



सह वीर्य करवावहे

FROM PRESIDENT'S DESK



Change is a process which generates resistance; be it implementation of CAS, office automation, use of CNG, privatization of loss-making industries etc. The process of change is well documented in science and management literature. Resistance to change takes place world over, however, quantum varies from place to place, country to country and time to time. Somehow, the resistance to change is comparatively more in our country. What could be the reason for this phenomenon? Is it that we do not analyze and plan the change threadbare? Is it that we do not foresee the effects and resulting problems on a long-term basis or is it that we do not have knowledge, patience and reasons to withstand what is right in front of decision-makers? Necessary and correct inputs, if provided before taking decision to implement the change, would bring down the resistance to it. Further improvement may take place if the change is implemented slowly.

Induction of off the shelf imported add-on subsystems also may create problems and scepticism. The remedy to the problems created by changes involving such an induction lies in developing our own research, development, manufacturing & testing facilities. Scientific culture thus nurtured would enable us not only to analyze the problems better but also indigenously manufacture our requirements keeping in view the existing and futuristic technologies.

IETE, in its endeavour has instituted Research Fellowship Scheme commemorating its Golden Jubilee, in which selected professionals would be provided financial assistance to pursue research in frontier areas of Emerging Wireless technologies and Microwave & Radar Engineering. Details are available at our Website: www.iete.org. For any other assistance you may contact IETE HQ.

I ask the professionals to avail this opportunity of Research Fellowship Scheme to enhance the scientific culture. And this, I think would be a step further of IETE's contribution towards developing and helping society.

(K K Aggarwal)

NEWS FROM HEADQUARTERS

35th World Telecommunication Day Celebrations

Like every year IETE celebrated 35th World Telecommunication Day at IETE HQ on May 17, 2003 by organizing lectures on the theme "Helping all of the World's people to communicate" selected by ITU. The Chief Guest on the occasion was Shri Pradip Baijal, Chairman, Telecom Regulatory Authority of India. Maj Gen Vinod Krishna, AVSM (Retd) Vice-President and IETE Zonal Coordinator Northern Zone, welcomed the dignitaries and techno savvy audience present and briefly introduced the theme topic.

Speaking on the occasion, Prof K K Aggarwal, President IETE said that this year World Telecommunication Day assumes greater significance due to Golden Jubilee Year of the Institution and we IETEians are making efforts to let the society know more about IETE and its mission of taking electronics, telecommunication & IT to all corners of our country through its various centres. He requested everyone to be proactive towards the profession, as electronics, telecommunications, computers and Information Technology are the fast changing fields. He felt innovation and Internet were the two sides of the same coin and connectivity & communication should be seen in much larger perspective than their verbal definitions. He said that connectivity in physical and electronic form should be integrated to ensure complete benefits to the masses. Prof Aggarwal added that for such useful deliberations IETE is the most appropriate platform.



A view of the dais during 35th World Telecommunication Day at IETE HQ, New Delhi on May 17, 2003.

Shri K N Gupta, Controller of Certifying Authority & IT said that the Internet is the least expensive, flexible and can accommodate audio, video and data to provide services now and later. He said that it is desirable to have more mobile and Internet lines because of low cost and benefits of the same should be passed on to consumers. In his view regulator should fix the upper limit and ensure that no operator should charge more than that amount. The minimum charges should be left to the market forces, which would bring full advantage of competition along with quality of service to the consumers. Shri Gupta said that nodes of networks of various service providers should be interconnected with Number 7 links. He said it would be an excellent achievement if our R&D efforts could create Internet access through AC power lines which would help more people to communicate through Internet.

Shri T V Ramachandran, Director General, COAI said that telecom as a recognized integral part of social & economic development in both developing and developed countries. He said to accelerate economic growth of India, we need to intensify our efforts to improve teledensity. He pointed out the lack of equitable interconnection and lopsided regulatory system, favouring only one incumbent service provider as the impediments to the growth of telecom. To improve the availability and affordability of communication facilities, he emphasized on level playing field & fair competition among telecom service providers through uniform and unambiguous regulatory controls.

