EDITORIAL

The rapid technological growth is clearly visible in every aspect of human life in our country. Gone are the days when we used to call India a developing country. It is the time for us to declare ourselves as the citizens of an advanced nation. The global revolutions in this Technological fields brought by our engineers and technocrats are the evidences.

Positron means **Positive Electron;** the MITSIANS will project as electron in positive manner in their career. This **"POSITRON"** magazine was first inaugurated by ECE students of 2002-06 batches with the support of Faculty. This Newsletter constitutes of the valuable message of desk members, details of the most efficient staff of our department.

The content of this worthy magazine are the departmental activities. Through this Newsletter we are also proudly presenting the accomplishments of our dedicated, intellectual faculty and the sincere, indigenous students in various Symposiums. We are very excited to publish the student list placed in different companies. The typical batches in the history of **MITS ECE (IV, III, II year students)** worked well for this magazine. So we hope to the students of MITS, ECE in the heights of various Technical areas.

"ALL THE BEST AND HAVE A SUCCESSFUL CAREER"

Editors
N.Irfan Ali
R.Maruthi Vara Prasad
K.Karthik Acharyulu
S.Jayasankar

Coordinator of Positron
Mr. J.T.Pramod
Asst. Professor

Chief of Positron
Dr.S.A.K.Jilani
Professor

Chief Editors
R.V.Krishna Teja
K.Chaitanya

Our Sincere Thanks to Review Committee

Dr.A.R.Reddy

Professor & Head of the Department

Professor B.D.Venkataramana Reddy (PhD)

Assoc. Professor Mahesh, (Ph.D)

Asst. Professor R.Triveni, (PhD)

Message from the Correspondent:

Positron 2K12 offers an excellent opportunity for making each one of the students feel better of being informative and knowledge oriented. It has formed an incredible knock to from a technologically advanced and fully loaded commitment. Brace yourself with the devices which ensure you with healthy valuable returns. Warm up with ultra-gaming experience and find out your carrier option. Fasten your growth, development and disseminate your knowledge at various levels. Grab the opportunities to the best of its exposure and illuminate your carrier, overcoming the odds against your efforts and endeavor. I am happy that every year the Department of ECE resolves to create a Magazine which cherishes the student's awareness in substantial making of his carrier.

-N.Vijayabhaskar Chowdary

Message from the Chairperson:

With the philosophy of taking our students to the forefront of the new economy and to drive them by intellect and values, the enthusiastic Faculty drawn up this Magazine to their appreciation. To continue the challenging legacy of achieving excellence, I would therefore advice the students to be cognizant to multiply the knowledge. Know about the Faculty, polish yourself with their help and set your minds to get holistic success.

- N. Krishna Kumar

Message from the Principal:

The technological information dissemination to public is the key factor in bringing concerned people/department together. The department of Electronics and Communication Engineering contributing best of its efforts in development of technical temper by publishing news letter "Positron". The documentation of different activities and bringing it to relevant technical community is the excellent towards service of society. These activities will help in making the science and technology much stronger towards knowledge bank. I am congratulating all the ECE department staff and students on this occasion.

- Dr. K. Srinivasa Reddy

Message from the HOD:

I am happy to see one more issue of POSITRON - a departmental newsletter exclusively for students and faculty. Our faculty has achieved a distinct progress in teaching to the students, and conducting research in various fields of electronics and communication engineering. This news letter brings all about their achievements. Our students have made deep impact in the Rayalaseema region by bagging several prizes in various events conducted by Engineering Colleges. Congratulations to all the winners.

- **Dr. A. R. Reddy**

Departmental activities

Profile

ECE department has an intake of 120 UG students, 18 of M.Tech Students and 60 of Diploma Students. Department has permanent affiliation to JNTUA, Anantapur. It has all necessary laboratories required to conduct JNTUA curriculum. Department has facilities to conduct Mini-projects and main projects by the final year students. Students take up innovative projects in the area of Embedded Systems, VLSI, Signal Processing, Image processing, Voice processing, Robotics, Control Systems, Wireless Systems, etc. It is regular feature to win awards by our students at various forums such as Seminars, Symposiums, Conferences, and other events for project exhibitions, research paper presentations, script writing, sports, etc. The Faculty of ECE is department is highly qualified with minimum of M.Tech degree qualification and imparts high quality education to the students. Students are well placed in several companies across India and Globe.

Workshops

The department has conducted two workshops in this academic year. The first one is International Workshop on "Image Processing" in collaboration with IUCEE. The second workshop is National workshop on "Advanced Processors for Embedded Systems". An expert from industry conducted the workshop high lighting ARM architecture, instruction set, addressing modes, and programming. The workshop has kick-started research work at MITS on ARM technology. Participants have immensely benefited from these workshops. Both the workshops were highly successful as it attracted faculties from various colleges across the country.

Guest Lectures

Guest lectures were delivered to Second year and fourth year students. Prof Rama Rao, conducted these guest lectures on Electronic Device Circuits for Second year students and Cellular Mobile Communication for Fourth year students. These lectures were well received by the students and learned basics and fundamentals in these areas.

New Research Initiative

An expert from industry conducted the Workshop high lighting ARM architecture, instruction set, addressing modes, and programming. The workshop has kick-started research work at MITS on ARM technology. Participants have immensely benefited from these workshops. We are proud to announce that this year our students have taken up project based upon ARM9 processor under the guidance of senior faculty. This is the first time our faculty is guiding the students on ARM9 processors by providing the developmental boards and required software tools either for Windows and Linux real time operating systems. The project work of PG students based upon ARM9 is already published in leading newspapers. Perhaps, we are the only college in the Rayalaseema region to achieve such a remarkable research work in ARM Technology.

