FROM THE DESK OF THE PRESIDENT

An International Conference on Multimedia Information Systems was organised by the IETE at New Delhi on 27-29 Feb 96. This Conference was inaugurated by Shri P M Sayeed, Hon'ble Minister of State for Information & Broadcasting. The Key-note Address on this occasion was delivered by Dr James L Clark, Director, Information Communication Institute of Singapore. With the successful conduct of this event, we are thinking of organising more conferences in future on similar lines.
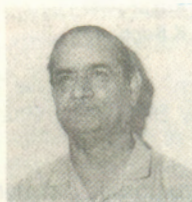
The IETE played host to two important visitors during Jan 96, namely, Mr Wallace S Read, President, IEEE and Dr Henry Chasia, Deputy Secretary General, ITU. Mr Read spoke to the Council Members on the **Role of IEEE in the Standards Arena.** The progress of the existing MOU with the IEEE was also reviewed during this visit. Dr Chasia delivered a lecture on the subject - **Role of ITU and Telecom Development.**

We have established a new Sub-Centre at Goa which was inaugurated on 31 Jan 96 by Shri Eduardo Faleiro, Minister of State for Electronics. This Centre will also conduct training of School Children in Electronics at Goa under the SUSIE scheme.

I visited the Hyderabad Centre in the first week of February. Later, during the month I visited the Kathmandu Sub-Centre along with Prof S C Dutta Roy, Vice-President and Chairman, Academic & Distance Education Committee. These visits provided me with an opportunity to interact with our members at these two Centres. At Kathmandu, we also discussed the possibility of organising a Seminar in the month of May 96.

We have set up a Committee of the Past Presidents. The first meeting of this consultative Committee was held on 27 Feb 96. This Committee will serve as a forum for ascertaining the views of the Past Presidents on various issues of importance concerning the IETE.

We are now getting ready for the next important event, the Mid-Term Symposium to be held at Trivandrum on 13-14 Apr 96. Lot of activity is afoot at Trivandrum for the conduct of this Symposium and based on the planning and preparations which are in hand, I am sure that this event would be well organised and would be fully successful.

S.V.S. Chowdhry

Brig SVS Chowdhry (Retd)
President

NEWS FROM HEAD QUARTERS

Dr Wallace S Read and Dr Henry Chasia visits IETE Headquarter

On 25th Jan'96 the IETE was honoured with the visit of two dignitaries - Mr Wallace S Read, President IEEE (USA) and Dr Henry Chasia, Deputy Secretary General, International Telecommunications Union.

Mr Read delivered a talk to a select audience at 4.00 p.m. at Siemens Chamber, IETE HQ on 'The IEEE's Role in the Standards Arena'. He briefly introduced the IEEE hierarchy and functioning and then went on to describe the activities of the Standards Board in detail. The IEEE has now a global presence with its membership of 320,000 drawn from all over the world. The mission of IEEE is to promote the development of electro-technology and allied services, the application of these technologies for the benefit of humanity, the advancement of the profession and the well being of its members. The various boards of the organisation have the broad objective of career enhancement, globalisation, organisational improvement, improved products and services and acceptance of public responsibility.

Among the products and services, the numerous publications of the IEEE which account for nearly 20% of world's literature on electro-technology have achieved

world-wide renown. Similarly, in the standards arena, the Standards Board with its autonomous unit has assumed the role of a leader and many of its standards find acceptance world wide as the defacto international standards. Being an organisation which is not country specific, it has the great advantage in the context of standard and increasingly, the focus of efforts is to deliver low cost, quality standards to suit the fast changing demands of a competitive electrotechnology marketplace. The IEEE standards board allows any national, regional or international body to adopt their standards without financial impediments which is helpful in fostering worldwide use of these standards and international participation in their development.

Dr Henry Chasia, Deputy Secretary General ITU addressed a packed gathering at IETE Delton Hall at 6.00 P.M. Shri A M Joshi, Wireless Advisor to the Govt of India gave an excellent introduction to the activities of ITU which was restructured in 1993 into ITU-R for allocation of radio frequencies to various application in a timely manner; ITU-T, for evolving standards more efficiently and in time; and ITU-D for promotion of development of telecom equitably among different parts of the world.

Dr Chasia laid emphasis on the activities of BDT and the recently formed body-WorldTel. WorldTel's focus is on devising innovative methods for generating the funds required for extending the telecom facilities to those parts of the world where telecom infrastructure is extremely inadequate. The efforts of the local government would not be sufficient to generate the capital costs required and WorldTel would possibly look towards some direct investments from private enterprises to raise the required capital, he said.

Dr Chasia warmed the hearts of the gathering with his accounts of ITU's long standing relationship with India and the commendable role played by Indian engineers in a large number of telecom projects in developing countries. The private sector representation in ITU is growing which shows the growing participation of non-governmental bodies in pursuing critical issues related to telecom.

Inauguration of Goa Centre

An IETE Centre at Goa was inaugurated on 31 Jan'96 by Hon'ble Minister of State for Electronics and Ocean Development Shri Eduardo Feleiro, in Govt Engg College premises. Prof K J Khatwani of the College and a senior Fellow of the Institution in Goa, presided over the function. The function was also attended by Dr P K Patwardhan, Vice-President, IETE, and Shri Gautam Soni, Sr Director, Manpower Development Divn, DOE.

Office bearers of the Goa Centre

Dr Ehrlich Desa	Chairman
Dr R J Krishnamacharyulu	Hony Secretary
Shri A K Kongari	Hony Treasurer

Address : C/o National Institute of Oceanography, Dona Paula, Goa-403004

International Conference on Multimedia Information Systems : Multimedia'96

Hectic preparations, particularly over the past six months by a team of dedicated workers under the able guidance of Prof R K Arora (Chairman, Technical Programmes Committee) and Shri Y P Singh (Chairman, Organising Committee) finally resulted in a grand success when the event unfolded on 27th Feb'96 at Hotel Taj Palace, New Delhi. Shri P M Sayeed, the Hon'ble Minister of State for Information and Broadcasting, inaugurated the Conference and the Exhibition on Multimedia Products organised concurrently (27-29 Feb'96). His message was brief and clear - scientists and engineers should not limit themselves only to establishing technical excellence; they need to adopt an integrated outlook for translating these technologies to applications beneficial to the society. While multimedia technologies hold untold potentials for the entertainment industry, in India the focus of the application should also be on provision of better health-care for all and for alleviating poverty using interactive information services with the help of these technologies. Information is the key factor to the socio-economic prosperity of a society, and the broadcast of right information therefore assumes great importance. Wrong information,

particularly of the communal variety could lead to disasters and hence, the need for utmost discretion.