Dr H S Sharma, Past President IETE in his opening remarks said that communication is a basic need, which is not only essential for survival but also for personal and economic development of an individual and society as a whole. He dwelt on utilities and usages of communication and talked about the measures to be taken to frame better models for communication, interconnection, network optimization of usages, indigenous development of products, management and governance.

The Chief Guest Shri Pradip Baijal, Chairman Telecom Regulatory Authority of India in his address, stressed the need for privatization. He said that neither government nor consumers are the losers in the process of privatization. He said that in all the products, externalities take place before the product is developed and when the product is developed it comes to a level where it explodes, starts reaching to the masses and a positive feed back is received and finally the price to consumers starts coming down. He cited examples of telephone communication, e-mail, Internet, fax machines and their network externalities. He said that competition brought the tariffs down and also improved the service. He emphasized on the careful examination of regulatory framework and policies in respect of telecom services in India.

Vote of thanks was proposed by Maj Gen K B Jhaldiyal, AVSM (Retd), Secretary General of IETE.

IETE Apex Forum Meeting on CAS

An IETE Apex Forum meeting on "Conditional Access System" (CAS) was held on Saturday the 07 June 2003 at IETE HQ, New Delhi. The Forum meeting started with a welcome address by Shri P N Chopra, Convener of IETE Apex Forum. He highlighted the subject of Conditional Access System and brought out the need for establishment of a regulatory authority in the Broadcast arena before implementation of CAS. He suggested the need to discuss promotion of the indigenous technology for the Set Top Box like the effort of C-DAC where they have designed a Set Top box and are ready to hand over the same for production by the country's hardware Industry. He also mentioned the effort of BSNL and other basic telecom service providers who are ready with DSL approach for distribution of Cable TV signal. He suggested that the Apex forum should discuss all the new innovations including DTH, HIT etc before introduction of CAS.

Conditional Access System (CAS) in its present form is so complex that most people do not understand what all it involves. The problem raised its head with the introduction of pay channels, which resulted in higher monthly cable bills for the householders, even if they did not wish to view the pay channels. The viewers therefore wanted some system whereby they should pay for what they view. However, the introduction of CAS in its present form is not going to solve this problem as most likely a viewer is going to end up paying more in spite of getting lesser number of channels to view. Like-wise broadcasters are also doubtful

whether with the introduction of CAS reporting of actual number of subscribers would improve.

Prof K K Aggarwal, President IETE, while inaugurating the Forum meeting said that it would be in the interest of consumers if the life cycle and compatibility with DSL & DTH of Set Top Boxes is determined before it is introduced. The other panel of experts consisting of Dr N Bhaskar Rao of Center for Media Studies, Col V C Khare, Col K K Sharma, Dr Mahesh Uppal, Shri D K Jain of C-DAC, Shri Rakesh Kumar of BSNL, Shri Jawahar Goel of SitiCable spoke on the present status of cable services, technology in use, consumers and service providers point of view, and actions being taken by the Govt. They also brought out what infrastructure they have and what needs to be created for economically viable and efficient dispensation of broadcast communication services to the consumers.

The salient points around which discussions were held are as under:

- Fixing the Per Channel Tariff of Pay Channels viewed by a subscriber and he is not forced to pay for the entire bouquet of channels offered.
- Identifying an approved DSL/DTH compatible technology for the Set Top Box so that after introduction same type technology is used for all the STBs in the entire country and one does not have to change the box when he changes residence or changes a cable operator.
- Ensure built in safeguards in the regulatory mechanism against blackout of channels at the discretion of MSO or cable operators.

NEWS FROM LOCAL CENTRES

Ahmedabad

IETE Ahmedabad centre organized lectures to commemorate World Telecommunication Day. Shri D K Agrawal, PGM, BSNL, Gujarat Circle and Shri Subodh Saxena, President, Reliance Infocom Ltd delivered the lectures. Shri Agrawal highlighted the role of BSNL to communicate through their network of telecommunications and facilities, where as Shri Subodh Saxena pointed out quick spread of mobile phone services in the country and emphasized the policies of telecommunications & communication revaluation in the world. Chairperson Smt Smriti Dagur welcomed all those present on the occasion and read out the message of Shri Yoshio Utsumi, Secretary General, ITU.

