

THE INSTITUTION OF ELECTRONICS AND TELECOMMUNICATION ENGINEERS

Newsletter

1953-1993

40
years

Vol. 2, No. 2

March-April 1993

FROM PRESIDENT'S DESK

Since the last issue of our Newsletter, we have progressed further in planning our 40th anniversary programme. The main function will be held at the IETE Building in the historic city of Hyderabad on Oct 1-3, 1993, preceded by our 39th Annual General Meeting on Sept 30. This includes our 36th Annual Technical Convention-IETE/ATC '93 on the theme 'Personal Communications Systems (PCS) & Enabling Technologies' on Oct 1-2, an Exhibition on 'PCS Products & Services' on Oct 1-3 and a professional development Course on Oct 3. The inaugural session on the forenoon of Oct 1 will feature the launching of yearlong 40th anniversary celebration and also includes the inauguration of the IETE Staff College at Hyderabad, release of the IETE Book Series and Special publications and invited Addresses. The IETE past Presidents, Distinguished Fellows of the IETE, IETE members of 40 years standing etc will be special invitees on this occasion. We plan to televise the inaugural session live to all our Local Centres/SubCentres. It is also proposed to have a series of technical programmes/functions befitting the occasion at all our Local Centres/Sub Centres during October 1993. May I therefore invite all our members to actively participate in these programmes?

As indicated in an earlier issue of the Newsletter, increasing our visibility nationally and internationally and providing better membership services are uppermost on the Agenda of our Council this year. Your ideas/suggestions will greatly help us in our action plan for achieving these goals. May I also seek your cooperation in this major task?

Bangalore

BS Sonde
President

NEWS FROM HEADQUARTERS

24th Mid-Term Symposium

The 24th Mid-Term Symposium of IETE was held on the theme 'Space Electronics & Communications' at Space Application Centre, Ahmedabad on 10-11 April 1993. The Chief Guest was His Excellency Dr Swarup Singh, the Governor of Gujarat.

Shri OPN Calla, Dy Director of Space Application Centre & Convenor of the Symposium while welcoming the Chief Guest & other participants highlighted the scope and objects of the symposium and the importance of the theme in the light of the year 1992 having been declared as 'International Space Year'.

In his Presidential address Prof B S Sonde, President of IETE described the importance of Space Technology and its close links with the industry. The INSAT

series of domestic geostationary satellites have revolutionised the Telecommunications, the Sound & TV Broadcasting and the Meteorological services in the country.

Giving the Key-note address Shri Pramod Kale, Director of Space Applications Centre, Ahmedabad spoke about the importance of the Space Electronics in Communications and said that the design & development in this area was very complex. He warned the industry that if they wanted to be in the forefront they should start looking carefully at their investment patterns. The ISRO was ready to help the industry in providing necessary design support and testing facilities.

Delivering the 20th Vikram Sarabhai Memorial Lecture, Dr N Seshagiri, Director General, National Informatics Centre, Planning Commission, Govt of India, presented an impassioned case for the modernisation of India's Satellite Communication Technology. He informed that all the District Headquarters in the country have already been linked with NICNET. He further said that the NIC would be ready with 10,000 earth stations to be located throughout the country in the next three years. He strongly advocated use of the most modern technology and informed that the Ku-band system would be installed in the country by Sept '93 for high speed transmission, which would be essential for the country's globalisation attempts. He said this was being technically debated by many, but it would become reality within the next few months. He added that the next step in the evolution of NICNET was to establish 'Information Highways' which would serve

about 150 economically important cities, towns and mega project locations hosting the highway nodes.

The Chief Guest Dr Swarup Singh was so enthralled by the speeches particularly of Dr Seshagiri that he in his inaugural address said he had high hopes for the country after hearing such enthusiasm and confidence expressed by most of the speakers. He confessed that he was pessimistic looking at the sad state of affairs in the country but the deliberations came as a moral tonic to him. He was confident that the Scientists and Engineers would be able to look after the interest of the country. He advised the industry to take a clue from Scientists/Engineers and invest in research and development rather than copy the western technologies.

The Chief Guest, Dr Singh released the Souvenir on the occasion and presented the Lal C Verman Memorial Award for outstanding contribution in the field of Standardization & Quality Control to Dr J S Raju, Dte Gen, STQC, Dept of Electronics, Govt of India.