Brig SVS Chowdhry, President IETE and the driving force behind the Conference, talked about the arrival of Internet in India and how the forces of globalisation have been unleashed in the country with the new developments in Telecom. To create an awareness on the information highway of the continuing professional development activities of the Institution, the IETE would soon be having its home page on the net, he said. The key-note address setting the tone for the conference was delivered by Dr James L Clark, AT&T Bell Labs USA (now on assignment with the Information Communication Institute of Singapore), with his address on 'Holistic Face of Multimedia'. Multimedia enables more effective and meaningful human-computer interaction he said and listed computer based training, edutainment, infotainment, digital publication, cross border high-resolution video conferencing and medical information as potential areas for multimedia, with plenty of market opportunities. These have been enabled through advances in image compression, fractal transform technologies, high speed networks (SDH, Sonet, ATM), storage medium (compact video disks), the physical transportation layer (fibre optics), self routing switches and the CPU technology, to name a few. The challenges multimedia poses are in the area of network architectures suited for the multimedia traffic, provision and management of bandwidth, design of user interfaces (that are not limited by language and the sense of vision alone) and the attending regulatory issues that come up with the transborder flow of information. Cultural issues such as safeguarding society / community sensitivities is also an accompanying challenge. But all said and done, the fact that distinctly stands out is that the multimedia tidal wave is on the horizon, and one needs to be well prepared for it.

The Conference was divided into eleven technical sessions and a concluding Panel Discussion on the theme '**Multimedia and Society**'. The various sessions and the chairperson for each are listed below.

Multimedia Panorama: Prof RK Arora, IIT Delhi
Multimedia Databases: Shri N K Sinha, Telecom Commission, Delhi
Multimedia-Man-Machine Interface: Prof T Viswanathan, INSDOC, New Delhi
Multimedia Communication & Videoconferencing : Shri B K Rai, Past President IETE and Advisor, RPG Communications
Multimedia Services : Shri Gautam Soni, DOE, New Delhi
Multimedia Environment : Shri N Vittal, PSEB, New Delhi
Virtual Environment : Prof H M Gupta, IIT Delhi
Multimedia in Industry : Peter A Borger, Siemens Telecom Ltd., New Delhi.
Active Learning and Multimedia: Shri Ranjeet Makkuni, IGNCA, Delhi
Multimedia in Art and Culture :Dr Kapila Vatsyayan, & Ms Neena Ranjan, IGNCA Delhi
Future Trends in Multimedia : Brig SVS Chowdhry

Forty five papers were presented during the 3 day conference which covered an extensive range of topics that fall within the purview of multimedia technologies. Multimedia communications have application in almost every domain, most perceptible among them being in entertainment, education, sales and marketing, presentation system, medical diagnostics, tourism and travel.... etc. The various aspects of content production, creative design, design of user interfaces, various multimedia tools, authoring softwares, techniques of content based database retrieval, multimedia query processing, potential multimedia applications .... etc were discussed.

ATM technology allows integration of voice, video and traditional data and other traffic types on a single network over variables bit rates and bandwidth-on-demand and hence, was proposed as the base for future global communications. Topics like video compression technologies, virtual reality interfaces, multimedia over internet, the need for video and audio data types in programming languages and additional multimedia features in operating systems, the revolution in the form of Java, the network-centric programming language that is hardware independent, video conferencing and video-on-demand, quality of service etc, also received considerable attention from various speakers. The consensus was that in future, the interfaces would increasingly be the virtual reality type which immerses all the faculties of the user in the application. Multimedia communications being inherently interactive in nature would naturally enhance the quality of man-machine interaction.

In India, the potential contenders for increasing multimedia applications are the entertainment, education, science and technology and military industry, though not necessary in that order. It was pointed out that India has the advantage of offering comparatively lower cost--high quality software products, especially in the film industry where we are the leaders in quantity of pictures produced(though not in quality). In education too, the application potentials are tremendous. Though isolated efforts by private companies and specialised institutions have focused on this area, there is no priority for a national effort in this direction. Also, for India, applications like video-on-demand have very little meaning in terms of affordability. The plans of DOT, India's major telecom carrier for introducing multimedia capability over the network using bandwidth enhancing technique like ADSL, HDSL and other tactical planning over the next five years to provide B-ISDN capability were outlined, to give an indication of the continuous efforts to deliver multimedia over its major network.

A very distinctive session on Multimedia in Art & Culture enabled in projecting the potential of multimedia communication in this socially relevant area. Various speakers discussed the issue of developing an interactive exploration device to recreate the experience of art and culture through digital means with the examples such as the architecture of the Brihadiswara temple, the life of Budha, rock art in Bhimbetka & Jhihri etc. The challenge in designing multimedia interfaces in art and culture related subjects is particularly in the context of catering to the needs of diverse sets of information seekers ie, say among the general public, researchers, artists and artisans; given the very large databases that exist on each subject with a number of possible viewpoints.

The theme of the panel discussion was Multimedia & Society. The participants were Dr K Sabnani (Bell Labs USA). Shri Veer Bhanu (Apple Computers), Shri D K Ghosh (Secy Gen, TEMA), Shri Bharat Bhargava (Purdue Univ, USA), Prof R K Arora (IIT Delhi), Shri N Vittal (PESB, Delhi), Dr Utpal K Banerjee (IGNCA, Delhi) and Shri Pradeep Gupta (Cyber Media, Delhi). It was chaired by Dr James L Clark (AT&T Bell Labs USA) and Prof T Viswanathan (INSDOC, Delhi).

The audience participated actively in the discussions and some of the specific views that emerged and on which consensus was achieved were :-

(i) Multimedia would have far reaching impact on the common man, much as the TV and telephones did earlier.

(ii) To enable multimedia communications what is needed is high performance networks, the technology is here but the implementation remains. One major constraint is the cost of backbone networks.

(iii) There is a need to look at the relevance of these technologies, particularly for India. The application of multimedia for education is very relevant and will have great impact on society, but perhaps non-centralised solutions like CD-ROM based stand-alone units would be more practical for India considering the cost of fibre inlay required otherwise.

(iv) With transborder flow of information with multimedia capabilities, certain policy issues would need greater address such as: who would manage the integrity and currency of information, how to safeguard the cultural sensitives of societies, and most importantly, how to manage quality of information over the networks.

(v) There is a need to protect the children from unsuitable information, however it would unwise to impose censorship on adults as this would lead to isolated societies.

About 200 delegates participated in the Conference and the feedback from them has been extremely satisfactory on all aspects of content and presentation. Several lectures were aided by actual multimedia presentations which greatly enhanced the quality of communication between the speaker and the audience.

The Council of the IETE greatly acknowledges the support received from the Government and Industry through their sponsorships and participation at the Conference and Exhibition. The Conference was sponsored by DOE, DST, DOT, MTNL, TCIL, VSNL, BPL, Motorola, Siemens Ltd., TCS, France Telecom, Apple, NIC, C-DAC, C-DOT, CSIR, DIT, IEEE (USA) & IEE (UK).