Brig K Balasubramaniam (Retd) and Prof K K Bhtuani were honoured being the 1st Chairman & 1st Hony Secretary respectively of the centre during the occasion.



A panel of experts discussing Conditional Access System (CAS) during IETE Apex Forum meeting on June 7, 2003.



World Telecommunication Day being celebrated at IETE Ahmedabad Centre.

Allahabad

A lecture on "Implication of natural languages processing in information gathering through Internet" by Dr Hemant Darbari, Member Technical Staff, C-DAC, Pune was arranged on May 14, 2003. The centre celebrated World Telecommunication Day on the chosen topic "Helping all the world's people to communicate" at Prof S N Ghosh Auditorium, J K Institute, University of Allahabad on May 17, 2003. The speaker on the occasion was Maj Gen M G Datar, Commandant, Selection Centre East.

A workshop on IT in Banking was organized by the centre. The speakers were from State Bank, ICICI Bank and IDBI Bank.

Aurangabad

IETE Aurangabad Sub-centre along with Rotary Club of Aurangabad Metro organized a seminar on "Marketing Strategies for Success" on May 25, 2003. Mr John Zekendrof from Zad Consultant, Australia in his address said "You can either do things differently or better or cheaper. However, you must ensure that nobody can copy your strategy." He spoke at length about marketing strategies, positioning, demographics, advertising, leadership, segmentation and customer relationship management. Industrialist and Director, Sanya Motors, Shri Sachin Mule was the Chief Guest on the occasion.

Bangalore

IETE Bangalore Centre organized the following activities in the recent months:-

- **5th April 2003:** Classes of the first batch of School in Electronics (SUSIE-2003) commenced for students of 9th & 10th grades. The duration of the course was one month.
- **26th April 2003:** A lecture on "Processor Computing Technologies - International & Scenario" was delivered by Dr K D Nayak, Director, Advanced Numerical Research Group (ANURG), DRDO, Hyderabad. Dr M H Kori, Chairman IMA, Past Chairman IETE Bangalore Centre presided over the function.
- **4th May 2003:** Valedictory function and exhibition of Electronics Projects of 1st Batch of SUSIE 03 was held. Mrs P Kailasnath distributed the certificates and prizes to the students. Classes of Batch-II of SUSIE commenced.
- **16th May 2003:** Shri M Thangarajan, Head, Quality Training, Tata Elxsi delivered a lecture on "Roadmap to CMM level 5 and CMMI Level 5 - the Elxsi Experience, a Case Study".
- **17th May 2003:** World Telecommunication Day was celebrated. Prof V Rajaraman, FNA, FAST, FNAE, Professor, SERcC, IISc, Bangalore delivered a lecture on the theme "Helping all of the World's people to communicate".
- **23rd May 2003:** Prof Narayan Mandayam, Rutgers University, NJ, USA delivered a talk on "Free Business: Real Challenge of the Wireless Internet".
- **27th May 2003:** Mr Martin Fowler, software pioneer and renowned IT author and speaker delivered a lecture on "Software Design in the 21st Century".



Prof V Rajaraman and Shri C Subramanian lighting the lamp during the commencement of World Telecommunication Day function.

- 31st May 2003: 28 electronics projects displaying various electronic principles were displayed in an exhibition by SUSIE- 2003 Batch-II.