Illuminatus

The word ILLUMINATUS in Latin means "To give light", it is an ancient underground society by some eminent scientists in the early part of the

11th centuary A.D. The group of scientists had to carry out research work secretly as the church was very powerful at the time and shunned scientific work, which they considered to be the pagan. Illuminatus is student's voluntary organization of Electronics and Communication Engineering branch. It was started in 2005 by small group with a burning desire to improve. The volunteers of the organizations are called ILLUMINATI.

We named our students association as ILLUMINATUS, keeping in mind the very fact that modern technical education provides no scope for overall personally development. The main motives behind forming such an association are to expose the students to various aspects of learning. The association meets once in a week within allotted hour. The various programs covered in the association meetings are Seminars, Paper Presentations, Guest lectures, G.Ds, Quizzes and other innovative ideas that not only relax the students from mentally toxing heavy academic work but also teach the students some new skill. It provides the platform for the students to exchange their innovative ideas to expose their inner talents. We released a logo for the Quiz and conducted intra Departmental Quiz program and paper presentations. To encourage the students and for their active participation, illuminates award prizes for the winners. The students discuss about advanced technology so that it provides flexibility to switch the modern technology and practical knowledge. The above mentioned activities make the students overcome their stage fear apart from gaining knowledge.

C-Time

It implies Company Time. A company details will be given in every session such as projects undertaken by particular company, about management their recruitment procedure, awards achieved by the company and the working environment in that organizations.

Q-Tech

'Q' refers to quiz and 'tech' represents technology. This is quiz on technology. Each and every student of ECE is a participant of Q-tech which is having its own versatile process for selection and elimination of groups.

Portroyal

The word portrayal means "describe in words" or "play the role of". This is a chance at the doorstep of students. Questions posed in portrayal test the spontaneity, clarity, focus of students which are considered to the qualities that should be possessed by technical students. Questions include general, current affairs, technical and analytical. The program describes the best creativity of a student in one minute.

Electro'n'

Pursuing higher studies in nothing but penetrating into the basics. Electro'n' is program where basics of technical subjects are made strong. Electro refers electronics and 'n' refers to elements from base to infinity. For each session a basic elements are described elaborately. We are very much thankful to the Head of the Department Mr. A.R. Reddy for his continuous support in making all the sessions successful.

Achievements made by the ECE department staff during 2011-12

S.No.	Name of the Faculty	Designation (administrative Positions, if any)	Qualification, University and year of graduation	Areas of Specialization	No. of research publications in journals and conferences since joining the department and Total no. of such publications (INJ,INC,NJ,NC)
1	 Dr. A. R. Reddy	HOD, Professor	M.Tech, Ph.D, IIT Kharaghpur, 1986.	Embedded Systems and Cryptography	INC-02, INJ-02, NJ-04, NC-02,
2	 Dr. S.A.K.Jilani	Professor	Ph.D, Sri Krishna Devaraya, 2002	Digital Signal Processing	INJ-12, INC-01 NJ-10, NC-02
3	 Prof. B.D.Venkata Ramana Reddy	Professor	M.Tech, S.V.U, 1999 (Ph.D)	Electronic Instrumentation & Communication systems	INJ-10 NC-12 NJ-02
4	 Mr. Mahesh	Associate Professor	M.Tech (Ph.D), J.N.T.U, 2005	Digital System & Computer Electronics	NC-01

5	 Ms. R.Triveni	Assistant Professor	M.E, Sathyabama University , 2007 (Ph.D)	Applied Electronics	NC-03 INJ-02
6	 Mr. M.Sreenath Reddy	Assistant Professor	M.E, PSG Tech, 2007 (Ph.D)	Applied Electronics	INC-07 NC-01
7	 Mr. M.Jagadeesh Babu	Assistant Professor	M.E, Anna University, 2006	Applied Electronics	Nil
8	 Mr. B.Sukumar	Assistant Professor	M.Tech, J.N.T.U, 2007	Digital Electronics & Communication Systems	NC-01 NJ-01
9	 Mr. V.Sai Kumar	Assistant Professor	M.Tech, V.I.T, 2007	VLSI Design	IC-01 NC-02 NJ-01

10	 Mr. S.Arun	Assistant Professor	M.Tech, Amrita Vishwa Vidyapeetam, 2009	VLSI Design	NC-02 IC-01,
11	 Ms. G. R Hemantha	Assistant Professor	M.Tech, J.N.T.U.A, 2010	Digital System & Computer Electronics	NC-01
12	 Mr. J. T. Pramod	Assistant Professor	M.Tech, J.N.T.U.A, 2010	Digital System & Computer Electronics	NC-03
13	 Ms. C.K. Hemantha Lakshmi	Assistant Professor	M.Tech, J.N.T.U, 2009	VLSI System Design	NIL
14	 Mr. R.Ravindraiah	Assistant Professor	M.Tech, JNTUA,2011	DECS	INC-4 NC-2 IJ-1

15	 Mr. M.Venkata Srinu	Assistant Professor	M.Tech, NIT,Calicut, 2011	Signal Processing	IJ-1
16	 Mr. P R Ratna Raju .K	Assistant Professor	M.Tech, SVNIT,Surat, 2010	Communication Systems	NIL
17	 Mr. P.Sravan Kumar	Assistant Professor	M.Tech, NIT,Calicut, 2011	Tele Communications	NIL
18	 Mr. L. Ashok	Assistant Professor	M.Tech, NIT,Calicut, 2011	Tele Communications	NC-1

Details of Diploma staff

S.No.	Name of the Faculty	Designation (administrative Positions, if any)	Qualification, University and year of graduation	Areas of Specialization
1	 K.Keerthi	Assistant Professor	B.Tech, MITS 2011	Electronics & Communication
2	 M. Haritha	Assistant Professor	B.Tech, MITS, 2008	Electronics & Communication

