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Newsletter of IEEE India Council

CHAIRMAN'S MESSAGE

et me firstly thank JEEE for its confidence in my team to continue its crusade for further strengthening the movement for one more year. During the Annual Conference at Hyderabad on 12 Dec 97, the Council Committee met for the fifth time in the year (sixth meeting) and reviewed the work done during 1997 for reporting to General Body. Keeping in view the constraints, we are quite satisfied with the progress on the Action Plan published in May 97 issue of our Newsletter. Highlights are:-

- O UpgradationofNewsletter in contents andmaking it self supporting with the active sponsorship by all Sections.
- O Distinguished Visitors/Speakers to various Sections including IEEE President Chuck Alexander, Prof Myron Kayton and Prof CC Chan.
- O Workshop on "Emerging Trends in IT" at Hyderabad with Prof H N Mahabala as Key făculty.
- O MVCSPC-97 and SPAC-97 at Jadavpur University, Calcutta and Increase in Student Membership by over 30% during the year (31 Oct 97 statistics).
- O Consolidation offinances at Hyderabad and publication in Newsletter for information of all Members. With advice from specialists, efforts are on to resolve outstanding issues. The funds position has been stabilized by curtailing expenditure and maintaining the activities.
- O Exercise in streamlining India Council by-laws to make them effective in the current environment.
- O Sponsorship / Co-operation ofmany International/National Activities in India including VLSI-97, IMCEMIC-97, ICPWC-97, HiPC-97, ACE-97 and Software Engg and its Applications-97.



Inauguration of ACE - 97 at Hyderabad. Dr. R.K. Bagga (left), Mr. Vittal (3rd from left)

ACE'97 CONCLUDED

By N.V. Rao, Conference Secretary

Internet for India has been organised successfully as the Annual Convention and Exhibition (ACE 97) at Hyderabad, jointly by IEEE Hyderabad Section & India Council organised in co-operation with JNTU Hyderabad. The conference also marked the Silver Jubilee of the University. The conference was inaugurated by Sri N. Vittal, Chairman, PESB (Formerly Secretary, DOE) on Dec. 11, 1997 at 1700 hrs. In the conference inauguration, Dr. Rao C Kasarabada, Chairman, Advisory Committee, Dr. A K Aggarwal, Chairman, Tech. Committee. Dr RK Bagga, Chair, India Council and Prof. C. Dayaratnam, V.C., JNTU also participated. In his address, Sri Vittal dealt with the Internet policy of the government and made suggestions for a healthy growth of Information Technology in India.

A cultural programme was organised on Dec. 11, 1997 at 6.30 p.m.- a classical Dance Performance 'KRISHNA TATTVA' by Anupama Kylash, Dancer and Choreographer, well co-ordinated by Dr. Brij Bhushan Sahni.

Five pre-conference tutorials were held on Dec. 10 & 11, 1997 -1) Web Administration and Internet through Linux on Dec.10, 1997. Internet for Beginners, Java; Network Security and Auditing Internet on Dec.11, 1997. These tutorials were well attended, specially by students.

The Exhibition was organised at Hotel Golconda. About 10 stalls were used by



prominent vendors to exhibit their web products. Satyam Computers, CMC, ECIL, Wipro, NIIT, Front Line, Web Commerz, Zoom Technologies and Net Surfer were among the Exhibitors.

The eight technical sessions on Dec. 12 & 13 were conducted in parallel on different themes: Hardware and Software Tools, 'Impact and Social Issues, Infrastructure, Policies and Guidelines, Security, Applications and Future proposals. There were 4 invited talks by Shri J.A. Chowdary, Director STPI (H), Shri T.H.Chowdary, Director, CTMS, Dr. Prasanta Mahapatra, MD, APTS, Shri PVSN Raju, Gp.Manager, Sonata Software and Shri VR Nishatla, Director, Cybercash India, on Internet related topics. All were well attended by more than 100 delegates and reflected the present expectations on Internet. A good coverage was given by the media. (See 'Internet with an Indian accent' by Anand Parthasarathy in 'The Hindu'dated Dec.25,1997).

India Council conducted its AGM on Dec.12,1997. The award function of MVC Student Paper Contest - 97 was also held. The ACE-97 concluded with a session on 'feed back from participants'.