Technical lectures were also conducted on : Introduction to Micro Electronics/ VLSI & Design Flow, Speech Processors, Optical Communication Laboratory, visit to IISc, Application Development in VxWorks Environment, VLSI Design Styles, TCAD FET, MOSFET, CMOSFET characteristics, Image processing, Integrated optics, VxWorks example programmes, Demo in VxWorks environment, MOS processing, CMOS Inverter, Adaptive Signal Processing & Wavelet Transforms, MPLS, MUTEX DEMO, BSP, Future trends in Software systems, Embedded System Programs on ISS Debugger, Cross assembler, VLSI Fabrication Techniques, application of DSP to Radar, Design of single board computers and example on evaluation kit, ASIC Design, Demo of KEIL Compiler, CPLD & FPGA Design, Real world Examples : Interface with MCS 51 kit, viz. ADC/DAC/LCD.

Bhopal

IETE Bhopal Centre and IE (I) M P State Centre jointly celebrated the World Telecommunication Day on May 17, 2003. Dr P B Sharma, Vice-Chancellor of RGPV was the Chief Guest on the occasion. Dr S C Soni, Director MANIT presided over the function. Welcome address was delivered by Dr J P Burnwal, Chairman, IE(I) MP State Centre. Wg Cdr A K Bhatnagar, Vice-Chairman proposed the vote of thanks.



Dr P B Sharma VC RGPV Bhopal addressing the gathering during World Telecommunication day celebration.

Dehradun

IETE Golden Jubilee Zonal symposium on "Trends in Surveillance and Communication" was organized during

28-29 May 2003 at DEAL, Dehradun. Shri V K Kaushik, Hony Secretary IETE, Dehradun Centre welcomed the Chief Guest, His Excellency Shri Sudarshan Agarwal, Governor of Uttaranchal. Other distinguished speakers/guests were Dr A S Bains, Director DEAL, Smt Madhu Narayanana, Chief Post Master General, Uttaranchal, Prof K K Aggarwal, President, IETE, AVM (Dr) N Natarajan, Vice Chancellor, HNB Garhwal University, Dr S C Jain, Chairman IETE Dehradun Centre. Prof K K Aggarwal, presided over the function and addressed the gathering. The Chief Guest, His Excellency Shri Sudarshan Agarwal, Governor of Uttaranchal formally inaugurated the symposium by lighting the ceremonial lamp. He released a souvenir and a first day special cover to mark the event of Golden Jubilee zonal symposium.

Dr JAR Krishnamoorthy, Director IRDE, Prof P S Roy, Director & DEAN IIRS, Dr S Venkatagiri Rao from ADE, Dr S D Mehta, Ex-Director DTRL and Mohan Kadde from M/s Rhode & Schwarz delivered the invited lectures besides other experts. The technical sessions were on "Satellite Networks and Communication", "Satellite Network & Surveillance", "Image Processing and Target Recognition" and "MMW & Radio Communication". The sessions were chaired by Dr B S Jassal, Gp Director SATCOM, Dr S C Jain, Head, Image Processing and Analysis (SDE), Brig J K Sharma, Gp Director, Image Analysis Centre, Shri A K Shukla, Project Director K-band Satcom and Shri K Siva Kumar, Associate Group Director MMW. Many scientists from various R&D organizations & academic institutions exchanged their ideas on the above topics for two days.



His Excellency Shri Sudarshan Agarwal, Governor of Uttaranchal releasing the souvenir on the occasion of Golden Jubilee Zonal symposium. Seen on the dais are Prof K K Aggarwal, President, IETE, Dr A S Bains, Director DEAL, AVM (Dr) N Natarajan (Retd), Vice-Chancellor, HNB Garhwal University.

Pre-symposium lectures on "Satellite Communication" and "Image Processing Techniques" were held on 26-27th May 2003. Invited talks were by Prof Shantanu Chaudhury, IIT Delhi, Shri R K Gupta, SAC Ahmedabad, Prof R Singhal, Canada, Dr S C Ahluwalia, NOCC, Delhi.

Hyderabad

7th U V Warlu Endowment lecture on "From Digital Divide to Digital Dividend" by Dr N Seshagiri, Emeritus Scientist, CMMACS, CSIR was organized by the centre on April 26, 2003. Shri U V Warlu was felicitated on this occasion. Dr A S Rao Award function was also organized on the occasion. Dr N Seshagiri presented cash awards to Shri K Niranjana Reddy and Shri B S Deepak of AMIETE Course. Shri V Premasagar Rao, Chairman, IETE Hyderabad Centre presided over the function.