Details of Technical Staff

1	 P.Md.Akram	Technical staff	B.Sc. IT(2009) M.Sc. IT
2	 M. Manjula	Technical Staff	B.Tech, KSRM College of Engg, 2004

3	 T.Neeraja	Technical Staff	B.Tech MITS 2009
4	 N.Hima Bimdu	Technical Staff	B.Tech IFET 2011

Supporting Staff of ECE Department

1	 P.Hari Krishna	Attender
2	 D.Sasi Kala	Attender

Publications of the Faculty upto 2011-12

Dr A. R. Reddy

International Journals:

1. Mohan H.S and A. R. Reddy, "An Effective Defense Against Distributed Denial of Service in Grid", "IEEE International conference on integrated intelligent computing ICIIC-2010, Aug 5-7, 2010, SJBIT, Bangalore. ISBN 978-0-7695-4152-5, PP 84-89, Published in IEEE Explore.
2. Mohan H.S, and A. R. Reddy, Generating the New S-box and Analyzing the Diffusion Strength to Improve the Security of AES Algorithm, IJCNS September issue (Vol.2, No.9), 2010.

National Conferences:

1. Mohan H.S and A. R. Reddy, "An Approach for Certifying Security in Software Components", "NATIONAL CONFERENCE ON ACADEMIC RESEARCH", Aug 13-14th, 2010, Dr MGR University, Chennai. ISBN 978-81-910827-0-8.
2. S Lokesh and AR Reddy, Vehicle navigation system using ARM9 processor, National Conference on electronic communication systems, 16 March 2011, MITS, Madanapalle.
3. Y Pavan Kumar Reddy and AR Reddy, Zigbee and GPS based tracking system using ARM9, National Conference on electronic communication systems, 16 March 2011, MITS, Madanapalle.

International conferences:

1. Mohan H.S and A. R. Reddy, "An Effective Defense Against Distributed Denial of Service in Grid", "*First International conference on integrated intelligent computing*" ICIIC-2010, SJBIT, Aug 5-7, 2010, Bangalore. Published in IEEE Explore.
2. Mohan H.S and A. R. Reddy, "Generating the New S-box and analyzing the Diffusion Strength to Improve the Security of Rijndael algorithm", "*International conference on Computer Science and information Technology*", ICCSIT-2010, Sep 17-18, 2010, RLJIT, Doddabalpur.
3. A Purushotham Reddy, AR Reddy, R Elumalai, **"**MUCOS RTOS for embedded systems**"** *International Conference* on Communication, Computation, Control and Nanotechnology (ICN- 2010), REC Bhalki, Karnataka, India, October 29-30, 2010.

Dr S.A.K.Jilani:

1. Dr. S.A.K. Jilani, G.N. Kodandaramaiah, M.B. Manjunatha, M.N. Giriprasad, R.B. Kulkarni & M. Mukunda Rao" The Minimal and Maximal Vocal Tract Shape Variabiligy for Vowels Based on LPC", International Journal of Highly Reliable Electronic Systems (Vol.3 No.1 Jan-June 2010) Pages: 39-45, http://www.serialspublications.com/contentnormal.asp?jid=180&jtype=1
2. Dr.S.A.K.Jilani, T.Syed Akheel, K.Kanthamma, "Face Recognition Using Eigen Values",Proceedings of international conference on MEMS & Optoelectronics Technologies (ICMOT 2010), 22-23 January 2010, Pages 455-459.
3. Dr.S.A.K.Jilani, T.Syed Akheel, K.Kanthamma, C. Sreevardhan, "Brain Image Segmentation Using RBF Neural Network", Proceedings of international conference on MEMS & Optoelectronics Technologies (ICMOT 2010), 22-23 January 2010, Pages 361-364
4. Dr.S.A.K.Jilani, T.Syed Akheel, K.Kanthamma," A Location Based Distributed Database Architecture For Global Roaming in Next Generation Mobile Networks" Proceedings of

international conference on MEMS & Optoelectronics Technologies (ICMOT 2010), 22-23 January 2010, Pages 331-334

5. S A K Jilani ,T. Syed Akheel, K. Kanthamma and, S. Javeed Hussain and Vekata Narasimhulu "An Efficient Face Recognition Method with FSVDRAND and RBF Neural Network", International Journal of Engineering Research and Industrial Applications (Vol 4 No III August 2011) pages 29-44.
6. S A K Jilani ,T. Syed Akheel, and G.N.S Vaibhav, "A Modified Approach for Face RecognitionUsing Eigen Values", International Journal of Math.Science & Engineering Application",(Vol 5 No. IV, July 2011) Pages 241-251.
7. S A K Jilani , N.Venkatanath, "Image Processing Based Automatic Mesh Quality Analyser", International Journal of Computer Applications in Engineering Sciences",(Vol 1, Issue 11, June 2011) Pages 118-121.
8. S A K Jilani ,T. Syed Akheel, K. Kanthamma and D. Ramana Naik, " Comparative Study of Face Representation Methods for Efficient Face Recognition Using Singular Features" International Engineering Research and Industrial Applications (Vol 4 No II May 2011) pages249-266.
9. S A K Jilani ,T. Syed Akheel, K. Kanthamma and, S. Javeed Hussain "Comparative Study of Face Representation Methods for Efficient **Face** Recognition- Survey" International Engineering Research and Industrial Apllications (Vol 4 No II May 2011) pages 287-304.