Dr Raju also delivered the 8th Lal C Verman Memorial Award Lecture on 'International Standards and Space Electronics'. He described the changing national scenario due to recent liberalisation policy adopted by the Govt. to ensure the industry to be driven by the market forces. He also emphasized the role of standards in space-electronics. He was of the view that 'Quality' has now rightfully occupied its lead role and therefore the necessity of following international standards. In his opinion it was essential to formulate 'Workmanship Standards' in order to streamline various work practices to enable the manufacturer produce goods of right quality.

In all there were 5 technical sessions spread over two days on 'Electronic Systems in Rockets', 'Spacecraft Electronic Systems', 'Defence Electronics', 'Satellite Communications & Broadcasting' and 'Electronic Systems in Remote Sensing'. These sessions were addressed by expert speakers. The sessions were followed by a valedictory session. The Chief Guest at this session was Shri Sashikant Lakhani, Hon Minister of Industry, Govt of

Gujarat. Shri Lakhani agreed that communications was a basic necessity for the expansion and development of industry. He announced that an independent deptt of Electronics in the Govt of Gujarat would be set up to help the development & growth of electronics in the state. He also informed that a Software Technology Park was coming up at Gandhinagar and IETE could play an active role in providing trained manpower for electronic industry in the state.

Other News

- The 39th AGM, and the 40th year Foundation Day function of IETE are to be held at Hyderabad along with the 36th Annual Technical Convention on 30 Sept, 1-2 Oct'93.
- Reimbursement of IETE annual subscription to our Corporate members from the following organisations has also been approved:
 - (i) National Aeronautical Laboratory, Bangalore
 - (ii) Indian National Scientific Documentation Centre (INSDOC) New Delhi

Professional Ethics

To uphold the concept of Professional conduct amongst its Corporate Members, the Council of the Institution felt the need to evolve a code of Ethics for Corporate Members.

A Corporate Member should develop esprit-de-corps among the fraternity and uphold the principles of honesty, integrity, justice and courtesy to guide him in the practice of his profession and his conduct and behaviour. He should discharge his responsibilities and the duties to the public and the profession.

He should scrupulously guard his professional and personal reputation and avoid association with persons and organisations of questionable character and uphold the dignity and honour of the Institution.

The detailed Code of Ethics is being published in the IETE Technical Review.

NEWS FROM LOCAL CENTRES

Allahabad

- A two-day Seminar on computer processing in Hindi Language (COMPHIL-93) was held on 10-11 Apr 93

Bangalore

- Technical visit to Doordarshan/AIR for the benefit of members was arranged in March 93.

Calcutta

- Annual Symposium -93 on the Role of Electronics in the Management of Quality and Reliability was held on 19 Mar 93. It was inaugurated by Dr B P Adhikari, Ex Director, ISI and Ex-Chairman, WBEIDC, Shri P K Mukherjee, Vice Chancellor, Jadavpur University was the Chief Guest to grace the occasion & Prof S P Mukherjee of Statistics Dept, Calcutta Univ, delivered the Keynote address.

Delhi

(i) Lectures Delivered

- By Prof H M Gupta of IIT Delhi on 'Photonic Data Networks' on 29th Jan'93.
- By Dr V R Singh, Head Instrumentation Cell, NPL, New Delhi on 'Recent Trends in Transducer, Instrumentation for Scientific & Biochemical Applications' on 19.2.93.
- By Prof Jurgen Franz of Germany on 'Optical Telecommunication in Space - A Challenge of the Future' on 10.3.93.
- By Dr P N Choudhry, Former Member, Telecom Board on 'Photonic Switching' on 29.3.93.
- By Dr R K Tiwari, Scientist, DRDO, Delhi on 'Radio Propagation' on 9.4.93.
- By Dr V R Singh of NPL, New Delhi on 'Smart Sensors' on 23.4.93.

- By Dr CK Chatterjee, Jt Director, Intelligence Bureau, New Delhi on 'Satellite Communication in 2000 AD' on 27.4.93.

(ii) Educational Visits

Educational visits for students were arranged to VSNL on 15th Feb'93 and IMD on 12th Apr'93. An educational visit for 60 students to Bangalore was arranged between 17th and 24th Feb'93 during which the students visited the workshops of ITI, BHEL and BEL.

(iii) Training Programmes

Training programmes for students of Section 'B' were arranged at Electronics Research Development Facilities Centre at Gurgaon and NS Electronics, Okhla Industrial Area, New Delhi, C-Dot, New Delhi and ERTL, New Delhi during Mar-Apr'93.