World Telecommunication day was celebrated by the Centre on May 17, 2003. The Chief Guest His Excellency Shri Surjit Singh Barnala, Governor of AP inaugurated the seminar. Shri Shyamal Ghosh, IAS, (Retd) Administrator, Universal Service Fund, Dept. of Telecommunications spoke on the occasion.



7th U V Warlu Endowment lecture & Dr A S Rao Award function in progress at Hyderabad.

Jaipur

On April 26, 2003 a Golden Jubilee seminar on "Electronic Design Automation: Issues and Challenges" was organized by IETE Jaipur Centre. The keynote address was delivered by Dr Chandra Sekhar, Head, IC Design Group, CEERI, Pilani. A total of 30 technical papers including 5 invited papers were presented in two parallel sessions. A souvenir containing the extended abstracts of

technical papers presented, was released during inauguration session of the seminar.

Kanpur

To commemorate IETE Golden Jubilee celebration IETE Kanpur centre organized a function. Shri S K G, Chairman, IETE Kanpur Centre presided over the function. The Chief Guest Maj Gen Yashwant Deva AVSM (Retd) Immediate Past President IETE delivered a lecture on "Playing Brahma: Visions of Bio, Neuro-Micro-Nanotechnologies of the future". Prof S G Dhande, Director, Kanpur spoke on "Digital Gangetic Plain - A vision of Research in ICT". He talked about experiments being conducted by a team of IIT Kanpur to assess the viability of WiFi technology under digital gangetic plain project extending internet connectivity to remote villages. Prof Singh, Director HBTI in his speech spoke about the importance of information collected through remote sensing and its applications to soil and vegetation. He said that timely availability of information about environmental changes helps in planning and utilization of natural resources. Shri S C Bansal, Hony Secretary local centre proposed vote of thanks.

Mumbai

IETE Mumbai Centre celebrated the World Telecommunication Day on May 17, 2003. The Chief Guest Shri B D Pradhan, Head C-DOT, traced the history of C-DOT exchanges, which were used in remote rural areas under extreme environmental conditions. Shri S Khasgiwal, Chairman, BESI Mumbai Chapter gave vote of thanks.

The Executive Committee members declared elected IETE Mumbai Centre 2003-04 election are: Shri G S Tuteja, Chairman, Shri S C Khasgiwal- Hony Secretary and Ashwini Kunte, Shri Bhushan Kumar Dewan, Shri G Joshi, Prof T S Rathore, Prof K T Reddy, Ms Sunila Sharma, Ms Vijay Laxmi Varkar as Executive Committee Members.

Nagpur

The IETE, Nagpur Centre, IE(India), Nagpur Chapter and BSNL, Nagpur jointly organized a function to celebrate World Telecommunication Day on May 17, 2003. Shrikant Jichkar, former Rajya Sabha MP and a Hony enthusiast was the Chief Guest. Speaking on the occasion he said that the novel technologies are making lives easier. Shri P C Sahu, Principal General Manager, BSNL Nagpur spoke on "From Information to Consciousness & Beyond". He said that art of selection of information was extremely important in today's context of information overload.

Special features of the celebrations included an exhibition and demonstration of Video Conferencing by BSNL, Nagpur Telecom Circle.

Noida

A talk on "Cyber Crime & Terrorism" by Brig Lakshman Singh, VSM (Retd) was arranged on May 18, 2003. Shri D K Jain, Director, Technical, CDAC, Noida spoke on "Indian Cyber Security Emergency Response Team".

