of greenhouse gases and help them to stem global warming. But the optimum conditions for burning petrol and ethanol are different, so a well-tuned engine needs to know what fuel it is being fed in order to adjust itself appropriately.

Petrol burns best with an air to fuel ratio of around 14:1.This means that, for every kilogram of fuel burnt, all of the oxygen in 14 kilograms of air will be consumed. Ethanol, though, requires an air-to-fuel ratio of 9:1. Delphi�s technology works by �sniffing� the amount of oxygen in a car�s exhaust. If too much or too little of the gas is sensed, it indicates that the fuel is burning in a less-than-optimal way, and thus that the air-to-fuel ratio is wrong. A signal is then sent to the engine to tweak the ratio appropriately.   This system also makes adjustments to compensate for the outside temperature. Optimal burning requuires more fuel in the mixture when the temperature is lower. Sniffing the exhaust means that this happens automatically.

Two other adjustments are also necessary. Ethanol needs more compression in an engine than petrol does. The scientists at Delphi compromised by using a level of compression between the ideals for ethanol and petrol. And ethanol is more corrosive than petrol. So the engineers had to alter the design of the fuel pump, gaskets and piston rings. Thee result is a1.8 litre engine that is now being fitted to Brazilian-made General Motors cars.

Brazil has a history of promoting ethanol as a fuel. In the 1980s, the government encouraged it, in a misguided attempt to subsidise sugar farmers (since the main source of ethanol is fermented sugar) and cut oil imports. At the height of this policy, almost 80% of cars produced in Brazil ran on pure ethanol.

That proved very costly to sustain, and the subsidies were eventually reduced. But the government is still keen on ethanol, and the motor fuel in Brazil still contains it in varying amounts.