Industrial projects collaboration:

1. Worked as team member in designing and developing PC based three-axis stepper motor control and driver circuit and nuclear radiation strength detection for gamma tomography system was designed and developed and shipped onto DRDO, Jodhpur and involved direct reporting and discussions with technical production.
2. Developed PC based system to determine Ultrasonic velocities of different liquids combinations by interfacing to interferometer. Processing was done in MATLAB
3. Worked as team member in designing and developing DSP based geophysical monitoring system for APFRO, Habsiguda, Hyderabad

Memberships and Reviewer:

Technical member for First International Workshop on Wireless and Network Security (WNS 2010), June 23-25 2010, Sheraton Grande Ocean Resort, in Miyazaki, Japan. http://sersc.org/ISA2010/First%20International%20Workshop%20on%20Wireless%20and%20Network%20curity.pdf

Reviewer for:

Springer
the language of science

Dr. B.D. Venkataramana Reddy:

1. B.D.Venkatramana Reddy, Dr.T.Jayachandra Prasad ''Color-Texture Image Segmentation using Hypercomplex Gabor Analysis'' Signal and Image Processing: An International Journal, December 2010, AIRCC.
2. B.D.Venkatramana Reddy, Dr.T.Jayachandra Prasad ''Color image Registration and Template Matching using Quaternion Phase Correlation'' Ubiquitous Computing and Communication Journal (UBICC), vol.6, no.1, February 2011, Ubicc publishers, Canada.

3. B.D.Venkatramana Reddy, Dr.T.Jayachandra Prasad "Edge Detection in Satellite Images using Quaternion Convolution in Frequency Domain'' International Journal of Electronics Engineering Research (IJEER), Research India Publications.
4. B.D.Venkatramana Reddy, Dr.T.Jayachandra Prasad ''Digital Colour Image Watermarking Scheme based on Quaternion Singular Value Decomposition'' International Journal of Systemics, Cybernetics and Informatics (IJSCI), Pentagram Research Publications.
5. B.D.Venkatramana Reddy, Dr.T.Jayachandra Prasad, ''Frequency Domain Filtering of Colour Images using Quaternion Fourier Transforms'' International Journal of Computer Science and Technology (IJCST), Cosmic Journals, Vol. 1 Issue 2 December, 2010.
6. B.D.Venkatramana Reddy, Dr.T.Jayachandra Prasad ''Colour-Texture Image Segmentation Algorithms based on Hypercomplex Gabor Analysis'' Research Journal of Engineering &Technology.
7. B.D.Venkatramana Reddy, Dr.T.Jayachandra Prasad "Colour Image Compression using Quaternion Principal Component Analysis'' Journal on Electronics Engineering, I manager Publications.
8. B.D.Venkatramana Reddy, Dr.T.Jayachandra Prasad,K.Sudhamayee ''Hypercomplex Correlation Techniques for Vector Images'' National Conference on Control of Power Electronic Drives and Systems held during 30th-31st May 2010 at AU College of Engineering(A),Andhra University,Visakhapatnam,pp.42-47.
9. B.D.Venkatramana Reddy et al., ''Skin Tone based Secret Data Hiding in Images using Steganography'' National Level Conference on Electronic Communication Systems held on 16th March 2011 at Department of ECE, Madanapalle Institute of Technology&Science, Madanapalle-517325, A.P.
10. B.D.Venkatramana Reddy et al., ''Combination of Wavelet and Curvelet based image Fusion for Medical Applications'' National Level Conference on Electronic Communication Systems held on 16th March 2011 at Department of ECE, Madanapalle Institute of Technology&Science, Madanapalle-517325, A.P.

International Journals:

1. B.D.Venkatramana Reddy and Dr.T.Jayachandra Prasad ''Digital Colour Image Watermarking Scheme based on Quaternion Singular Value Decomposition'' International Journal of Systemics, Cybernetics and Informatics (IJSCI), Pentagram Research Publications, January 2011.
2. B.D.Venkatramana Reddy and Dr.T.Jayachandra Prasad, ''Frequency Domain Filtering of Colour Images using Quaternion Fourier Transforms'' International Journal of Computer Science and Technology (IJCST), pp.46-52, Vol. 1, Issue 2, December, 2010.
3. B.D.Venkatramana Reddy and Dr.T.Jayachandra Prasad ''Color image Registration and Template Matching using Quaternion Phase Correlation'' Ubiquitous Computing and Communication Journal (UBICC), Vol.6, no.1, February 2011, Canada.
4. B.D.Venkatramana Reddy and Dr.T.Jayachandra Prasad "Edge Detection in Satellite Images using Quaternion Convolution in Frequency Domain'' International Journal of Electronics Engineering Research (IJEER), Research India Publications, Indexed in Open J-Gate, pp.83-92, Vol.3, No.1, 2011.

National Journals:

1. B.D.Venkatramana Reddy and Dr.T.Jayachandra Prasad, "Colour Image Compression using Quaternion Principle Component Analysis'', Journal on Electronics Engineering, February 2011, I manager Publications.

2. B.D.Venkatramana Reddy and Dr.T.Jayachandra Prasad ‘‘Color image Registration and Template Matching using Hypercomplex Phase Correlation’’ Journal on Software Engineering, February 2011, I manager Publications

M.Mahesh:

International Journals:

1. Mahesh and Subramanyam, “Non-subsampled contourlet transform for edge detection performance” international journal (IJCIR), volume 7, number 3,2011 pp.311-317.
2. Mahesh and Subramanyam, “Corner Detection using Curvelet and Harris Algorithm”, ” international journal (IJCST), Jan-Mar 2012 volume 3, issue 1.

R. Thriveni:

1. R Thriveni, A real time licence plate recognition using image segmentation technique, National conference on Image processing, CMRIT, Bangalore, 23 April 2010.
2. R Thriveni, Color image edge detection using quaternion quantized localized phase, National Conference on electronic communication systems, 16 March 2011, MITS, Madanapalle.
3. R Thriveni, Satellite Color Image Enhancement Using Discrete Wavelet Transform, Vol.2 Jan-2012 @ ISSN 2249-9946.
4. R. Thriveni A Qualitative Approach for Resolution Enhancementof Satellite Images using 2-DWT International Journal of Electronics and Communication Engineering.ISSN 0974-2166 Volume 5, Number 2 (2012), pp. 159-164.