Patna

The 35th World Telecommunication day was jointly celebrated by the Institution of Engineers (India) Bihar State Centre, & IETE Patna Centre on May 17, 2003. Shri S A Thomas, Chief General Manager, BSNL, Bihar Telecom Circle inaugurated the function and Shri Rakesh Babu, Principal General Manager, Patna Telecom District, Patna presided over the function. Shri Babu highlighted the programme, policy and packages of the telecom department through which benefits of Internet, e-mail, TV etc are made available to common people. Dr Arbind Prasad, IAS, Director L N Mishra Institute of Economic Development & Social Change, Patna delivered the keynote address. He opined that the rural organizations and NGO's must be supported to adopt the technology, which has reduced cost of operation, better services and efficiency. The Chief Guest Shri S A Thomas said that the reliable power supply is necessary for telephone exchanges to provide better communication services in the rural areas.

Pune

A lecture by an Israeli Scientist Dr Joseph Shapira, Chairman Celletra Ltd, Israel on "Cost Effective Capacity Maximization of CDMA Cellular Systems" was jointly organized by IETE, J C Bose Science Promotion Forum and IEEE, Pune on April 26, 2003 at Firodia Hall, Pune. Prof Pramod Kale, Former Director, ISRO & presently Director IC & IT, University of Pune presided over the function. Dr Joseph Shapira systematically brought out the technical features like Capacity limits of CDMA Wireless Systems, Capacity coverage enhancement parameter, Channel Improvement, Reduction in overhead resources, Capacity/coverage improvement with repeaters, Intelligent Load balancing & control. He showed as to how his company's products bring out improvement in channel capacity through simple add-on circuits. Also the repeater provided by Celletra optimizes the coverage with diversity and enhances isolation gain. He said that CDMA relies on careful network planning and channel frequency control for high capacity performance and flexibility.



Sitting on the dais from L to R are Shri M N Shukla, Chairman IETE Pune Centre, Prof Pramod Kale, Director IC & IT, Dr Shapira, Chairman Celletra Ltd, Prof Govind Swarup, Convenor J C Bose Science Promotion Forum Pune.

Shimla

The sub-centre celebrated the World Telecommunication day on May 17, 2003. The Hony Secretary Shri A S Jaswal delivered the welcome address. Technical lectures were delivered by Shri Sanjay Qasi, Station Engineer Doordarshan Kendra, Col D P Gupta, Shri P S Kalia, Shri Vikas Bhatt and Shri Ravinder Kumar Thakur. Shri V K Upadhyay, Chairman IETE Sub-Centre highlighted the role of IETE in bringing the new developments in the field of IT for the knowledge of common people.

Thiruvananthapuram

The World Telecommunication day was celebrated by the local centre on May 17, 2003. Dr V P Kulkarni presided over the function and addressed the gathering. Shri G Abraham, Hony Secretary gave the welcome speech. Shri K V Balasubramanian, General Manager BSNL, Mobile Services delivered a lecture on the theme topic "Helping all of the World's people to communicate". Vote of thanks was proposed by Shri N A Abraham, Hony Treasurer, IETE local centre.

Varanasi

44th IETE Centre was inaugurated by Prof KK Aggarwal, President IETE on June 29, 2003 at BHU, Varanasi. The centre started functioning from an officer room in the Department of Electronics of BHU, IT. The officer bearers are Shri SC Misra (Chairman), Prof Vishwakarma (Vice-Chairman), Shri Ashok Kumar (Hony Secretary) and Dr TS Mishra (Hony Treasurer).

Vijayawada

Vijayawada local centre celebrated World Telecommunication Day on May 17, 2003. Er D Rama Krishna conducted the proceedings. Er Y Radhakrishna, President, IE delivered the welcome address. The Chief Guest on the occasion was Er V KameswaraRao, Formal Advisor, ITU and Past Chairman, Vijayawada local centre. Er M Ravishankar, DGM, BSNL, Vijayawada was also spoke. Er Rama Krishna, Chairman IETE local centre proposed vote of thanks.

ISF Activities

ISF JNNCE, Shimoga arranged a lecture by Prof Sudhi, MS Ramaiah Institute of Technology on "Cryptography".

ISF MVJ College of Engineering, White Field Bangalore organized lectures by Prof C Murali, on "Communications Systems" and by Prof P R Muralidhar on "Satellite Communications".