The Proceedings of the Conference published by Tata McGraw Hill (ISBN-0-07-463000-8) carries the text of the papers received prior to the conference. The remaining papers were also distributed to the participants at the time of the Conference. The Chief Guest Shri P M Sayeed formally released the Proceedings and a Souvenir brought out to mark the occasion, during the inaugural session. Smt Sukanya Balakrishnan, Newsreader on the Doordarshan was the compere for the inaugural session. An AIR vocal artis, Shri Arun Kumar Surya rendered the inaugural invocation and at the close of the conference, and a farewell song.

Tutorials on Multimedia

On 25th and 26th Feb '96, prior to the International Conference on 'Multimedia Information Systems'- MULTIMEDIA '96, intensive tutorials on different aspects of multimedia were organised at Hotel Taj Palace, New Delhi by the IETE. The list of tutorials conducted and the faculty is given below.

Multimedia in Health Care (25th Feb '96) : Anil K Singh, Siemens Medical Systems, Chicago, USA
Multimedia in Document Management (25th Feb '96) : Prof H M Gupta, IIT Delhi
Multimedia in Telecom (25th Feb '96) : Prof H M Gupta, IIT Delhi, Shri RRN Prasad, Advisor, Telecom Commission and Dr Ingolf Karls, Siemens Germany
Interactive Video (25th Feb '96) : Shri Mohan Tambe, DOE Delhi and Dr S Sarkar, NIC Delhi
Multimedia Databases (25th Feb '96) : Prof S Sadagopan, IIM Bangalore
Multimedia on Internet (26th Feb '96) : Mrs Neeta Verma, PSA, NIC Delhi
Multimedia Presentation Systems (26th Feb '96) : Dr Sugata Mitra and Shri Sandeep Kanjiwal, NIIT Delhi
Multimedia in Distance Education (26th Feb '96) : Prof M M Pant, School of Computer Information Science, IGNOU, Delhi

Multimedia and CD-ROM (26th Feb '96) : Dr Sunil K Singh, IIS Vision Works, Delhi and Dartmouth Univ, USA and his group
Video Conferencing, Multimedia technology and Applications (26th Feb '96): Shri Rajesh Gera, PSA, NIC Delhi, Mr Vijay Srivastava, NIC and Dr Ingolf Karls, Siemens Germany

The response to the tutorials was fairly enthusiastic and a large number of delegates participated.

Exhibition on Multimedia

Along with the International Conference, an Exhibition on Multimedia was organised at Hotel Taj Palace and inaugurated by Shri P M Sayeed. Participants included Motorola, Apple, Computer Zone, AIR & Doordarshan, Delhi Institute of Technology, American Institute of Technology, Inprint, Tata McGraw Hill Ltd, BPB Publications etc.

Restructured DIPIETE Syllabus

The DIPIETE syllabus has been revised. It is being introduced with effect from Dec 96 Exams. From 1 April '96 students will be registered only in this revised syllabus scheme. Those who are registered as Student Diploma (SD) members up to 31 March '96 are allowed to appear in the old scheme. DIPIETE Exams will be conducted both in old and new scheme syllabi from Dec 96 Exam till Dec 1998 Exam. There after, i.e. from June 1999 Exam onwards DIPIETE Exam will be conducted only in the Revised Syllabus (New Scheme)

NORAD 95-96

The Dept of Women and Child Development has sanctioned the training of poor and needy urban women as IETE entry level programmes under the NORAD 95-96 Scheme at 12 centres of IETE listed below.

- Bangalore, Mumbai, Delhi, Hyderabad, Madras and Pune - 120 trainees each.

- Ahmedabad, Allahabad, Calcutta, Jabalpur, Thiruvananthapuram and Vijaywada - 60 trainees each.

IETE-CASET Programme

IETE-CASET, Hyderabad has scheduled the following courses in the period January-June 1996.
Computer Vision on Feb 13-17, 1996 at IETE-CASET, Hyderabad.
Digital Technology on April 8-20, 1996 at IETE-CASET, Hyderabad.
Remote Sensing Applications May 1996 at NRSA, Hyderabad.

Past Presidents Meet

A meeting of the Past Presidents of the Institution was held on 27 Feb 1996 at New Delhi. While welcoming the members, Lt Gen I D Verma PVSM (Retd) Chairman of this Committee, stated that the Committee of the Past Presidents (CPP) shall serve as a Consultative Committee to the Council in helping them to take decisions for improving the image and stature of the Institution, implementation of Institution's code of ethics and amendment in the byelaws of the Institution.

Brig SVS Chowdhry, President and Shri Y P Singh, Hony Treasurer highlighted the progress made by the Institution in various fields since inception and appraised the various activities proposed to be undertaken by the Council.

The members suggested several measures to increase the membership of the Institution both Corporate and students categories. The Committee suggested that the IETE should prepare policy papers to assist decision making by the Govt in areas of interest to the IETE.

French Technology Summit

A new French Technology Summit was held on 12th, 13th and 14th February 1996 at the New Delhi Hilton, organised by the French Trade Commission (ACTIM - Agency for Technical and Industrial Economic Cooperation). IETE was one of the co-

sponsors of the Technology Summit and was represented at the Summit by Lt Gen M K Ghosh, PVSM, AVSM (Retd), Council Member. A High Level French delegation participated in the Summit. Mr Bruno Lasserre, Director General, French Ministry of Posts and Telecommunications, Mrs Beryl Joncom Chapius, President Foreign Trade Commission, Syndicat des Industries de Telecommunications (SIT), Mr Louis Lacas, Executive Director, Export Committee, SIT were some of the notable participants. In the Inaugural Session Mr Phillippe Petit, Ambassador of France welcomed the participants whilst emphasising the vast potential of French Telecommunications industries to take an active and useful role in the liberalisation and the great expansion that was taking place in Telecommunications in India. In his Keynote Address, Mr R K Takkar, Chairman Telecom Commission and Secretary, DOT gave a lucid presentation of the Telecom Scenario in India bringing out the immense scope for cooperation from other global players in developing the Telecommunications infrastructure. He recounted the past association of DOT with French firms like ALCATEL who helped to modernise equipment and systems in India. Mr Mahendra Nahata, President, Telecom Equipment Manufacturers Association spoke of the vast demand for equipments and technologies that the privatisation and expansion of the Indian Network would create and suggested setting up of manufacturing bases in India for domestic as also the export market.

A large number of leading French Telecommunications firms exhibited their products. In a seminar-cum-discussion sessions held on Spectrum Management, Switching and Network Management, Transmission equipment, Wireless local loop, Radio Communications, Public telephony, Corporate communications and Training, the French participants described their products and technologies which resulted in a lot of discussion and interaction between the French and Indian participants. The Summit was thus able to bring together French Industry, Indian Industry, Government agencies and others which certainly will lead to a heightened degree of collaborative effort in contributing towards the transformation of India Telecom-

munications towards a better future.