Internet for India: Conference Proceedings

A few copies of conference proceedings, covering about 24 contributed papers are available for sale. The price per copy:

IEEE Members: Rs.400/- Others: Rs.500/- Student Members: Rs.300/-

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The National Conference on "INTERNET FOR INDIA" hosted by Hyderabad Section from 10 to 13 Dec 97, was a resounding success. With full Exhibition, 5 Tutorials and an excellent Programme (an Excellently edited Conference Proceedings/Publications, best so far) with a galaxy of Invited Speakers including Mr N Vittal, T H Chowdary, Mohapatra, Nishatla and J A Chowdary, IEEE could not ask for more in reviving

Seeing the press reports (HINDU Netsurfer etc), I am really thankful to all the Organisers and Participants for making my dream come true!

We are planning to give a New Year gift to IEEE community in the form of IEEE INDIA HOME PAGE on INTERNET. See the special announcement in this issue.

Lastly, let me thank all my team and IEEE professionals for their co-operation during 1997 and hope the same will be continued during 1998 also. During ICPWC 97 at Mumbai, I had the opportunity of meeting our Region 10 Director, Mr Harbans L Bajaj who assured full support to all IEEE units in India and wanted me to convey his special New Year Greetings as below:

> WISHING ALL IEEE MEMBERS AND THEIR FAMILIES A VERY HAPPY AND PROSPEROUS NEW YEAR!



Hyderabad 01.01.1998 Dr R K Bagga Chairman

WISE AND OTHERWISE

Life is the biggest bargain. We get it for nothing Only love can be divided endlessly and still not

-Anne Morrow Lindbergh When the mouth stumbles, it is worse than the

- West African provert

INDIAN INTERNET

oday the word INTERNET connotes not only an interconnection of some networks, but also something more. The public associates it with a WORLD-WIDE NETWORK which can be used to fetch nearly all THE INFORMATION THAT ONE NEEDS, at the click of a mouse.

The developed world is using INTERNET to improve the competence of its citizens, to enhance their productivity in various fields and in general, to provide a better quality of life to its citizens INTERNET is therefore being perceived today as an essential part of the infrastructure for generation of wealth.

The national highways, railways, shipping lines, the internal waterways and airlines do help a nation to develop. The question is whether we can truthfully say that, for India, INTERNET is as important a part of the national infrastructure as, for example, the highways are.

To search out an answer, let us imagine a large country with no modern means of communication like highways, railways, automobiles etc. Let us also assume that it is then provided with excellent airports which connect its major cities to the developed world. Shall we be able to say that the air connectivity is an essenial part of the wealth generation processes for that country? If we leave out the conceptual framework of the white man's burden, whereby the entry of the west and its way of life was per se considered to be the only way for a country in Asia, Africa, the Americas of the Red Indians or Australia of the Aborigines to develop. I do not think that the airline connections only would be able to improve the quality of life for the citizens of that country. These connections,

of course, could provide the developed world a means to assimilate any useful ideas that the great men of the large country may have been able to develop on their own.

INTERNET as it exists in India today, is a means of connecting some citizens of India to the west (largely to North America). Whereas, it may be providing a means to these citizens to be more productive in their work, its total impact on the country's life cannot be even remotely approximated to the beneficial impact that it has had in North America.

If the word INTERNET is to have the same significance in our discourse, as it has in the developed world, it must acquire the following characteristics.:

- (i) An easily accessible and widely used network which should be able to connect an Indian to nearly any place in the world which is likely to be of interest to him.
- (ii) A Source for a large part of the information that an Indian may need in his day-to-day life.

Unless we work out our policies to achieve the above objectives, INTERNET would be only a means for a miniscule percentage of Indians to maintain a contact with the Western sources of information.

May I invite IEEE's learned members in India to use this column to express their views on how INTERNET can acquire the above characteristics within the next few years?

A. K. Aggarwal Executive Vice-Chairman IEEE INDIA COUNCIL (e-mail: aka@ad1.vsnl.net.in)

ACCOLADE FOR H.M. DESAI

Mr. H.M. Desai who has been the Hon. Secretary of the Institution of Mechanical Engineers (India) continuously since 1957 and having many outstanding achievements and contributions has been recognised for his untiring efforts, by Marquis who's who, Asia Pacific who's who and the IBC Directory etc. He has also been instrumental in having a co-operation agreement between Asia/Oceanic Mechanical Engineers Society and Chinese Mechanical Engineering Society for leading a delegation of Mechanical Engineers to China.