Achievement

Dr A K Saxena, FIETE and Professor Department Electronics and Computer Engineering IIT, Roorkee been elected as a 'Fellow' by the Council of IOP, Lc (UK) in recognition of his achievements and contribution in the area of Solid State Electronics.

Notices

- IETE Council has decided to bring out IETE News electronically from January 2004. Therefore readership is requested to intimate their requirements hardcopy, if any, to the Managing Editor by 31st Aug 2003.
- During Golden Jubilee year, IETE has planned to increase the number of local centres to 50. Towards this IETE has opened a new centre at Varanasi on June 2003 and another centre at Coimbatore is scheduled opening in near future.

To keep yourself up-to-date in state-of-the-art, subscribe to the Journals of the IETE

- * IETE Journal of Research (Bi-monthly) contains R&D type articles covering state-of-the-art) ISSN 0377-2063)
- * IETE Technical Review (Bi-monthly) contains general interest articles, practical designs, book reviews, new products, calendar of forthcoming events (ISSN 0256-4602)
- * IETE Journal of Education (Quarterly) contains tutorial type educative articles of diploma/under-graduate level (ISSN-0970-1664)

Annual Subscription Rates (w.e.f 1st January 2003)

	Inland (Rs.)	Foreign* (US \$)	NOTES
IETE Journal of Research & IETE Technical Review	660	170	* Journals are mailed after receipt of payment in advance. * Subscription period is on calendar-year basis. Subscribers are requested to renew their annual subscription in advance. * Facility of 'STANDING ORDER' is available, i.e. IETE will send invoice to subscribers without waiting for the form order every year. * The annual subscription covers the cost of special issues which contain in-depth review state-of-the-art articles. * Non-receipt complaints become time-barred after six months of publication.
Above both Journals for Student Members of IETE	470	—	
IETE Journal of Research	400	100	
IETE Technical Review	400	100	
IETE Journal of Education	100	35	
IETE Journal of Education for Corporate Members of IETE	70	17	

One Journal (either IETE Journal of Research or IETE Technical Review) is free of charge to IETE Corporate members. Second or subsequent journal can be given to them on nominal annual subscription of Rs.65/-.

*Air Surcharge : US \$ 80

Call for papers

Special issue of the IETE Journal of Research on Spread Spectrum Theory and Applications

Early applications of spread spectrum techniques (SST) were confined to military/defence only. Once the theory matured to a good level and the signal processing and the VLSI technologies advanced considerably, the SST started making inroads in civilian and commercial communication applications as well. While the anti jamming capability of the SST was of paramount importance to strategic communications, its multiple access feature is very valuable in civilian and commercial communication applications as well. Code Division Multiple Access (CDMA) which is based on the SST is a potential efficient multiple access technique in wireless, wire line and optical communications.

A considerable amount of research and development work has been done and is being done on various aspects of the theory and applications of the **Spread Spectrum Communication Techniques**. The IETE has planned a **Special Issue** on this topic of interest to many to publish the thoughts and findings of the researchers as well as users.

Papers are invited on, but not limited to, the following topics which are relevant to the spread spectrum theory and applications, containing the original research, new concepts & ideas, theoretical studies & in depth understanding, novel applications, system design, and theoretical/experimental/simulation performance evaluation.

Suggested Topics of Relevance to SST:

Spread Spectrum Theory * Capacity Limits * Spreading Codes * Signal Processing Techniques * Multiple Access * Modulation Schemes * Error Control Coding * Diversity Techniques * Interference Cancellation * Acquisition and Tracking * Receiver Architectures and Design * Fixed and Mobile Wireless CDMA * Optical CDMA * CDMA Networks * Performance Evaluation and Bounds * Traffic Modelling * Power Control * New Applications * OFDM/Multicarrier CDMA * Emerging areas and Future Directions.

The manuscripts should be submitted in the IETE format following their guidelines given in IETE website <http://www.iete.org> For the review process, electronic submission in the PDF format along with three hard copies is preferred. After acceptance the final paper will be required in MS Word along with one hard copy with original drawings.