1996 IEEE International Conference on Personal Wireless Communications.

The 1996 International Conference on Personal Wireless Communications was held at the Hotel Hyatt Regency New Delhi from 19 Feb 96 to 21 Feb 1996. The Conference was sponsored by India AES/Com/LEOs chapter, IEEE Delhi Section in cooperation with IEE Region 10, IEEE India council and the IETE. The conference started with four intensive lecture courses. The subjects covered were : An introduction to personal wireless communication, Multiple access for future generation of wireless personal communication systems (WPCS), Digital cellular systems - GSM and Fixed wireless systems. There courses were conducted by eminent experts from organisations and universties in Canada, Netherlands, Poland and USA. The main conference started with a theme Seminar where Modern trends and the Personal wireless communcating scenario in India were covered amongst other subjects. There were technical sessions on WILL, WPCS, CDMA, Mobility management, Mobile communications, RF & Spectrum issues, Coding techniques and Satellite based mobile communications. There was a very large participation from abroad and the standard of papers presented and discussions was indeed very high. The Conference sites/venues were always filled to capacity. It was a very educative, upto date and comprehensive conference and a great success. The support provided by the IETE in organising the Conference was greatly appreciated.

Nomination for the IETE Awards

The Awards Committee has made a decision in its meeting held on 18th Feb'96 that all Fellow members of IETE with a standing of five years or above, are eligible to nominate for the various awards that are given annually/biennially. This will be made effective with the nominations for the year 1995-96 and a notification inviting nominations to the Awards will hence be issued in the Nov-Dec'96 issue of the Newsletter.

IETE-IRSI-Award

The IETE-IRSI Awards (1993-94) have been declared at a meeting of the IETE-IRSI Awards

committee meeting held on 27th Feb, 1996 at Bangalore. The first Award goes to **Shri C Varadarajan** (Engineer SG) and **Shri Y Ashok Kumar** (Engineer SF) joint nominees from Vikram Sarabhai Space Centre (VSSC), Trivandrum for their significant contributions in development of RF and microwave systems for satellite launch vechicle systems.

The second award goes to **Dr S R Ramasamy**, Director, Electronics and Instrumentation, DRDO, New Delhi for his significant contribution towards self reliance in EW systems, radar, and electromagnetic compatibility, antennas, anechoic chambers and open test ranges, radar cross section analysis & measurements, and launching of two electronic warfare programmes.

These awards will presented at a function in Bangalore at a future date.

Mr F C Kohli obtained his B A & B Sc (Hons) degrees at Punjab University, Lahore, and then proceeded abroad for further studies. He obtained his B Sc (Hons) Elec Engg degree from Queen's University, Canada, and SM Elec Engg degree from the Massachusetts Institute of Technology, USA. He joined the Canadian General Electric Companies as an engineer and subsequently, worked with Ebasco International Corp., New York, before returning to India in 1951 to take up the appointment of Cheif Load Despatcher with Tata Electric Companies. He advanced to the position of General Superintendent in 1963 and Dy General Manager in 1967. In 1966, he was also appointed as Senior Consultant to Tata Consulting Engineers and in 1969, was appointed as General Manager of Tata Consultancy Services. Mr Kohli was appointed as Director-in-Charge of Tata Consultancy Services in 1974 and Dy Chairman in 1994. He is also a Director on the Borad of Tata Sons Ltd., Tata Industries Ltd., Tata Unisys Ltd., Tata

Electric Cos., Tata Honeywell Ltd., Bradma of India Ltd., Airline Financial Support Services (I) Pvt Ltd., Tata Technologies Ltd Singapore, Investor Services of India Ltd and Triveni Engineering Ltd. He is also Chairman of WTI Advanced Technology Ltd and Tata Elxsi (I) Ltd.

Mr Kohli is actively associated with professional bodies like the Computer Society of India, the Institute of Electrical and Electronics Engineers (New York), the Institution of Electrical Engineers, the Indian National Academy of Engineering and the Institute of Management Consultants of India. He is a Fellow of the above institutions. In 1985, he was awarded the Fellowship of the Singapore Computer Society. Mr Kohli was on the Board of Directors of the Institute of Electrical and Electronics Engineers for the years 1973-74, and was the Chairman of the India Council. He is the Past President of the Computer Society of India and was the Chairman for the South East Asia Regional Computer Conference held at Singapore in 1976, and Chairman, Apex Committee of the South East Asia Regional Computer Conference held at New Delhi in 1988. He was President of the Management Consultants Association of India for the year 1975-76. From 1975-77, he was the Chairman of the Institution of Electrical Engineers, Bombay. In 1989, he was appointed Adviser to the South East Asia Regional Computer Confederation.

Mr Kohli has been associated with educational institutions in advisory capacities, viz. Banaras Hindu University, Indian Institute of Technology, Bombay, National Institute for Training in Industrial Engineering, Bombay, Jawaharlal Nehru University, New Delhi, Sardar Patel College of Engineering, Bombay. He is also associated in an advisory capacity with the Dept of Education and the Dept of Science & Technology, Govt of India. In 1984, he was appointed Chairman of the Software Export Promotion Committee set up by the Dept of Electronics, Govt of India. In 1988, he was appointed Chairman of the Computer Software Study Group, Dept of Electronics, Govt of India. Mr Kohli has made significant contribution to engineering in India in the fields of power system control techniques, power system management, automation of power systems, computer aided design and

development of consultancy in application of computer science and management sciences to business, government and industry.

Mr kohli is the current Chairman of NASSCOM.

NEWS FROM LOCAL CENTRES

Aligarh

The IETE Aligarh Centre organised a Student Paper Contest on 20.01.96 for students of Electronics, Electrical and Computer Engineering branches. Prof K A Khan, Mr M J Siddiqui. Mr Omar Farooq, Mr Ekram Khan and Mr M S Alam were the judges for this paper contest.

Allahabad

Engineers' Day Celebration On 15 Sept'95, the centre celebrated Engineers' Day with Prof Krishnaji, former Pro-Vice Chancellor of Allahabad University as the chief guest. Contributions of a great son of India, Bharat-Ratna Sir M Visvesvarya were recalled and the role of Engineers in the modern age was highlighted as the ones responsible for bringing the benefits of basic research to the society. The function was very well attended by corporate members and students.