Workshops Attended:

1. National Workshop Advanced processors for embedded systems, MITS, Madanapalle, 25 October 2010.

B. Sukumar:

Papers:

1. “Compensated Noise Reduction in B&W motion picture films.”, Lab Experiments, pp 184-194, March 2011.
2. “DSP based bore well geophysical monitoring system ”, Lab Experiments, pp 184-194, Vol–10, No–4, Dec.–2010

Workshops Attended:

3. National Workshop Advanced processors for embedded Systems, MITS, Madanapalle, 25 October 2010.

National Conference:

1. B.Sukumar., ‘‘Color image edge detection using quaternion quantized localized phase’’ National Level Conference on Electronic Communication Systems held on 16th March 2011 at Department of ECE, Madanapalle Institute of Technology Science, Madanapalle-517325, A.P.

G.R. Hemantha:

Papers:

1. GR Hemantha, Hiding data in images by LSB substitution using double polynomial, National conference on Emerging trends in electronics and communication engineering, SJBIT, Bangalore, 8 May 2010.

Workshops Attended:

1. National Workshop Advanced processors for embedded Systems, MITS, Madanapalle, 25 October 2010.

J.T. Pramod:

Papers:

1. JT. Pramod, Format variability for vowels using AR Model of vocal tract, National conference on Emerging trends in electronics and communication engineering, SJBIT, Bangalore, 8 May 2010.

Workshops Attended:

1. National Workshop Advanced processors for embedded Systems, MITS, Madanapalle, 25 October 2010.

V. Sai Kumar:

Papers:

1. Compensated Noise Reduction in B&W motion picture films." Lab Experiments, pp 184-194, March 2011.

Workshops Attended:

1. National Workshop Advanced processors for embedded Systems, MITS, Madanapalle, 25 October 2010.
2. High Teaching Skills, WIPRO Mission10X, MITS, Madanapalle, 12-13 July 2010.
3. WIPRO Mission10X, MITS, Madanapalle, 14-17 July 2010
4. IUCEE workshop on Mobile computing, IUCEE, Pune, June 21-25, 2010.

National Conferences:

1. Sai Kumar.V ., ''Vehicle parking occupancy information system'' National Level Conference on Electronic Communication Systems held on 16th March 2011 at Department of ECE, Madanapalle Institute of Technology&Science, Madanapalle-517325, A.P.

S. Arun:

Workshops Attended:

1. High Teaching Skills, WIPRO Mission10X, MITS, Madanapalle, 12-13 July 2010.
2. WIPRO Mission10X, MITS, Madanapalle, 14-17 July 2010
3. IUCEE workshop on Teaching Engineering using MATLAB and Simulink, IUCEE, Madurai, 5 July 2010.

R.Ravindraik:

1. Qualitative evaluation of enhancement methods for analysis of acute leukemia images, IJEST, vol.3 No.8 August 2011.

M.Srinath Reddy:

1. V. V. N. Satish Kumar, M. Sreenath Reddy, "A Better Approach For Quality Compression of Color Filter Array Data", International Conference on Systemics, Cybernetics and Informatics 2011, pp-472-474.
2. N.V. Apparao, M. Srinathreddy and S. Kezia, "An Efficient Approach for Image Coding Using Wavelet Based Weighted Adaptive Lifting", International Conference on Smart Technologies for Materials, Communication, Controls, Computing and Energy, (ICST 2011), January 05-07, 2011.
3. V.R.Prasad Dudala, M.Sreenath Reddy,"Efficient Color Image Enhancement by DCT In Compression Domain", Proceedings of Second International Conference on Signals, Systems & Automation (ICSSA-11) 24-25 January, EC Department, G H Patel College of Engineering & Technology, Gujarat, India
4. G.Govardhan Reddy, M.Sreenath Reddy, "High Speed Pattern Matching for Intrusion Detection in Network Security", Nternational Conference on Reliability Infocom technology and Optimization(ICRITO2011),pp-1148-1152.
5. R. Mahender, M.sreenath Reddy, "Modified Spatial Filteration for Image Denoising in Digital Image Processing", International Conference on Systemics, Cybernetics and Informatics 2010, pp-425-428.
6. Nagaraju Panaganti, M.Sreenadh Reddy, "Video Denoising Using With Both Spatial and Temporal Filters Based On Video Codec Motion Estimation", International Conference on Demand Computing (ICODC 2010), November 03-04, 2010.
7. S.Neelaveni, M.Sreenath Reddy, "Iris Identification Based on Feature Extraction", Proceedings of First International Conference on Modelling, Control, Automation and Communication (ICMCAC-2010), 20th -21st December 2010. pp 114-117.

M.Venkat Srinu:

1. Qualitative evaluation of enhancement methods for analysis of acute leukemia images, IJEST, vol.3 No.8 August 2011.

Achievements by ECE students in 2011-12

Paper Presentations:

- K.KarthikAcharyulu & J.PavanKumar of III B.Tech has presented a paper on "Pass Transistor Dual Value logic For Low Power Cmos" in RGM , Nandyal under Evince and won First Prize,

- C.NagaDeepika & G.BhavyaReddy III B.Tech has presented a paper on "Augumented Reality" in JNTU Anantapur , under E-Merge an d got second Prize,

- A.Rajesh, E.Rajesh, M.Shanmukha, G.Sree Devi, D.Viswanath presented a project exhibition on " TWO WHEELS SELF BALANCING ROBORT" in BITS, Proddutur under PRAKARNA 2012 and bagged 1st prize

- K.Chaitanya(IV-A) presented a paper on "LANE DEPARTURE SYSTEM USING IMAGE PROCESSING" in MITS, Madanapalle and bagged first prize

Filme:

- B,S. Medha, Ashwitha, Deepikamani, and Charishma of III-A participated in Filme on the topic "ENVIRONMENT" at JNTUA, Anatapur on 04-Mar-2011 and bagged 1st place.

