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**CHAIRMAN'S MESSAGE**

Dear members,

It gives me great pleasure along with a sense of responsibility to assume the august volunteer office of the Chair of the IEEE India Council. I am grateful to all members for having chosen me to be the Chair of IC for 2003.

Right from 1976 many a luminaries as Chairs of India Council led the IEEE movement in India. Today thanks to the efforts of many a volunteers, the IEEE is a visible professional body in India. However, it may be noted that the IEEE strength in India is a miniscule compared to the total percentage of related professionals here. In order to grow we need to fill our volunteer ranks with members from all walks of life and ensure satisfaction of members in terms of membership benefits. We must all work together if we are to grow and prosper in the 21st Century.

The Council is open to your ideas and suggestions. Please send them to me at [r.muralidharan@ieee.org](mailto:r.muralidharan@ieee.org)

With best wishes for a happy and fruitful professional year 2003,

**R. MURALIDHARAN**

Chairman

IEEE India Council

1 Jan. '03

**EDITOR'S DESK**

'Loyal to the Organization or  
to the Boss'

In corporate circles, many are faced with this question – to remain loyal to the firm they are working for or to the boss they are reporting to. The situation becomes more complex if there is no choice – in the bid to retain one's position, the boss has to be supported knowing fully well that many of the actions are not really in the interests of the organisation.

There are numerous stories of people losing jobs because they were too loyal to the organization, much to the resentment of their bosses, who finally showed the door to such employees. In many such cases, the news of the boss himself losing position, after late realization by the top management is also heard. But, by then the damage would have been done, many a time in an irreversible manner.

What is loyalty to the organization? Most organizations have their short and long term goals. Any activity not in line with these objectives requires to be identified and shot down, as otherwise the very existence of the organization will be in jeopardy. In this respect, the sensible role played by some well-meaning workers' unions, deserves to be complimented. They are quick to observe and bring to light, actions that may endanger the organization in the long run, much to the discomfort of the non – loyalist managers. But such creative roles are not seen among all the unions, who are more concerned about what their rank and file can get, come what may, to the establishment.

Some smart people would advice that you strike a balance between the two- playing loyalty to both, the organization and the boss. How practical it is, is a million dollar question!

This is the era of team work. The best way to foster loyalty to organization among all sections of people in the organization is to promote team work, which generally doesn't give room for much vested interests.

**With warm New Year Greetings to you,**

Trivandrum **N.T.NAIR**

1 Jan. '03 Editor

e-mail: [del@vsnl.com](mailto:del@vsnl.com)

**LET 2003 BE AN EXCELLENT YEAR FOR YOU - FULL OF JOY, GOOD HEALTH AND COMMENDABLE  
ACHIEVEMENTS IN ALL FRONTS  
-IEEE India Council**

**“India’s future is secure only in economic development that is pro-nature and pro-people, especially the poor”**

**J.C.Kumarappa, an associate of Mahatma Gandhi.**

**Technology in brief**

**Wireless Electricity**

Portable computerized devices like mobile phone, laptop, pocket PC, digital camera etc are fast becoming as essential as a wallet or a set of keys. Each one of these gadgets normally comes with two cords or cables- one to exchange data with a computer or talk to another device and the other to recharge batteries. Most device makers’ wires work only with their specific device and can not be shared with other gadgets. Hence the need to carry separate cables suitable for each individual device.

At least one wire problem- of the one used for transferring data- however, is not expected to last for ever. Wireless technologies like Bluetooth, IEEE 802.11, Infra-red etc are emerging as the solutions to do away with one of the two cords, now used for transfer data. There are several such portable devices available in the market today.

However, intense research work is being done in the ‘last wire’ dilemma which refers to the power adapters mentioned earlier that juice computing devices. One such development. ‘Wireless Electricity’ that could cut loose mobile device owners from their power cords is now reported. An early design of the technology looks something like a thick rubber place mat. Metal ‘connectivity points’ span the surface of the pad and are responsible for delivering power to notebook PCs, cell phones or other devices that make contact with the surface. A single pad can power any number of devices that can fit on top.

MobileWise, a California based Co behind this initiative, is working with Acer and other manufacturing partners to deliver early next year a pad with a conductive surface that can power computing devices resting on top of it as if they were plugged into an electrical outlet.

Its potential uses are diverse. One obvious benefit is that a pad, which has a single power cord that plugs into the wall, could replace the multitude of power supplies required for individual devices that fit on its surface. Computer and handheld device maker Acer has committed to releasing a number of next generation mobile computing devices in the first half of 2003 that will ship with a wire-free power supply based on Mobilewise’s technology. Samsung has also announced a partnership agreement with Mobilewise to use the technology in future Samsung products, like the Japanese Cos, RF Technology and Hanrim Electronics Industries which will produce the pads for device makers.

The base is safe to human contact and emits no harmful radiation, the Co claims. It will only distribute power to devices placed on top of it that include a special microchip developed by Mobilewise that sends information to the pad, such as how many watts are required to power the device. That means other objects such as a wristwatch or a full coffee cup, would be unaffected when placed on top of the mat.