A Seminar on Sir J C Bose and Recent Trends in Radiocommunication was conducted on Nov 8, 1995 at J K Institute, Allahabad University. Prof K K Bhutani, Chairman welcomed the Chief Guest and the participants. Dr S C Srivastava, Convenor of the seminar highlighted the importance of the seminar and presented an elaborate perspective of the theme of the seminar. Prof S N Ghosh, Founder Head, J K Institute, and a senior Fellow of IETE, in his inaugural speech presented a touching biography of Sir J C Bose and apprised the audience with the circumstances in which he did his pioneering work. Other invited speakers included Er S K Gaur, Station

Engineer, All India Radio, (Trends in sound broadcasting), Er A K Vanvasi, Chief Engineer, Indian Telephone Industries, Naini, (Cellular Telephone), Dr Krishna Kant, M L N R Engineering College, Allahabad (E-Mail) and Er G R Tripathi from Radiant Connect who gave a demonstration of F M Radio Pager. The seminar was attended by over 140 participants which included corporate members and guests from various organisations besides students. Vote of thanks was proposed by the Hony Secretary Er Ram Singh.

Bangalore

The IETE Bangalore Centre organized **ELCOMEX-95**, comprising of an Exhibition, Tutorials and Seminar at Bangalore during Nov 3rd to 7th, 1995. The theme of the seminar was '**New Opportunities and Challenges in Telecom**'.

The two day seminar, inaugurated by Shri R V Deshpande, Honourable Minister for Large and Medium Scale industries, Govt of Karnataka, provided a platform for representatives from multinational companies, indigenous manufacturers, the Telecom Commission etc., to exchange ideas and take stock of the situation. Inaugurating the seminar, the Honourable Minister said a Rs. 110-crore project of Tatas and AT & T for manufacture of digital switching equipment would go on stream in six months in Karnataka. He said Karnataka accounted for nearly Rs. 966 crores of the Rs. 3,150 crores worth of telecom equipment manufactured in the country.

Shri R K Takkar IAS, Chairman, Telecom Commission, Govt of India delivered key note address. He said the response to basic services and value-added services by private investors had been tremendous. The Government would be getting license fees to the tune of Rs. 1,11,000 crores in the next 15 years from basic services and Rs. 21,000 crores from cellular services in the next 10 years.

Dr K Kasturirangan, Chairman, Space Commission presided over the Inaugural function and released a Souvenir called IETE Technical Update. Introducing the Seminar, the Chairman ELCOMEX - said,

that for the past one decade there has been greater awareness of the potentials of the integrated national and global information through modern tele-links. This seminar provides a platform for the diverse players in this field to upgrade the existing infrastructure.

Three tutorials on ISDN, Data Communication and Sat-Com were organised on 3rd and 4th of Nov 1995 at the IETE Building. The tutorials were inaugurated on 3rd Nov morning by Prof B S Sonde, Dean, Faculty of Engg, Indian Institute of Science, and Prof N R Shetty, Vice Chancellor, Bangalore University presided over the function

The ELCOMEX-95 Exhibition (5-7 Nov '95) was organised at the Golden Jubilee Hall, Lalbagh, Bangalore, with participation from multinational companies, Govt Department and local manufacturers. It was inaugurated on the 4th of Nov 95 afternoon at 3.00 p.m. by Rear Admiral J J Baxi, CMD, Bharat Electronics. At the same venue an Industrial Meet was also organised which was addressed by Shri Kolar, Joint Director, Dept of Industries, Govt of Karnataka.

The technical sessions of the seminar consisted of sessions on opportunities and challenges in design, fabrication, services and export of equipments & services. The valedictory programme on 6th Nov afternoon consisted of a panel discussion on the topic: 'Telecommunication at the Crossroads in India-Opportunities and Challenges'. The panellists were : Shri P S Saran, Member Services & Ex Officio Secretary to Govt of India, DOT, New Delhi, Shri Dinesh Puri, President, Motorola, Page Point Service India Ltd., International Network Division, Shri Suresh Sanghani, Vice President AT & T, Prof C S Subramanian, Chairman Industrial Coord-ination & Organising Committee ELCOMEX-95, Dr M G Chandrasekhar, Scientific Secretary, ISRO and Chairman IETE, Bangalore Centre, Shri K N Reddy President Advocates Association.

The panel discussion was chaired and valedictory address delivered by Shri N Vittal IAS Secretary, Dept of Electronics, Govt of India. ELCOMEX-95 events were organised in association with the Indian Space Research Organisation and with the active cooperation and assistance from ITI Ltd, Bharat Electronics and KEONICS.

Bhopal

The following Office bearers have been elected for the year 1995-96.

Dr A K Tewari	Chairman
Dr S C Srivastava	Hony Secretary
Shri R K Rajawat	Hony Treasurer

Centre's Location : Dept of Electronics, M A C T, Bhopal - 462007

Bhubaneswar

The following activities were organised by the Bhubaneswar Centre during December '95-February '96.

A technical talk, for the benefit of corporate and student members, was delivered by Dr Shakti Ranjan Tripathy, Technical Consultant, Ninex Ltd, Belfast, UK on **Software Development** on 26.12.95. and another technical talk was delivered, for the benefit of the corporate and student members, by Sri Sanatan Das, Member, IETE Bhubaneswar centre on the topic **FET MOSFET and their Applications** on 29.12.95.

Cochin

The Cochin Centre organised the following activities during Oct-Dec'95 and Jan'96.

● A technical lecture session on **Robotics - Application of Robotics in Meeting the Automation Needs of Industries** was arranged at International Hotel, Ernakulam on 16th of October 1995. Prof Piyatnisky, Head of Dept of Robotics, Russian Academy of Sciences was the invited speaker. The programme was arranged through CEDT, Calicut and co-sponsored by V-Guard Industries, Cochin. Delegates from various organisation & companies like HMT, FEDO (FACT), O/E/N, STIC, Telecom Dept etc, participated.

● A technical lecture session on **Modern Trends in Communication Through Satellite Media** was held on 15 Jan'96 at the School of Marine Sciences (CUSAT).

Sri A S Menon, General Manager (Eastern Region) Videsh Sanchar Nigam was the invited speaker on the occasion. Members and students participated in the session.

● The technical library was formally inaugurated by our member Sri K V Thomas at a function arranged for student members on 10 Dec'95.

● A national symposium on **Modern Trends in Instrumentation** was arranged during 23rd & 24th February '96.

Hyderabad

The IETE Hyderabad Centre organised the following activities in the month of Nov-Dec 1995.

● Inauguration of AIR/DD Officers course in Digital Electronics & Microprocessors on 6th Nov'95, presided over by Shri S Narayana, Chairman, IETE Hyderabad centre.

● Lecture by Dr David G Goodenough, Chief Research Scientist, Advanced Forest Technologies Programme, National Resources, Canada on **Intelligent Land Information Systems** on 23rd Nov'95. This programme was arranged by IETE, IEEE, Association of Exploration Geophysists, A P Academy of Sciences and CSI Hyderabad Centre.