- M.Archana, Nikhila, Bharathi, Charitha, Navya Vani of III-A participated in Filme on the topic "SAVE WATER" at JNTUA, Anatapur on 23-02-2012 and bagged 2nd place.

- B.Anil, V.Bhandav, G.ReddyMadhukar, R.C.Naveen , III-A has presented a short film on "Save Life" in SKU , Anantapur, under Evince and got second Prize,

Sports:

- B.NaveenKumar (III-A), S.Nayaz(IV-A) members of MITS Cricket Team, which stood as Runners in the Tournament conducted by Audishanka ra college of Engineering, Gudur.

- B .NaveenKumar(III-A), S.Nayaz(IV-A) a member of MITS Cricket Team, which stood as Champions in the Tournament conducted by Sri Venkateshwara college of En gineering

List of students placed in various companies

ROBERT BOSCH:

1. M.Amulya
2. M.Sandeep Kumar
3. R.Yuvraj
4. K.Varun Kumar Reddy
5. S.Saraswati

CSS CORP:

1. K.Joyce Manogna Sree
2. G.Hema Latha
3. V.Lavanya
4. D.Sruthi
5. K.P.Vyshnavi
6. D.Sandhya Rani
7. L.Sirisha
8. C.Sushma
9. N.Swaroopa Reddy

SLK SOFTWARE:

1. B.Nagaraja
2. R.Mahesh
3. K.Ankitha
4. R.Divya
5. G.Kiran Kumar
6. B.V.Sai Sravan Kumar

XCHANGING:

1. K.Chaitanya
2. P.Deepika Rao

Articles by Students

Future Smart Phones Will Project Images on the Wall

Mobile phones currently on the market are capable of showing high quality images and video, but the phones' small size sets insurmountable limits on screen size, and thus the viewing experience. VTT Technical Research Centre of Finland, EpiCrystals Oy and the Aalto University are developing a better laser light source for projectors that will be integrated into mobile phones, which will enable accurate and efficient projection of, for example, photographs and movies on any surface. Mobile phones equipped with the laser light source can be within the ordinary consumer's reach already in a few years' time.

Small-size laser projectors 1-2 centimetres in length can be integrated into many kinds of electronic appliances, such as digital or video cameras, gaming devices and mobile phones. Integrated micro projectors could, in practice, project images the size of an A3 sheet of paper on a wall. The challenge is to develop a small, energy-efficient and luminous three-colour (RGB) light source, whose manufacturing costs can be kept low, for use in the projectors.

They are developing an entirely new technology that is currently not in use anywhere else in the world. At the moment, there are stand-alone projectors on the market that can be connected to electronic appliances and early stage integrated projectors, but their quality and price are not competitive enough. Large electronics manufacturers are extremely interested in integrated projectors, and market research shows that demand for these micro projectors will increase strongly in the coming years. Soon, around two billion mobile phones per year will be sold in the world, and if even a couple of per cent of those contain a projector.

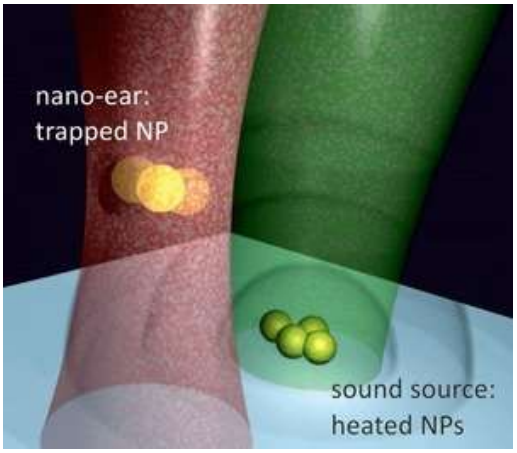
-M.ARCHANA , III-A

Ultra-tiny "nano-ear" can hear bacteria and viruses

The world's smallest ear doesn't belong to any animal. Instead, it's a tiny piece of gold suspended in a laser beam. It can hear sounds a million times fainter than any human ear can, making it a powerful acoustic microscope.

The nano-ear is the work of Jochen Friedmann and Andrey Lutich of Munich's Ludwig-Maximilians University. The setup is a progression from the 1986 development of so-called "optical tweezers", which use laser beams to trap microscopic particles inside the most powerful part of the electric field. This effectively suspends the particle so that it no longer moves on its own - the only way it can move if something nearby disturbs it.

In the case of the nano-ear, that "something nearby" are the vibrations of sound waves that the human ear couldn't possibly detect. The optical tweezers allow the researchers to carefully track and record any disturbance to the particle, and from that they can figure out precisely what sounds passed by the nano-ear and caused the particle to move. The nano-ear is capable of hearing sounds as low as -60 decibels - and because decibels are on a logarithmic scale, that means six orders of magnitude, or a million times lower than the faintest sound we can hear.



To test the nano-ear, the researchers placed the gold particle, which is just 60 nanometers across, inside the beam. They then took some other microscopic gold particles and heated them using a laser. The sound vibrations given off by this heating then traveled past the nano-ear. The movement of the particle revealed not just the exact decibel level created by the heated particles, but also from what direction they had come.

Admittedly, the nano-ear only worked when placed in a carefully controlled, perfectly arranged environment. Speaking to *ScienceNOW*, Lene Oddershede of the Optical Tweezer Laboratory called the work "very inspiring" and said the inventors likely "can relatively quickly improve the equipment."