Mobilewise, primarily a microchip company, has developed a chip (US\$ 1.5 a piece) which can be integrated into the circuit of a mobile device so that it can draw power from a pad.

Mobilewise is already devising plans for future uses of the technology. It could be used to supply power to toys, kitchen appliances or power tools. The rubbery plastic pads are also impervious to food and liquid spills and it is envisioned that someday it could be designed for use as a surface for a counter or desktop, powering common household appliances that are placed on top of it.

The technology can also transfer data, and could some day replace a notebook docking station, which is used to distribute electricity as well act as the connection point to the Internet and peripheral devices. In that case, a user could place a digital camera on the pad and have images stored on that camera automatically transferred to the hard drive of a computer also placed on the pad. Similarly, it could be used to synchronize data between a handheld computer and a note book.

**Library Scan**

| **Fortune Magazine**

**Nov. 11 2002**

A discussion on Moore’s Law and early days of Intel between Gordon Moore and Andy Grove appears in this issue. The plans of Intel to enter new markets and open new plants with large investments are also covered.

| **“Cases and projects in International Management”** Book by Richard Mead (Blackwell Publishers Ltd., UK and USA)

This collection of cases and projects in the field of international management helps students to develop cross-cultural skills needed by the modern manager. Three key questions are explored:

- When are cultural factors a significant influence?
- When are other factors of greater influence?
- How can the importance of these different factors be weighed?

"I'd rather be chairman of Netscape which got born, changed the world and died within 48 months, and have that on my tombstone, than have, 'He met his earnings targets for 50 straight quarters'."

– Tom Peters,  
Management Guru

"Adversity is like a strong wind. It tears away from us all but the things that cannot be torn, so that we see ourselves as we really are."

– Arthur Golden  
(Memoirs of a Geisha)

"Half of the harm that is done in the world is due to people who want to feel important"

– T.S. Eliot

### News - Scan

#### Indian students in US

In spite of the recent IT slow down, computer sciences continue to be a favourite area of study among Indian students in US. Some highlights of the annual report on International education published by the Institute of International Education (IIE) are:

- | Management education occupies the place of pride among international students in US, with almost 20% of foreign students in the US enrolling at business schools
- | About 75% of Indian students in the US are studying at the graduate level
- | Around 21% are enrolled for undergraduate programmes and 4.2% are doing non-degree courses.
- | Engineering study occupies the second biggest position
- | An increasing number of Indian students from other fields are switching to fields like bioinformatics, bioengineering and biotechnology
- | The 66, 836 Indian students account for 11.5% of the international students in the US
- | China, leading the table till last year, comes a close second with 63.211 students

### Science & Technology Policy 2003

The S&T Policy 2003 announced during the recent Science Congress 2003 at Bangalore aims to foster R&D in educational institutions, Industrial R&D houses etc with the main aim of improving the global market share of Indian hi-tech products through industry friendly policies, IPR support etc.

Some of the highlights of the policy are:

- | All science-based Ministries and departments will be run by scientists or technologists in order to rid them of bureaucratic spokes
- | The policy aims to put new life and dynamism into research institutions and improve the country's scientific talent pool
- | It is meant to be a road map that integrates S&T with societal concerns
- | To double the S&T outlay to 2% of the GDP
- | Unshackle the scientific establishments from bureaucracy
- | The private sector will be encouraged to adopt and fund institutions & their courses and to get marketable technologies from them in return
- | Science, medical and engineering institutions will get new and easy funding modes to promote research
- | To reverse the present trend of best, young talents flowing into IT sector ignoring scientific careers, the policy aims to provide incentives and innovative schemes and assured career in industry and academia.
- | Scientists of Indian origin will be offered incentives to return to India
- | Researchers in Govt. bodies will be allowed to move within industry, institutions and labs to improve skills and opportunities

### Indian IT Exports 2001-2002

During the fiscal 2001-'02, export of computer software and electronic hardware clocked a total of Rs 42,300 cr, as per Electronics and Computer Software Export Promotion Council (ESC) under Ministry of IT, Govt of India. Out of this, southern states claimed nearly 50% share (Rs 21,307 cr). Karnataka topped the list with a software export earning of Rs 10,500 cr, followed by Tamil Nadu at Rs 5,875 cr. Andhra Pradesh did Rs 2,925 cr while Kerala accounted for Rs 201 cr.

In electronic hardware exports, western region topped the list with earnings of Rs 2,326 cr, followed by north at Rs 1,595 cr, east at Rs 73 cr and the south at Rs 1,806 cr. Here again Karnataka is the leader in south with Rs 1,445 cr export earnings, Tamil Nadu Rs 164 cr and Andhra Pradesh Rs 34 cr.