● Valedictory function of VIII batch of AIR/DD Officers two weeks course in Digital Electronics-cum-Microprocessor on 24th Nov '95. Chief Guest was Shri U V Warlu, Ex-Chairman, APEDC. Shri S Narayana, Chairman, IETE Hyderabad Centre presided.

● Inauguration of A Level Computer Course by Smt Pushpa Subramanyam, IAS, Collector of Ranga Reddy Dist, Hyderabad on 28 Nov'95.

● Valedictory function of NORAD 2nd batch on 28th Nov'95. Chief Guest was Smt Pushpa Subramanyam, IAS, Collector, R R Dist, Hyderabad. Shri S Narayana, Chairman, IETE presided.

Kanpur

The Kanpur local Centre, organised a workshop on **Power Semiconductor Devices & Applications** on Sunday, 28th Jan'96 at Hotel Landmark, Kanpur. Prof G N Mathur, Director, DMSRDE, Kanpur was the Chief Guest who gave details of development of power semiconductor devices. Prof V Sinha, Dy Director, IIT Kanpur, introduced the subject, explained the importance of this workshop in terms of efficiency, reliability and low cost etc. A well known personality in the field of Power Electronics in India and abroad, Prof Gopal K Dubey, Dept of Electrical Engg, IIT Kanpur was the main speaker. He introduced the topic from the basics and explained that diode rectifiers had the drawback of high harmonic content, low power factor, low efficiency and high cost. The switch mode rectifiers draw nearly sinusoidal current from AC mains and operate at unity power factor. These are therefore replacing diode rectifiers. The recent regulations regarding harmonics and power factor, such as for power supplies for telecom, equipment, will soon make it mandatory for several industries to use switch mode rectifiers. Other advantages of switch mode rectifiers are high power density (or low weight and volume). He named three technologies based on power semiconductor namely MOSFET Technology for lower range, IGBT for medium power range & GTO for high power range. He also listed the advantages of SMPS which directly relates to economy in operation, maintenance & size. Shri P K Gupta, presently the project incharge for manufacture of SMPS at Indian Telephone Industries Ltd., Rae Bareilly talked about manufacturing and gave live demonstration. Shri S K Gupta the well known figure in the field of manufacturing electronics equipment prepared a paper on problem in this field which was read by Shri R K Upadhaya, Telephone District Manager, Allahabad, in his absence. The workshop was attended by 43 delegates.

Lucknow

The following lectures were organised by the IETE Lucknow Centre on 26th Dec'95.

A lecture on **Advancement in Power Electr-**

onics, by Dr Jai P Agarwal, Dept of Elect Engg Tech, Purdue University, Calumet, USA and **Communication Networking**, by Sri Sanjay K Agarwal, Stanford Univ, USA.

Mankapur

The following Office bearers have been elected for the year 1995-96:

Shri R K Patnaik	Chairman
Shri O P Srivastava	Hony Secretary
Shri A K Srivastava	Hony Treasurer

Centre's Location: IETE Mankapur Centre, Hospital Building, Professional Area, ITI Ltd., Mankapur, Dist Gonda 271308

Nagpur

Air Marshal Dr R C Bajpai, AVSM, Air Officer Commanding-in-Chief, Airforce Maintenance Command delivered a talk on **Hundred Years of Radio Communications** on 26th Dec'95 at Institute of Science, Nagpur. Dr W S Khokle, Emeritus Scientist, CSIR presided over the function.

Pilani

The Pilani Centre, co-organiser **Techutsava '96** at the Local Polytechnic, Birla Technological Training Institute (BTTI), Pilani. BTTI is organising this one week event from 11 to 18 Feb'96. Students from all the Polytechnics of Rajasthan were invited to participate in this. The technical activities covered project demonstration, competitions in cartoons & poster on scientific topics-popular as well as specialised invited lectures etc. The participating students are the prospective students members of IETE. These are the people who may decide to take up IETE exams in future.

Pune

● The 7th Finolex Endowment Lecture on **Recent Developments in Fibre Technology** was delivered by Shri Subrata Paul, CEO & President, A&T Finolex Fibre Optical Cables Ltd on 26th Feb. His lecture covered the basic concepts of fibre optic technology, future trends in fibre optic communication products, recent trends in application of fibre optics in long haul network, cable TV network and Local access network.

● Pune centre took the lead in presenting mementoes to the senior members of IETE. Shri G S Talaulikar, MD, Finolex Cables, Pune was the Chief Guest. The members who were honoured included Air Marshal S D Sapre (Retd), Shri S M Nabar, Lt Col H K Ranji (Retd), Mr N T Taskar, Mr D M Pathak, Prof S V Kharkar, Mr S N Joshi.

On the same occassion, certificates were distributed to sucessful candidates of the first batch of NORAD programme. Gp Capt H Kaushal, Chairman of the centre presided over the functions.

Trivandrum

The IETE Trivandrum Centre organised the following activities in the last quarter of '95.

● A one day seminar on 10th Nov'95 was arranged at Quilon (Kollam) on **I-NET** in which Videsh Sanchar Nigam and expert team on I-NET participated. A useful demonstration also was conducted. Shri S Krishnan, Chief General Manager, Telecommunication, Kerala Circle inaugurated this Seminar.

● The construction of Centre's building has started. The project is for a 7 storeyed building. The construction of basement floor is almost completed with approx. area 3000 sq. ft.

● 50% of the trainees of 1st batch of NORAD scheme training were helped in getting employment in Govt/Private sectors.

● Second batch of NORAD scheme of training completed in Nov'95.

A one-day seminar was jointly conducted with CSI, IEEE & IE on **Internet** during Nov'95, with a live demonstration. This was repeated again, due to heavy demand.

● The first newsletter was published in October 1995.

● The Trivandrum Centre jointly with CSI, IEEE & IE conducts technical lectures on all Wednesdays on various topics of interest.

Vijayawada

The students Forum of IETE at S R K R Engg College, Bhimavaram organised a Lecture on **Recent Trends in Satellite Link Engineering**. The lecture was delivered by Sri L Anantharam, Director (Maintenance), Southern Telecommunication Sub-Region, Vijayawada on 28th Apr'95. The students found it interesting and highly informative.

DISTINCTIONS

Lt Gen P D Bhargava, AVSM, (Retd) former Signal Officer-in-Chief, Army HQrs, and a Fellow of the IETE was awarded the Param Vishisht Sewa Medal on 26 Jan'96.

Brig (Dr) G K Deb, Director, ER&DC, Calcutta, a Fellow of the IETE and a Member of the IETE Council was awarded the Vishisht Sewa Medal on 26 Jan'96.

Shri K M M Rao, Group Head, Imaging & Image Processing and Dy Project Director (IAS) SARPAD and Operations Director, NRSA, Hyderabad and Fellow Member of IETE was awarded the SICO sponsored National Academy of Sciences India Award in the field of Instrumentation for 1995. The award carries a sum of Rs. 10000/- and a Citation.