Hyderabad

- Madan Mohan Endowment Lecture 1993 on the theme "Telecom Reforms in India" was delivered by Shri U V Nayak, Member, Telecom Commission, DOT. Prof CVS Rao, Chairman of the centre, presided over the function.

Lucknow

- One day Seminar on Role of Cable TV in Mass Communication" was held on 04 Apr 93. Shri R D Sonkar, Adviser to Governor, UP was the Chief Guest and Prof MS Sodha, Vice Chancellor, Lucknow University delivered the Keynote address.

Pune

- National Seminar on "Mobile Communication (NSMC)" was held on 6-7 Feb 93. It was inaugurated by Dr Pramod P Kale, Director, Space Applications Centre, Ahmedabad & the Keynote address was delivered by Shri A M Joshi, Wireless Adviser to Govt of India.

Vijayawada

- ECE Quiz & Student Paper Contest was held on 14 Mar 93.

Nagpur

- One day Workshop on "Awareness in Vidarbha Region for Advanced Information Technology Age" was held on 21 Mar 93. It was inaugurated by Prof S V Kharkar, Member of the Council & Past Chairman of IETE Pune centre. Brief report is being published in the IETE Technical Review.
- Technical Lecture on "Invasion of Indian Skies by Star TV and Challenges before Doordarshan" was delivered by Shri M Y Thote, Ex-Chief Engineer, Bombay Doordarshan & Ex-Chairman, IETE Centre on 27 Mar 93.
- A Technical Lecture on "Industrial and Import Export Policy" was delivered by Shri A G Joshi, Asst Manager, Meltron on 30 Jan 93.

PERSONALIA



Shri Promod Kale was born on 04th March 1941 in Pune, Maharashtra. He holds a Master of Science Degree. He has been involved with the Indian space programme

from the time of first rocket launch from Thumba. He was the Project Manager for Electronics and TV hardware for Satellite Instructional Television Experiment (SITE). He was also the Project Director for INSAT-1 Space Segment Project. He has been the Head of the Electronics Division, Satellite Systems, Space Science & Technology Centre, Thumba and the resident representative of ISRO at Goddard - Space Flight Centre, NASA, Greenbelt, Maryland, USA. At present he is the Director, Space Applications Centre, Indian Space Research Organisation, Ahmedabad.

He is the recipient of Hari Om Ashram Perit Vikram Sarabhai Award for Systems analysis and management problems (1975), Padma Shri Award for outstanding contributions to INSAT-1 programme

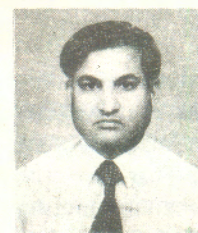
(1984) and Ram Lal Wadhwa Gold Medal Award of the Institution of Electronics and Telecommunication Engineers in 1991. He is a Fellow of the Institution of Electronics and Telecommunication Engineers and Gujarat Science Academy. He is the founder life member of Indian Society for Advancement of Materials and Process Engineering (ISAMPE), Life member of Astronautical Society of India, Bangalore. He is a member of the Board of Trustees of Dr Vikram A Sarabhai AMA Memorial Trust. He is also President of Indian Society of Remote Sensing and Chairman Ahmedabad Chapter, Computer Society of India.

Shri Kale has more than 25 publications in national and international journals/proceedings etc.

DISTINCTIONS



Dr V K Koshy, FIETE who is 49 has been appointed Director (Commercial and Management Services) of the public sector Bharat Electronics Ltd. He took charge on Feb 17, 1993.



Dr AK Saxena, FIETE and member, Editorial Board of IETE and Professor, Dept of Electronics and Computer Engineering, Univ of

Roorkee has been invited to serve as a representative member from India on the international advisory committee of the editorial board of Japanese Institute of Electronics, Information and Communication Engineers Transactions on Electronics.

Mr. Anil Kumar Subudhi (Mem. No. AM 055505) has qualified IES Exam. this year and secured 122 Merit rank.

ACADEMIC NEWS

DOEACC Scheme

The Govt of India has entrusted CSI for conduct of DOEACC 'O' and 'A' Level Examinations and IETE for the conduct of 'B' and 'C' Level Examinations. IETE is a member of the National Advisory Committee of DOE and DOEACC.