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REPORT 1997: IEEE INDIA COUNCIL

- 1. The I.C.Committee, assuming charge on 18.1.1997, met 5 times in 1997 at different places with the active participation and support from the respective local Sections. The significant feature has been full participation of all sections in India, to strengthen the coordinating work of IC. A special general body meeting was held at Bangalore on 26th July
- 2. All accounts were got almost centralised at Hyderabad.
- 3. The most significant work of IC, has been the IEEE India Bulletin with improvements in Quality & Quantity, under the able editorship of Prof. V.K.Damodaran. All Sections are sharing the publication costs, by sponsoring one issue in the year.
- 4. The following were the programmes arranged by IC and its chapters.
- a) Talk on Avionics by Prof. Myron Kayton at different sections.
- b) Seminar on 'Emerging Trends in IT' at Hyderabad with IETE-CASET, 4-5 July 1997.
- c) Public Lecture on 'Emerging Trends in Internet' by Prof Maha Bala, 4 July 1997.
- d) ACE'97 at Hyderabad, 10-13 December 1997 in the form of Seminar on 'Internet for India'.
- e) All India M.V.Chauhan Student Paper Contest on 'Vision Electro Technology 2000' at Calcutta. A meeting of student branch Counsellors & Chairpersons was also organised. The programmes were successfully organised by Prof. R. Nandi, Chairman, Student Activities.
- 5. A new Society chapter on 'Signal Processing' is being initiated with the efforts of Bangalore Section.
- 6. The other chapters under IC are under reactivation.
- 7. In Co-operation with the IC, the following programmes were held.
 - 1997 IEEE International Conference on Personal Wireless Communications, Dec. 17-19.
 - 1997 National Seminar on Software Engg. and its Applications organised by IPE, Hyderabad.

- 8. 'Amendments to Byelaws of IC' was taken up to reflect the current functioning of IC. The recommendations of the Committee were debated to arrive at conclusions, supported by all Sections.
- 9. Income Tax and FCRA issues are being seriously considered. Because of the current problems involved in these issues, it will take some time to get these issues resolved.
- 10. Statement of accounts as on 15 Nov. 1997 is ready. It will be updated as at the end of the year

and the audited statement will be published in the Bulletin.



(N. Vyaghreswara Rao) Secretary & Treasurer

IEEE INDIA HOME PAGE ON WEB

Based on Recommendation of IEEE India Council Committee, AGM approved during its meeting on 12 Dec. 1997, hosting a Home Page on the Web.

DR. S. Parthasarthy has volunteered to design the Home Page and host IT on IEEE Server by Feb 98. All members are requested to give their suggestions at the following address by 26 January 1998:

DR S PARTHASARTHY

ALGOLOGIC RESEARCH & SOLUTIONS 78, SANCHARPURI COLONY BOWENPALLY PO SECUNDERABAD - 500 011 TEL FAX: 91-(40)-7751650 EMAIL: algolog@hd1.vsnl.net.in

Your co-operation is solicited for starting IEEE India Council and its affiliated Sections/Chapters WEB HOME PAGE for use by all professionals as an important milestone in improving our Communications.

> Secretary IEEE India Council.

Save Lakhs of Rs. Prevent Equipment & Production loss due to Transients

POWER QUALITY **SOLUTIONS** (Tutorial)

Instructor:

Mr Vittal. R. Rebbapragada

Raytheon Engineers & Constructors, USA

A tutorial presented by PES/IAS Joint Chapter of **IEEE Hyderabad Section**

Feb 13-14, 1998 Hotel Golkonda, Hyderabad

For registration, contact:

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Fees:

Rs. 1000

IEEE Member

IEEE Student Member Rs. 600 Rs. 2000

Others

Refunds not allowed Substitution allowed

DD payable to **IEEE Hyderabad Section**

Minutes of the Annual General Meeting of the IEEE India

Council held on Dec. 12, 1997 at Hyderabad at 1800 hrs.

- Chairman, Maj. Gen.(Dr.)R K Bagga welcomed the members. The minutes of the Special General Body Meeting held at Bangalore on July 26,1997 were approved.
- Chairman informed that the amendments to the byelaws are discussed at IC meeting. However, the framework of byelaws is under revision at Hqs. It is decided to wait until new guidelines are framed by IEEE Hqs. In the meanwhile, Prof. AK Aggarwal, will consolidate the views of all Sections, along with the other members of the sub-committee for byelaws.
- 3. Mr. H. Kalyanasundaram, Chairman, MDC, Region-10, presented a statistical view of Membership development, highlighting the strengths and weaknesses.
- 4. Executive Vice-Chairman, Prof. A K Aggarwal informed that the four chapters under IC, are revitalised with dynamic technical programmes. Members suggested that the IC should more actively work towards motivating Sections in arranging more professional and technical programmes.
- Secretary & Treasurer, Mr. N. Vyaghreswara Rao submitted the Activities report and financial statement as on Nov. 20, 1997. The audited statement of accounts for 1997 will be published in the India Bulletin. Both were approved by the General body.
- 6. ACE 98 will be held at Ahmedabad during Dec. 10-12, 1998. Prof. A K Aggarwal, Exe. Vice-Chairman highlighted the proposed theme: Networking India & the World, with other two tracks on 1) topics related to IEEE 2) Computers, Electrical & Electronics Engg. in Chemical & Petrochemical Industries.
- 7. IC Committee 1998: Dr. SC Bhargava announced the slate suggested by Nominations Committee. As there were no petitions, the members recommended by the Committee are declared elected. Chairman, requested Prof. K. Uday Kumar (Madras Section) to be the Vice-Chairman, Student Activities. The next SPC will be organised at Madras Section. The new Committee assumes charge from January 1, 1998.