Dr J H Agarwal, former IETE Council

Member and University Professor, & Director Instrumentation and Project Coordinator UNDP-DOE-MAEP(IEPP) JNAU Jabalpur has been nominated by the Ministry of Science and Technology, Govt of India on the national level Steering and Monitoring Committee on Geo-scientific, Agri-electronics Test and Measuring Instruments for a tenure of three years effective till Jan'99.

Prof E Balaguruswami, Director, Institute of Public Enterprise, Hyderabad has been selected for the Lifetime Achievement Award by the American Biographical Institute Inc., USA.

Dr V R Singh, Head, Instrumentation and Biomedical Ultrasonics Group, National Physical Laboratory, Delhi has been elected Fellow of IEEE (USA) with effect from Jan'96 for his contributions to the research and development in transducers and instrumentation system for scientific and biomedical applications.

New Appointment

Mr T V Sivakumaran (Past Chairman, IETE Lucknow Centre) has taken over as advisor (Technology) in the Dept of Telecommunications.

OBITUARY

Shri Maheshwar Manjunath Wagle, Past President of IETE passed away on 8th Jan'96. He was suffering from heart ailment.

Shri M M Wagle graduated in Electrical & Mechanical Engineering from the College of Engineering, Pune, Bombay University in 1946 and 1947. He joined the Indian Telecommunication Engineering Service (ITS) of the Government of India through the competitive examination held in 1948.

As a young officer, he saw service in various parts of India. Early in his career, his managerial capability was recognised when he was called upon to take charge of the Bombay Telecommunication Workshops which he reorganised and managed with rare distinction. In the Sixties he was a accredited to a tough assignment in the High Commission of India, UK, for procure- ment of a variety of equipment (including Defence) needed by India. On his return to India, the P & T Board deployed his services in some of the most difficult Telecommunication Circles which he soon brought up to a high standard with his ingenuity and hard work. Later the hearded the Complex Directorate of Phones (Engineering) at the Headquarters of the P & T Board in Delhi and thereafter he took over the planning, installation and commissioning of the vast and complex telecommunications network of Bombay. He served as Member (Telecom Operations) of the Post & Telegraph Board which is the apex body in the country's communications activity. He travelled widely in India and abroad and has represented India at International Conferences both in India and abroad. In November 1981, he was elected Distinguished Fellow of IETE.

Shri M M Wagle was a fine sportsman in his time and played Cricket and Badminton for the College. His skill in rowing earned for him a special name at the College Boat Club, then one of the finest in its class in the world. Speaking of his human self, it was he who gave shelter and food to innumerable people in his house, who were totally stranded during the Tiesta Floods that ravaged Jalpaigury in West Bengal in 1968, of which only a memory remains today.

He served the Institution during the 70's and 80's as Member of the Council, Vice President and the President during 1980-82 for two successive terms with great dedication and distinction.

New Members

The following members have jointed the Institution during the month of Jan 1996 in the various classes of corporate membership.

Fellows

Bhatia, Thakur Das, Brig, (F-112501)	Noida
Seth, Raj, Brig, (F-112502)	C/O 56 APO
Randhawa, K S, (F-112503)	New Delhi
Trikha, Ashwani Kumar, (F-112504)	New Delhi
Kohli, Vijay Kumar, (F-112473)	New Delhi
Raghavaiah, G, (F-112474)	Secunderabad
Venkateshwar Rao, P, (F-112475)	Hyderabad
Sreenivasan, G, Prof (F-112479)	New Bombay
Fazil, Mirza Mohd., (F-112490)	Panchkula
Purwar, Anil Kumar, (F-112480)	Kanpur
Thomas, T G, (F-112481)	Hyderabad
Lall, Shiva Nandan, Dr. (F-112482)	Goa
Unikrishnan, B K, (F-112483)	Goa
Ramana Rao, M V, (F-112485)	Hyderabad
Sekhar, S, (F-112486)	New Delhi
Bantleman, Joseph, Col. (F-112487)	C/O 99 APO
Ramesh Kumar Marhatta, (F-112491)	New Delhi
Kaura, Shashi Kumar, (F-112492)	New Delhi
Dimri, D P, Col, (F-112493)	C/O 56 APO
Rajagopalan, S. (F-112494)	Madras
Mohd Yaseen, P A, (F-112495)	Madras
Balkrishnan, V S, (F-112496)	Madras
Madhavan, R, (F-112497)	Madras
Gopal, V, (F-112498)	Madras
Babu, Y, (F-112499)	Madras
Jain, Suresh Chand, (F-112489)	Chandigarh
Goswami, N D, Dr. (F-112476)	Patna
S B Singh (F-112488)	Patna
Pai, K Radhakrishna, Dr. (F-112484)	Farmagudi, Goa
Manna, Debatosh, (F-112500)	Bhubaneswar
Subbaiah, P V, (F-053401)	Vijayawada
Abraham, G, (F-009014)	Trivandrum
Srivastava, S K, (F-011361)	Bhubaneswar
Satish Chander, Cdr, IN, (F-036189)	Bombay
Gupta, Mohan Lal. (F-028243)	New Delhi
Pathania, Dharam Singh, (F-057956)	Chandigarh

Members

Sathyanarayanan, A, (M-112101)	New Delhi
V Ramachandran Nair, Lt Col, (M-112102)	New Delhi
Pradeep Kumar, (M-112103)	Chandigarh
Nangia, Asha, (M-112104)	New Delhi
Sharma, Arvind Kumar, (M-112105)	New Delhi
Vatsa, Jai Prakash, (M-112106)	New Delhi
Bisht, C S, (M-112107)	New Delhi
Madanpuri, Shivendra Kumar, (M-112108)	Ranchi
Naga Raja, C, (M-112109)	Anantapur
Seetharaman, J, (M-112111)	Bangalore
Saxena, Uma Kant, Maj, (M-112112)	New Delhi
Sarankapanai, S, (M-112113)	Kolathur
Chattopadhyay, Abir, Dr. (M-112114)	Calcutta
Ghai, Jagdish Kumar, (M-112115)	Baroda
Virinder Jit Singh, L, Lt Col, (M-112116)	C/O 99 APO
Rastogi, Krishan, (M-112117)	Lucknow