Workshop on DOEACC Scheme

Workshops on DOEACC Scheme were conducted by the Manpower Division, Dept of Electronics, New Delhi in the month of March 1993 at Delhi, Madras, Bombay and Calcutta. IETE Local Centre Chairman at these places participated in the Workshop activities as the representatives of the President IETE.

Workshop of the Northern Region was conducted on 6 Mar 93 in the Delton Hall of IETE Delhi. Prof Ashoka Chandra, Director Institute of Applied Manpower Research, New Delhi inaugurated the workshop. Brig SVS Chowdhry, President CSI, Shri Gautam Soni, Senior Director, DOE, Brig VM Sundaram, DOEACC Coordinator, Shri SC Tiwari, Chairman IETE Delhi Centre, Shri T C Gupta, Addl Director, DOE and representatives of many Organisations/Institutions in the Northern Region participated in the Workshop.

Many useful discussions regarding mainly DOEACC 'O' and 'A' Level Examination took place, as the majority of the representatives were from the Organisations/Institutions conducting courses for 'O' and 'A' Level Examinations. There is only one unit in Bhubaneswar which has been accredited by the DOEACC Control Centre for DOEACC 'C' Level examinations.

At the Workshop, the DOE has informed that they have already moved the Ministry of Human Resource Development (MHRD) for the recognition of DOEACC 'O', 'A', 'B' and 'C' Level Examinations as equivalent to a Certificate, Diploma, Degree and MTech level of recognised Universities in India and the recognition is expected soon. Many had

requested for the wide publicity of these courses and provision of better placement opportunities for those who complete these courses.

IETE Examinations

June Examination of AMIETE, DIPIETE and DOEACC 'C' Level will be conducted at all our 22 Centres in India and 6 centres abroad from 16 to 23 June 1993. The first DOEACC 'B' Level Examination will be conducted only in December 1993.

A short term course on "Microcontroller based system design."

A short term course on "Microcontroller based system design" was organised jointly by MAEP, C&I Division, Department of Electronics and IETE from 26-30 April '93. The participants were from various industries and Government organisations. Sponsorship from SAC, Ahmedabad was substantial. The course was inaugurated by Shri N.Vittal, Secretary, Dept. of Electronics. Brig. SVS Chowdhry, Vice President, IETE, presided the inaugural function.

Course contents were – Microprocessor based systems for real-time control environment, Analog to Digital converter, Digital to Analog converter and Bit addressing, introduction to Microcomputer Development Systems, Editor – Cross assemblers and simulators, i8051 Microcontroller Hardware and software features, architectures timing cycles, assembly language, system design etc. During the course, the emphasis was given on i8051 Microcontroller Hardware and software and hardware interfacing. Advanced controllers such as 8096, 80186 and 30960 were also covered. The course also gave 'hands on' on how to connect the systems to the I/O devices such as keyboards, displays, DAC/ADCs etc.

The feed back from the participants showed that the course contents were relevant to their work. They appreciated the instruction methodology and the course contents, specially the case studies.

Prof. P.V. Indiresan delivered the valedictory

speech and distributed certificates to participants. The course coordinators were Dr. Krishna Kant from DoE and Dr(Mrs.) Sneh Mohan from IETE. Shri S Mukhopadhyaya, Sr. Director, DoE gave guidance and technical support for successful conduct of the course.

TECHNICAL NEWS

E-mail (X.400 over dial-up)

E-mail is an integral part of office automation system now. The advantages E-mail offer are manifested in executive time saving, savings in communication cost, confidentiality of communication and facility for call conferencing. In India with I-NET connectivity establishment, E-mail usage is expected to become more popular.

But electronic messaging is not as pervasive and easy to use as telephony. To make long distance calls, one just looks up a number, picks up the phone and dials. To send an E-mail, one has to know not only the recipients address but also what system he subscribes to. To receive a message, one has to hook one's computer to a modem, start a communication programme, dial into the remote computer where one's mail is stored and download the message into one's computer. Traditionally, E-mail users need a leased line or X.25 line to send messages to other X.400 based traffic. While users can currently use shrink wrapped E-mail programme over dial-up lines, none of them are compatible with one another.

A diverse alliance of international vendors are hoping to develop a standard that will allow E-mail subscribers to communicate world-wide without the use of a private line. Called the Asynchronous Protocol Specification Alliance (APS), the goal is to develop and promote a global specification for asynchronous OSI communication over dial-up access network such as PSTN, point to point and PAD with particular focus on X.400/X.500. The resulting specifications will cover both client server and server-server communications. The alliance also hopes to move the specifications to the wireless arena in future.