Important Dates

Submission of paper 31st August 2003

Acceptance Notification 31st October 2003

Manuscript to be submitted on the following address:

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CALENDAR OF EVENTS

Subject	Date	Venue	Contact
• IETE Golden Jubilee Symposium on "Convergence of Technologies" & tutorials	11-13 July 2003	Hyderabad	Shri V Premasagar Rao Chairman, IETE Hyderabad Centre, Near University Post Office Osmania University Campus, Hyderabad- 500 007 Tel: 040-27098025, 27098758, Fax: 040-27097175 E-mail: ietehyd@hd2.vsnl.net.in
• A National Seminar on "Nationwide Cellular Mobile Telecommunication Services"	9-10 Aug 2003	Pune	Shri M N Shukla Chairman, IETE Pune centre Raghuraj, 62, Indiranagar, Erandawana, Pune- 411 004 Tel: +91 020 5449762, Fax: +91 020 5410179 e-mail: ietep@vsnl.net
• All India Jamia Electrical Engineering Conference-2003 "Recent Trends in Power Management"	16-17 Aug 2003	New Delhi	Organizing Secretary JEEC 2003, Dept of Electrical Engg., Jamia Millia Islamia Jamianagar, New Delhi- 110 025 Fax: 91 11 26982651, e-mail: viren_krec@hotmail.com
• 46th ATC of IETE on "ICE-2020: Its impact on quality of life" and grand finale of Golden Jubilee celebrations	30 Sept -01 Oct 2003	New Delhi	Maj Gen K B Jhaldiyal, AVSM (Retd) Secretary General, IETE, 2, Institutional Area, Lodi Road, New Delhi 110 003 Tel: +91 (011) 24631810; Telefax: +91 (011) 24649429/246318 e-mail: ietend@iasdl01.vsnl.net.in; website: http://www.iete.org, http://www.iete.info
• 5th International Infrastructure Summit & Expo "TELECOMM India 2003"	4-7 Nov 2003	Mumbai	Jimmy D'Souza, Project Manager, TELECOMM India 2003, Tel: 022 26103824/3921, Mobile: 98200 43398
• International Radar Symposium India-2003 (IRSI-2003)	2-5 Dec 2003	Bangalore	Shri D Rajagopal IRSI Secretariat, PO Box No. 9339 CV Raman Nagar, Bangalore- 560093 Tel: 91-80-524-1666, 91-80-333 1133, Fax: 91-80-5242860, 91-80-333 7231 E-mail: irsi@radarindia.com, Website: www.radarindia.com
• AIDC Solutions Expo 2003	11-13 Dec 2003	New Delhi	Ms Rakhee Bansal Manager- Marketing Communication V-15, 2nd Floor, Green Park Extension, New Delhi- 110016 Tel: 91 11 26711525, E-mail: expo2003@aidcsolutions.org Website: www.aidcsolutions.org
• National Symposium on Ocean Electronics (SYMPOL-2003)	16-17 Dec 2003	Cochin	Prof P R S Pillai, Co-ordinator, SYMPOL-2003 Dept. of Electronics Cochin University of Science & Technology, Cochin-682022 e-mail: prspillai@cusat.ac.in : prspillai@doe.cusat.edu, Web Site: www.doe.cusat.edu/sympol
• International Conference on Computers and Devices for Communication (CODEC-04) and Tutorials	31 Dec 2003-03 Jan 2004	Kolkata	Dr N R Das, Secretary / Convenor CODEC-04 E-mail: codec2004@yahoo.com, codec04@inrphel.ernet.in Web: www.irpel.org/codec/codec04.html
• BES EXPO 2004- 10th International Conference & Exhibition on Terrestrial Satellite Broadcasting on "Broadcasting in the Era of Multimedia"	4-6 Feb 2004	New Delhi	Shri N M Mehra, Hony secretary, BES (I) 52 D, Pocket C, Siddhartha Extension, New Delhi- 110 014 Telefax: 91 11 6903534, E-mail: bes@nda.vsnl.net.in Website: www.besindia.com

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