This issue of the Bulletin is sponsored by the Calcutta Section of IEEE.

TECHNOLOGY CORNER

Data Through Electric Cables

NORWEB communications, an international gas and electricity group in the UK, is developing techniques to use electric cables instead of phone lines to transmit data into homes. The method would ensure that data could be transmitted without any problem.

The group has developed a method to send Internet data to an electricity sub-station through optical fibre, coaxial cable, or twisted copper wires. The Internet signal is injected into power cables after it leaves the electricity sub-station. Then it is transported into home by modulating high frequency carrier waves. The signal is imposed on a much lower frequency. Then it is extracted from the power line by a filtering unit set close to each domestic meter. It is then delivered to a PC via conventional coaxial cable.

Sonar Robot

Rodolph —a robot which uses the sonar ability of bats and dolphins to use echoes for locating a target — has been developed by Roman Kuc at the Yale University, USA. The sonar device is very sensitive and can detect whether a tossed coin has come up heads or tails. The detector could be easier to use and less costly than camera vision in identifying an authorised customer at an automated teller machine. It may also help find production flaws on an assembly line.

Shrinking Transistors

THE number of transistors in a single chip has been growing steadily for many years.

- 8. All Sections & IC are encouraged to have Internet & Home pages with frequent updates, and are specially requested to use e-mail for regular correspondence. Dr. S. Parthasarathy, Algologic Research & Solutions, Secunderabad will be entrusted with the responsibility of creating and maintaining a Home page for IC as per the IEEE norms.
- 9. It is suggested to have an IC committee meeting at Ahmedabad in February '98, well before the Region-10 meeting to be held in April at Perth, Australia. All Section Chairs can discuss various issues, including organisation of ACE 98, in the meeting.
- 10. Prof K. Uday Kumar, stressed the need for the status of ACE to attract good quality papers for the conference. Regarding reimbursement of IEEE subscriptions by academic institutions, Prof. Uday Kumar suggested to approach UGC, AICTE etc. before they submit their recommendations.
- 11. Mr. N. Vyaghreswara Rao was felicitated by Mr. H. Kalyansundaram on his receiving the award for best Volunteer, Region-10 at Brisbane on Dec. 3, 1997.

The AGM concluded with thanks to the Chair.

29 Dec., 1997

N. Vyaghreswara Rao Secretary Simultaneously, the size of transistors has been shrinking at a faster rate. Most researchers believe that after a certain point, the shrinking of transistors in size would stop as there is a lower limit for the transistors to work efficiently. The limit for the size of the transistor gate—the part of the transistor responsible for switching on and off—is normally considered to be about 30 nanometres. One nanometre is a billionth of a metre.

Researchers at NEC's Fundamental Research Laboratories, Tsukuba, Japan, however, report that they have developed a transistor which has a gate of only 14 nanometres. If the device is produced commercially, it would have far reaching implications on the microelectronics industry (Science, Vol 278, No 5337).

EDITORIAL

ON TO ACE '98

ACE '97 concluded with a bang, a big bang - announcing ACE '98 to mark yet another milestone in the activities of India Council of the largest professional body of engineers, viz. IEEE. The year 1997 for IC has been one of resounding success. A coherent team of volunteer engineers could silently and in mutual co-operation, achieve an array of success as shown in the Annual Report of the Secretary. The year 1997 has proved the need for and the role of an active co-ordinating body like the India Council Committee for an organisation with spread out activity centres and individual members with diverse views and professional environments. The EC of IC with sizable participation could meet six times during the year at different locations spread between south and north and east and west, is no mean achievement. Let us pledge ourselves to repeat our good performance and surprise others by yet other mega events during the year 1998! Let me look for more and more pressures to compress

my letter size to cover more of activity reports and announcements in the limited pages of this small bulletin in the months to come.



Trivandrum 04 January 1998

Prof. V K Damodaran

Editor