IETE will soon be acquiring NICNET

connectivity and in the initial phase, the local centres of Bangalore, Hyderabad, Calcutta and Bombay will be networked with the headquarters in Delhi. With that, electronic messaging comes to IETE.

Global Star : A Transparent System

In the current state-of-art you cannot use a single handheld terminals to make calls nationwide. National and regional communication facilities exist but they do not offer full coverage. New mobility functions in public networks allowing you to contact a given subscriber wherever he or she may be, have made it necessary to modify the networks conveying the information and routing the calls. The target market for satellite network is not big enough to justify new developments or changes to these functions. The only alternative is to incorporate the satellite network into the switched or mobile networks; this requires use of low earth orbit (LEO) satellites. In countries/areas with low population densities where investment in conventional communication facilities (fixed, microwave or cellular networks) is too high for the volume of calls handled, LEO satellites is the answer.

The World Administrative Radio Conference (WARC) has taken note of this and has assigned LEO satellite mobile services to two bands, each 16.5 MHz wide, from 1610 to 1626.5 MHz and from 2483.5 to 2500 MHz. The decisions take effect from Oct'93.

Type of LEO constellation currently available are :

Polar orbits providing full coverage of the planet and inclined orbits which do not provide coverage of poles and can be designed specifically for a particular band of latitudes

Satellites Communication with mobile networks involves special type of signal propagation. The earth-satellite path can be obstructed by obstacles (buildings, trees) which attenuates the signal. This problem diminishes as elevation of the satellite increases. The only constellation satisfying high average elevation criterion are inclined orbits. For populated

areas, the inclination of satellite plane is around 50°. To achieve integration with terrestrial networks, the ideal altitude is 750 nautical miles.

GLOBALSTAR is a mobile communication system using LEO satellites. The system is based on two concepts of transparency: transparency of the space segment so that several types of terminal standards can co-exist; transparency linked to interworking with the various networks overflowed by the satellites.

The main innovation of GLOBALSTAR system is its' integration with mobile or switched public networks through the low altitude of satellites. GLOBALSTAR will provide operators with an infrastructure and subscribers with full world coverage. The operators investment will be proportional to the number of circuits that he intended to use. The subscriber can use a pocket phone or a car phone. The system is integrated with PSTN and is complementary to the cellular radiotelephone system. The terminals are based on cellular technology and will not be more expensive than cellular terminals. The price of the service should be close to that for terrestrial mobile service when the space segment comes on stream.

NEWS FROM INDUSTRY

Joint Venture Agreement signed by Bharat Electronics and Thorn-EMI Electronics, UK

An agreement was signed by Bharat Electronics Limited (BE) and Thorn-EMI Electronics of the UK for setting up a Joint Venture Company in India for worldwide marketing of the Cymbeline Mortar Locating Radar using technical support from both the companies and the manufacturing support from Bharat Electronics.

Shri P D Modak, Chairman and Managing Director of Bharat Electronics and Mr Mike Penery, Managing Director (International) of Thorn-EMI signed the agreement on February 24, 1993 during

the visit of the British Defence Mission to the facilities of BE/Bangalore Complex.

Recognising the potential of pooling the resources of both the companies, a Memorandum of Understanding was signed by the two companies on March 5, 1992 to do a market survey for the requirements of these radars worldwide. This survey has revealed that there is good potential for marketing for the radars in several countries in Africa, South East Asia, West Asia and South America.

Bharat Electronics has been manufacturing the Cymbeline Motor Locating Radar in India for Indian customers under licence from Thorn-EMI Electronics since 1986. BE has the capability of increasing production of these Radar to at least 12 radars per year for the worldwide markets.

INTERNATIONAL NEWS

World Telecom Standardization Conference concluded on 12th March 1993. Over 450 standards were approved and a new programme of work upto 1996 was adopted. This includes 15 study groups who will be meeting throughout the next 3 years. The work programme for 1993-96 period comprises of 289 questions covering nearly every aspect of telecommunication and include a diversity of subjects as new ISDN services, directory services for telematic services, tariff principles for global virtual network services or for intelligent network, customer network management service, colour faxes, Programming communication Interfaces, telematics on ISDN, long term intelligent network architecture and intelligent network capability sets, signalling requirements for FPLMTS, telecom for the physically impaired, integrated video services, broadband connectionless data services on broadband ISDN, optical systems, SDH and ATM equipment, to name a few.