#### Automotive world

Personal transportation in its present form throws up several challenges, especially in the matter of environmental impact of the vehicles. In 1960, fewer than 4% of the world's population possessed vehicles. 20 Years later, 9% were owners, and currently the share has reached 12%. Based on present growth rates, as much as 15% of the people living on the planet could have a vehicle by 2020, and because the world's population may climb from 6 billion today to nearly 7.5 billion two decades hence, the total number of vehicles could increase from about 700 million to more than 1.1 billion. This projected expansion will be spurred by the burgeoning of the middle class in the developing world, which translates into rising per capita income. Higher income correlates almost directly with automobile ownership.

Three quarters of all automobiles are now concentrated in the U.S., Europe and Japan. It is expected, however, that more than 60% of the increase in new vehicle sales during the next 10 years will occur in eight emerging markets: China, India, Brazil, Korea, Russia, Mexico, Poland and Thailand. The challenge will be to create compelling, affordable and profitable vehicles that are safe, effective and environmentally sustainable. Hydrogen Fuel Cell vehicles, are nearly twice as efficient as those using internal combustion engines, and promise to be the major technology contender.

#### Walden C Rhines, President and CEO, Mentor Graphics speaks...

“India will build its strength on software expertise required to create and analyse electronic systems and chips. Other countries will try to build upon their local manufacturing strengths. When I managed the Texas Instruments (TI) start-up in Bangalore in 1984, I made sure that we started a mixed-signal design group, in addition to the work we started on design software. TI now depends heavily on the chip design expertise of the Bangalore group and other companies have done likewise in India. As a result, we have a powerful food chain in India, from design software to actual chip design. That's a more direct approach than going from electronic system manufacturing to chip assembly to wafer fab to design approach”

“Outsourcing implies arms-length subcontracting. Companies usually do this when they want to reduce costs, and India provides a good place to do this because of the wealth of human resources”

### IEEE NEWS & EVENTS

#### Annual General Meeting 2002 of IEEE-AES-COM-LEO-Society Chapter India and IEEE Delhi Communications Chapter

The Annual General Meeting of the above two chapters will be held on  
January 19,2003 along with the AGM of IEEE-Delhi Section

Venue:

Lecture hall (Basement), Annexe of India International Centre,  
40, Max Mueller Marg, New Delhi-110 003

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#### 2002 IEEE International Conference on Personal Wireless Communication (ICPWC), New Delhi

The event conducted during Dec. at New Delhi 17-19 commenced with intensive lecture courses on the following topics:

- l **Space Time Codes:** Prof. B. Sundar Rajan, IISC, Bangalore
- l **Third Generation Wireless Systems? CDMA 2000:** Dr. Sandip Sarkar, Qualcomm Inc., USA
- l **Wireless LANs: Infrastructure and Adhoc Networks:** Dr. Sridhar Iyer and Dr. Leena Chandran,IIT, Mumbai
- l **Mobile Communications, Standards, Diversity Techniques:** Prof. Ranjan K.Mallik and Prof. Ranjan Bose, IIT, New Delhi
- l **OFDM? Choice of Next Generation Wireless Communication:** Dr. Uma S Jha,University of Aalborg, Denmark
- l **Pervasive Networking, Architecture and Protocols:** Dr. Amitava Mukherjee and Dr. Debashis Saba, IIM, Kolkata

129 participants from 9 countries attended the conference. 25% participants were students from the different academic institutions and industry.

*Reported by: Dr. Ram Gopal Gupta*

## **An International Conference on Information Technology: Prospectus and Challenges (ITPC – 2003)**

May 23-26, 2003, Kathmandu, Nepal

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Nepal Engineering College IEEE India Council's

Royal Nepal Academy of Science & Tech MOST and NCIT

COMPUTER SOCIETY CHAPTER

### **Call for Papers**

(Last date: Feb 23, 2003): Papers in the following areas are invited.: Real time systems, Mobile Computing, Information Retrieval and Data Mining, Natural language processing and Speech technology, IT in rural development, Mediacl and bioinformatics, Parallel and distributed systems, Graphic and visualization, QoS, Remote Sensing and GIS, Software Engineering

The Conference also invites proposals for Workshops and Tutorials.

For details, please refer to <http://www.nec-itpc.org.np>.

## **ATTENTION –LIFE MEMBERS**

Life Members may kindly remember that IEEE expects them to renew.

The ranks of Life Members have been swelling in recent years. This is reflective of a natural rise resulting from the continued, long-term growth of the IEEE membership population and ever increasing life spans. To achieve Life Member status, a member needs to be at least 65 years old, and have a combined age and years of IEEE membership equal to or greater than 100 (e.g., 68 years old with 32 years of active membership).

Once a member reaches Life Member status, their IEEE dues and Regional assessments are waived. This year, however, Life Members are also being required to return their renewal notices in order to keep their membership active. Life Members who do not respond by returning their renewal forms will have their memberships deactivated as of the end of February.

**An IEEE student Branch was inaugurated at  
Mailam Engineering College,  
Villupuram District, Tamil Nadu  
on 12 Dec 2002.**

**"We, the members of the IEEE, ... do hereby ... agree to be honest and realistic  
in stating claims or estimates based on available  
data"  
-IEEE**

**Code of Ethics**

**Administrivia:**

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