Sandeep Kapoor, (M-112119)	Ambala
Sridhara Murthy, K R, (M-112121)	Bangalore
Mohd Waseem Kazmi, (M-112122)	Gorakhpur
Ramachandra, D, (M-112138)	Bangalore
Breja, Lokesh, (M-112139)	New Delhi
Sharma, P K, Col. (M-112140)	New Delhi
Debnath, Anil Chandra, (M-112142)	Calcutta
Khurana, Ranjan, (M-112143)	Chandigarh
Datta, Devesh Kumar, (M-112144)	SAS Nagar
Kalavathi, S M, (M-112145)	Madras
Gupta, Ajay Kumr, (M-112146)	New Delhi
Sanjay Kumar Singh, (M-112149)	New Delhi
Ramarao, N, (M-112150)	Hyderabad
Gupta, R D, Lt Col, (M-112141)	New Delhi
Prabhakar, K, (M-112148)	Madras
Vijayasree, K, (M-112147)	Madras
Bhople, N B, (M-112120)	Pune
Tripathi, Anita, (M-112136)	Kanpur
Ram Kripal, Dr, (M-112135)	Allahabad
Murty, B V N, (M-112134)	Visakhapatnam
Misra, Rajnish Kumar, (M-112123)	Gorakhpur
Ramana Rao, V V, (M-112118)	Hyderabad
Punwatkar, Pradip R, (M-112110)	New Panvel
Srivastava, T N, (M-014237)	Lucknow
Chilla, Ravi Kumar, (M-041029)	Secunderabad
Radharani, P, (M-056765)	Hyderabad
Neelakantan, S, (M-013884)	Madras
Gurukukh Singh, (M-017050)	Delhi
Yadav, Rajni, Mrs, (M-042168)	Faridabad
Sampath, S K, (M-010617)	Bangalore
Biswas, Alok, (M-080649)	Bangalore
Surjit Singh, (M-017372)	Delhi
Ananthesh Rao, S, (M-099277)	Madras
Arya, Om Prakash, (M-011197)	Lucknow

Associate Members

Puneet Kumar, (AM-112152)	Delhi
Serwal, Vijay, (AM-112153)	Ratlam
Jaswal, Anju, (AM-112154)	Ghaziabad
Joseph, Reuben, (AM-112155)	Thiruveella
Jayaraman, Raj Kumar, (AM-112156)	Madras
Jayanthi, S, (AM-112157)	Salem
Mamatha, S, Mrs, (AM-112126)	Bangalore Dt
Saad Farrukh, M, (AM-112129)	Delhi
Srivastava, J S, (AM-112130)	Lucknow
Jain, Vinay Kumar, (AM-112125)	Kanpur
Dubey, Awdhesh Dhar, (AM-112137)	Gorakhpur
Dongaonkar, V R, (AM-112124)	Thane (E)
Nangia, Vishal, (AM-112133)	New Delhi
Srinivasan, R, (AM-112132)	Bombay
Aneja, Suneet, (AM-112131)	New Delhi
Qazi, Sanjay, (AM-112128)	Noida
Patil, Vivekanand T, (AM-112127)	Kolhapur
Darbari, Manuj, (AM-112151)	Allahabad

Call for Papers

Global Information Infrastructure-India in 2005

39th Annual Technical Convention of the IETE
30th Sept - 1st Oct 1996
Hotel Taj Palace, New Delhi

The creation of a global infrastructure (GII) is expected to transform our world into a Global Information Society. As it continu;es to evolve, there will be increased job opportunities increased productivity and competitiveness. GII encompasses Communication infrastructure,Computers and applications, Content of information, "People and companies who develop, manufacture, sell and service the network" and "People and organisations who will make use of the GII".

Under the above global framework, India has to create its own vision of National Information Infrastructure (NII). The extent of India's preparedness to realise a NII, the technological challenges and the policy issues that will ultimately spell success for the endeavour are some of the key topics for debate at the Annual Technical Convention planned by IETE in September - Octoober, 1996. The players involved - the Government, Telecom / Broadcasting / IT Industry, the Information Providers, the Consumer and the Scientists and Engineers, will all be there to chalk out a vision for NII by year 2005.

Technical Sessions

1. Global Information Infrastructure(GII) : Overview
2. NII - A tool for India's Competitiveness
3. Communication Infracture Technology Sessions I & II
4. Information Technology
5. Interconnection, Inter-operability and Security
6. Standardization and Quality Management
7. Panel Discussion

Submission of Papers :

Authors are requested to submit two copies of their paper along with the electronic version (floppy) prepared using Wordstar or Wordperfect (version 4.0 or higher) on topics listed below. The list is not exhaustive and any other subjects related to the technical sessions are also welcome.

- Elements and usage of GII, Global Vision, Indian Vision and the Financing
- Distance Education, Tele-medicine/Veterinary, Agriculture Development and Improved Commerce.
- Switching Networks: Digital Switching, CCS 7, Narrowband ISDN, IN
- Transmission Networks : SDH, Optical Fibre Systems, WDM, Satellite Systems, Digital Microwave
- Access Networks : WILL, FILL, ADSL, HDSL, HFC, PCS
- Data Communication Networks : X.25, Frame Relay, Virtual Private Network
- Broadband Networks : ATM, Photonic Switching
- Broadcasting : Network and services
- Computing Eqpt : PCs, Large Computers, LANs, Routers
- Software Tools, Multimedia, Interactive Video, Internet
- GII Network Architecture : Network Service Providers, Information Providers, Access Providers, Users
- Policy issues, Security and Legal issues
- Standardization of Interfaces in NII, Industry and Corporate Strategy, Open Architectures, Quality of Service, Network Management

Panel Discussion : Availability and free flow of information is critical to development of economies of any nation and for this, a clear and firm strategy for setting up an NII is essential. IETE invites opinion of its members and other professionals from the Govt, Industry, Defence and Associations like IEEMA, CETMA, MAIT, TEMA, NASSCOM, ELCINA etc on all aspects of the issue. A vision document will be prepared based on these inputs and the panel will deliberate on these issues in detail.

Last date for receipt of papers : 15th July, 1996

Address for Correspondence :
Maj Gen Vinod Krishna, AVSM (Retd),
Secretary, IETE,
2, Institutional Area, Lodi Road,
New Delhi -110 003

Brig SVS Chowdhry with Mr Wallace S Read and Dr Henry Chasia during their visit to IETE

Inauguration of Goa Centre. Standing from L ->.R Dr S N Lall, Principal Goa Engg College. Shri Ashok Kumar, Scientist NIO, Dr Gautam Soni, Senior Director, DoE, Dr P K Patwardhan, Vice-President, IETE, Smt Nirmala Sawant, President Goa Pradesh Congress

Shri P M Sayeed, the Chief Guest inaugurating the Conference on Multimedia Information System at Hotel Taj Palace. To his right are Dr James L Clark, Brig SVS Chowdhry, Prof S C Dutta Roy and Shri Y P Singh

Signing of the MOU between IETE-CASET and ECIL Hyderabad

Release of the Souvenir on Multimedia. Shri Y P Singh, Prof R K Arora and Maj Gen Vinod Krishna are seen on the dias with Shri P M Sayeed.

Prof G N Mathur, Director DMSRDE Kanpur, delivering his talk during the workshop on Power Semiconductor Devices and Applications at Kanpur.