New Members of ITU

Georgia, Slovakia and Kazhakstan have become the latest members of the International Telecommunications Union.

ANNOUNCEMENT

**36th Annual Technical Convention
at IETE Centre, Hyderabad, 1-2 Oct'93**

on

Personal Communications Systems and Enabling Technologies

CALL FOR PAPERS

The 36th Annual Technical Convention (ATC) of IETE will be held on the 1-2nd Oct'93 on the theme Personal Communications Systems (PCS) and Enabling Technologies. The event coincides with the 40th anniversary of the IETE (1953-1993).

The IETE Annual Technical Convention (ATC) is a major national event in India. It brings together IETE members and all other scientific/ technical/ managerial personnel engaged in the broad areas of electronics, telecommunications and computers on a common platform for an exchange of ideas and information on topics of current and future interest to the country. The IETE ATC'93 which coincides with the 40th anniversary of IETE is devoted to Personal Communications Systems (PCS) and Enabling Technologies. Recent advances in microelectronics, digital techniques, transmission/ switching technologies, portable radio/ satellite communications, software and electronics packaging and growing demand for person to person mobile communications have driven PCS to become a major communications frontier. This frontier is being penetrated by evolving many approaches to portable communications for voice, data and other services, *e.g.*, cordless telephones, mobile radio telephones, radio paging etc around the world and PCS is advancing rapidly. Considering this and the likely influence of PCS on the overall communications development in India, IETE ATC'93 devoted to PCS and Enabling Technologies is timely and important.

The technical presentations at IETE-ATC'93 include Invited and Contributed papers broadly covering but not limited to the following topics :

- PCS approaches/configurations
- PCS architectures/access networks
- Radio propagation studies/radio interfaces and links for PCS
- Multimedia technology for PCS
- Communications security for PCS
- PCS software issues
- PCS hardware issues and packaging technologies
- PCS design and implementation
- Low Earth Orbiting Satellites (LEOS) for PCS
- Emerging trends in PCS

Contributed papers (about 3000 words) are invited on these and related topics. Important dates for authors:

Deadline for the receipts of Abstracts (limited to 500 words, 3 copies)	: Friday, Jun 25, 1993
Paper acceptance notice (together with instructions)	: Monday, Jul 12, 1993
Final typescript in Camera-ready form (for inclusion in the Proceedings)	: Monday, Aug 16, 1993

ALL Contributed Papers will be considered for BEST PAPER AWARD

Abstracts and full Papers be sent to :

Prof CVS Rao, Chairman
IETE Hyderabad Centre
O U Campus, , Hyderabad - 500 007
Tel. (off) 868254 (Res) 854118

BIBLIO FILE

Books added in the IETE HQ Library during Jan-Feb 93

Introduction to Semiconductor materials & Devices	M S Tyagi	Text book of Fluid Mechanics & Hydraulic Machines	R K Bansal
Electromagnetics Theory problems & application	J P Tewari	Control System Theory	S D Gupta
Electrical Engineering (Objective Type)	S S Gupta	Course in Control Engineering	A K Tandan
Engineering Mathematics	A K Gupta	Computer	
Modern Electronic Instrumentation & Measurement Techniques	A D Helfrick	Computer Communication and Networks	J R Freer
Microwave Devices & Circuits	S Y Lio	UNIX Installation Guide	Oracle Corporation
		SQL Plus User's Guide	Oracle Corporation

FORUM

Having presented the First Issue in the second year, IETE Newsletter feels more confident of its lasting future. Members have also been kind in forwarding their suggestions and views sometimes orally and in writing too. However, this interaction needs to be enhanced and we, therefore, once again entreat our honourable members to consider some of the current issues like New Economic policy and its impact on the growth of electronics and telecommunications in the country, standardization of Hardware, Software and education, intellectual proprietary rights vis-a-vis electronic, telecommunication and computer industry, role of professional societies and mutual interaction for better results, use of the vast pool of experienced manpower retiring at various stages and better utilisation of the new-comers in the field of electronics, computers and telecommunications.

Among the developing countries, India with its known potential of trained manpower and industrial infrastructure, is being watched with great apprehension and expectation. The developed countries are also watching India with great interest. In this dynamic environment, where whole world is passing through a phase of realignment of economic and technical priorities, the professionals and the institutions have a larger role to play.