If her predictions are correct, then the nano-ear would be hugely useful in bacteria, viruses, and other microorganisms, as being able to "hear" the sounds they make could provide vital new data on what distinguishes different strains. What's more, the nano-ear might be able to detect the presence of these microorganisms in situations where light levels make a standard optical microscope unusable. It's early days yet, but this nano-ear could revolutionize

how we interact with the microscopic world. Now if only scientists would stop dragging their feet on the smelloscope...

-B.S.MEDHA, III-A

Hackers... Hacking his way to fame

Many of computer systems of world's top telecommunication companies who suffered the hacking incident included Nokia, Motorola, Sun Microsystems and Fujitsu. All of the technical professionals were amazed of the hacker's intelligence then what is the position of normal originations and companies ???

Although you think that your data is safe then you must know … what extent your data is safe now by reading this…

Actually what the hackers do and what the real hacking is….

What would you do if somebody broke into your e-mail account and stole all your data and used it to transfer funds out of your bank account? Then think your e-mail account has become more dangerous than anyone ever imagined....Hacking has become so common that even school kids are hacking the websites which are highly confidential. Some of the hacking incidents are such that they can even amaze as well as horrify the reader. Kevin Mitnick who allegedly broke into the North American Aerospace Defense Command (NORAD) when he was 17 years old.. At the age of 16, Jonathan James became the first juvenile hacker to get sent to prison. Another famous hacker is Vladimir Levin, a mathematician who led a group of Russian hackers and stole ten million dollars from Citibank. Gary McKinnon, He is the unemployed former computer engineer is accused of causing the US government $1billion of damage by breaking into its most secure computers at the Nasa and could be jailed for 70 years.

Actually its not a simple job to hack the details of the others and become a hacker. A hacker needs a brilliant mind to hack anything and to protect him from others. All the hackers noted above are very well educated professionals but they didn't utilized their education for the development of their nations Then there is no meaning for their education and talent. Here now a days hacker can do anything. They can be utilized for both good and bad. All the international secrets are released by Wikileaks are almost can be done with the help of Ethical hacker. Here the hacking can be done with a simple program and they are also called computer programmer. The top most hacker's i.e. computer programmers are listed-

- The most known hacker is Bill Gates, co-founder of Microsoft. Considered the richest person in the world for more than a decade, he became the most successful entrepreneur of the computer industry. His beginnings go

back to the 1970's when he designed computer programs for the computer platforms of that era, and ended with the introduction of Windows in the world of personal computers.

- Linus Torvalds was known among the hacker community as the hero who created Linux, the open source operating system, it hasn't been until recent years that people started to wonder if there was another option apart from using Microsoft's operating system.

- Steve Jobs came back with the introduction of several new products in Apple. The most known of them is the iPod, which has revolutionized the music industry around the world. Jobs started nearly at the same time that Gates, founding Apple and introducing to the market the first home computer, the Apple II.

Many of the famous computer hackers of the past are the billionaires of today without any crime cases only because they utilized their hacking power and education in the right way. Hackers who obey the law can make a good living. Now think that how much time a programmer can have to hack your details. The only way to protect from it, is becoming an anti-hacker ourselves, maintaining up to date with the most basic knowledge: firewall, antivirus, antispam, constant operating system updates and taking care of suspicious websites. So the only suggestion is 'make the others to entertain with your talent but don't entertain yourself with the others'. Be useful for the nation to have a useful technology.

Intel's Plan to Replace Copper Wires

A new kind of optical cable will provide ultrafast connections between electronic devices

There's a reason that the Internet backbone is made of fiber-optic cables: photons transport bits of information faster than electrons. But while photons and fiber are the most efficient way of sending data across continents, it's still cheaper and easier to use electrons in copper wiring for most data transfer over shorter distances.

Now Intel plans to sell inexpensive cables with fiber-optic-caliber speed to connect, for instance, a laptop and an external hard drive, or a phone and a desktop computer. At the Intel Developer Forum (IDF) in San Francisco Wednesday, the company announced a new type of optical cable that it hopes will be fast, cheap, and thin enough to make it an attractive replacement for multiple copper wires.

By 2010, says Dadi Perlmutter, vice president of Intel's mobility group, the company hopes to ship an optical cable called Light Peak that will be able to zip 10 gigabits of data per second from one gadget to another, a rate equivalent of transferring a Blu-ray movie from a computer to a mobile video player in 30 seconds. A single Light Peak cable will also be capable of transporting different types of data simultaneously, meaning it will be possible to back up a hard drive, transfer high-definition video, and connect to a network with just one line.
At both ends of a Light Peak cable are chips that contain devices that produce light, encode data in it, and send it on its way. The chips can also amplify incoming signals and convert the light to an electrical signal that can be interpreted by gadgets. The first generation of Light Peak will use chips made with standard optical materials such as gallium arsenide. However, to truly make optical cables cheap enough to replace copper, future versions of Light Peak, which will handle 40-gigabits-per-second and 100-gigabits-per-second transfer rates, will most likely need to rely on silicon-based optical chips, a product of the maturing field of silicon photonics. Silicon photonics researchers hope to transform computing by making high-bandwidth connectors cheaper than ever before, not just in cables, but also eventually within electronic motherboards and microprocessors.

"This will be a long-term transition," says Perlmutter, referring to the fact that it takes years to develop and adopt standards for new connecting technologies. On stage during his IDF keynote, he held up in one hand a bundle of cables he currently lugs around with his laptop, and in the other, a thin, white Light Peak prototype cable. "I have a very light notebook," he said, "but carry a huge amount of cables with me."