IETEians, the respected electronics and telecommunication experts needs to look into the future and come up with plans and proposals and inter-act through various workshops, seminars to evolve the future course of electronics and telecommunications for the growth of the society.

We would request our honourable members to ponder over the current issues facing the society and give their views, plans and proposals keeping in view the desire for growth, but constraint of resources for the growth of our nation. We present our second edition with a call to our intellectuals and professionals to actively participate in building the future of India.

CDR (DR) H S SHARMA (RETD)
Hony Editor

TECHNICAL INTEREST PROFILE

The Members are requested to fill in and return the Proforma for this purpose included in your Copy of the Membership Directory, Jan 1993 (last white page before the yellow pages), if not already done. This information is very important and is urgently required at the IETE HQ to enable offering membership services matching with the needs of our Members. May I request you to send this soon and preferably before May 31, 1993?

Secretary,
IETE HQ
New Delhi

CORRECTIONS

Under list of Govt and other Agencies where IETE is represented given in Jan-Feb '93 issue of IETE Newsletter.

Please read Chairman Allahabad IETE Centre instead of Prof S C Dutta Roy against Governing Council – Motilal Nehru Regional Engineering College, Allahabad.

CALENDAR OF EVENTS

Subjects	Dates	Venue	Contact
IETE 36th Annual Technical Convention 'Personal Communication Systems and Enabling Technologies	30 Sep 1-2 Oct'93	Hyderabad	Secretary, IETE HQs 2, Institutional Area Lodi Road, New Delhi 110 003 or The Chairman, IETE Hyderabad Local Centre, Near Jama-i-Osmania Post Office, Osmania University Campus, Hyderabad 500 007
System Control Fair'93 (SCF-93)	05-08 Oct'93	Osaka Japan	System Control Fair, Executive Committee JEMA Bldg, 2-4-15 Nagatacho, Chiyoda-Ku, Tokyo 100, Japan
Korea Electronics Show'93	09-14 Oct'93	Seoul Korea	Electronic Industries, Association of Korea (EIAK) 648, Yeogsam-Dong, Kangnam-Ku, Seoul, 135-080, Korea
Computer Graphics'93 Annual Conf & Exhibition	13-15-Oct'93	Bangalore	Mr Tara S Ganguli, Director, Technology & Research Associates, 5, Lindsay Street, Calcutta 700 087
Indian Wind Energy Annual Conference	17-19 Nov'93	New Delhi	Mr Tara S Ganguli, Director, Technology & Research Associates, 5, Lindsay Street, Calcutta 700 087
IEEE India Council & Hyderabad Section. 19th Annual Convention and Exhibition (ACE'93) Theme: 'Engineering Education & Relevant Technologies for India'	25-27 Nov'93	Hyderabad	Brig (Dr) R K Bagga, (AVSM), Chairman, Org Committee, Dir Computer & Info Centre DRDL, Kanchanbagh, Hyderabad (PO)- 500 258
National Symp on Ocean Electronics 1993 (Sympol-93)	15-17 Dec'93	Cochin	Dr PRS Pillai, Coordinator, SYMPOL-93 Dept of Electronics, CUSAT, Cochin-682 022, India
4th Intl Symp on Recent Advances in Microwave Technology (ISRAMT'93)	15-18 Dec'93	New Delhi & Agra	Prof Banmali Rawat, Dept of EE, University of Nevada, Reno, Nevada 89557-0153, USA; or Prof Bharathi Bhat, CARE, Indian Institute of Technology, New Delhi 110 016
Conference on 'Solar Energy'	Dec'93	Jaipur	Mr Tara S Ganguli, Director, Technology & Research Association, 5, Lindsay Street, Calcutta 700 087
TRAFOTECH-94, International Conference on Transformers	20-21 Jan'94	Bangalore	Mr M B Telang, Organising Secretary, IEEMA, 501, Kankad Chambers, 132, Dr Annie Besant Road, Worli, Bombay 400018
Conference on 'Automation & Robotics'	Jan'94	Madras	Mr Tara S Ganguli, Director, Technology & Research Association 5, Lindsay Street, Calcutta 700 087
Conference on 'Waste Management'	Feb'94	Calcutta	Mr Tara S Ganguli, Director, Technology & Research Association, 5, Lindsay Street, Calcutta 700 087
Conference on 'Tech Transfair'	Mar'94	Bombay	Mr Tara S Ganguli, Director, Technology & Research Association 5, Lindsay Street, Calcutta 700 087

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