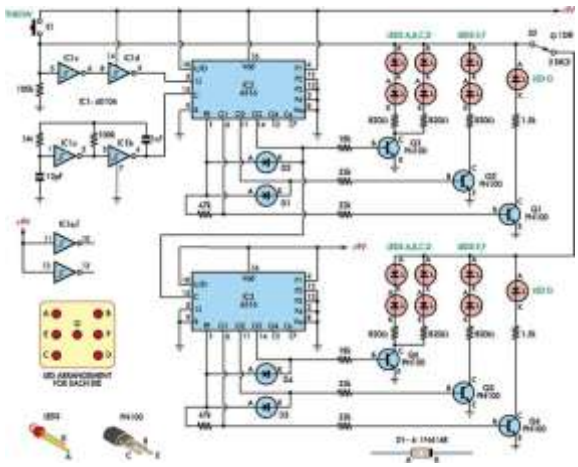
-M.NAGARJUNA, III-A

Dual Digital Dice (With Low Cost IC's)

Dual Digital dice circuit is a very low cost circuit that can be implemented in gaming without affecting the cost of the game set. We use the following circuit to implement dual digital dice.

This simple dual digital dice is constructed using three low-cost ICs, a few transistors and a handful of LEDs. Here when we plug in the circuit, it utilizes 9V of voltage. IC1a and IC1b operate together as an oscillator with 4 kHz frequency. This works as clock to IC2. IC4516 is a binary counter that it used to count from 1 to 6. If the initial state is outside the correct range (more than 6), the counters will count into the correct range after a few clock pulses.

Let us now consider the operation of IC2. When the counter reaches "7" (i.e., 111), the AND gate formed by diodes D1 & D2 and the 47kΩ resistor applies a high to the PE pin (pin 1). This presets the counter to 1 (i.e., 001) and so PE goes low again. The counter then increments in the normal manner until it reaches "7" again. Counter IC3 operates in the same manner except that the clock signal is derived from IC2's O3 output. This is how we attain control over range of the counter between 1 to 6. The output pins O1, O2, O3 drive the transistors as shown in circuit diagram.



Assume, when we press the S1 switch (i.e., throw button) the counter is carrying a value "4". It is sent to the output pins O1, O2, O3 in a binary form as "100". This drives the transistors, by which only Q1 goes to saturation state connecting LEDs to the ground. Normally all the LEDs appear to be lit. But when we push 'throw' button, the output of IC1c goes low and in turn it makes output of IC1d high. This makes the counter to pause for few clock cycles. During that time LEDs connected with Q1 lit. Others that are connected to Q2 and Q3 turns off as, the transistors go to cut off. While using two ICs, IC3 has its own count to differ with IC2's count. Finally, toggle switch S2 allows the user to choose between two dice or just one.

-G.YOGBHAVITH, III-B

Science and Systems Conference about Robotics

The goal of robotic Science and Systems Conference is to bring together researchers working on algorithmic or mathematical foundations of robotics, robotics applications, and analysis of robotic systems. To get the high quality and original papers in all areas of robotics, the final program was the result of a highly selective review process designed to include the best work of its kind in every category. The program included invited talks as well as oral and poster presentations of refereed papers.

A robotic science and system conference is organized through several tasks. At first, the committee on conference announces for paper from all scientists working with robotics. This is formally known as call for paper. A deadline for

the paper is fixed. The authority can extend the deadline of paper submission if enough papers are not submitted in due time. The authority reviews the submitted papers for the quality of work and achievement of the work. They select some paper that fills their requirement. Then they publish the list of accepted papers. Finally, the conference is held on the date that is determined by the authority of the conference.

The selection process for being chosen is extremely rigorous. Only 25 percent of applicants are accepted to present their research, said Yoky Matsuoka. He is program chair on the Robotic Science and System Organizing Committee and associate professor in the UW's Department of Computer Science and Engineering.

The fund of the whole conference and tutorial comes from some sponsored company. The university may provide the full fund or the company and university may share to held the conference. The authority of all conferences tries to provide the best conference, so they may maintain some additional task on the participant of the conference. They may continue to contact the participant of the conference after the publication of list of accepted work to the date of conference. They may train up the participant of the conference to improve their performance.

In each year different organization, arrange different conference on robotics. The main goal behind this arrangement is to provide knowledge about the current development in each field of robotics. Another purpose of such a conference is to inspire the young scientists to continue research in this direction. The scientists assume as an aware to participate in a conference. Due to this conference, all scientists inspire to their work and increase their performance.

-N.DEEPIKAMANI, III-A

Can Robots Help or Take Away Human Jobs

From the age of human history we can learn that people always tried to make their work easier and for that purpose all these modernization took place. The modernization never stopped and now the speed of modernization is extra vast than any other time. Robots are the most tremendous invention of mankind. You can think this is a modern creation but people think about this machine a long

time ago and the first step took place about 2000 years ago. The modern robots are the result of 2000 years old research. Now robots can do job like human and in some purposes they do even better than the human.

People used to build robots to make their work easier and now robots can work on household jobs even in the industry. First robots are used to do the risky job of human but now they work like a human labor in the industry. Some people think that the robots take away human job but this is not correct exactly, they are just helping to do the human job and it makes the human job easier. They make mistakes hardly and their accuracy and performance is constant and much higher than human so the risk of failure is become lowest than ever and the productivity of any industry is higher than ever.

People need to do their work quickly and cheap, and for that the robots can be an ultimate solution. For example the cost of an industrial robot is about the 6 months salary of a labor but you can use the robots for many years which will make your cost lower and sometimes this will also make the insurance cost lowest. You can also buy a robot and use it for work done and surely it will get you some extra money. The household robots will help you do the household jobs, so you can give the extra time in your other jobs. Robots can do the medical operations perfectly and sometimes they do such things what usually human can't do.

In some ways robots take away human jobs but after a few years' people will maintain the work types then it will not be a problem. Robots are usually help people to make their work easier not taking away. Robots can't think and they also can't make their own decision, they just do as their program or software command them to do. Robots and robotics are the most fabulous invention of human kind; we should help to develop this science to get more efficiency.

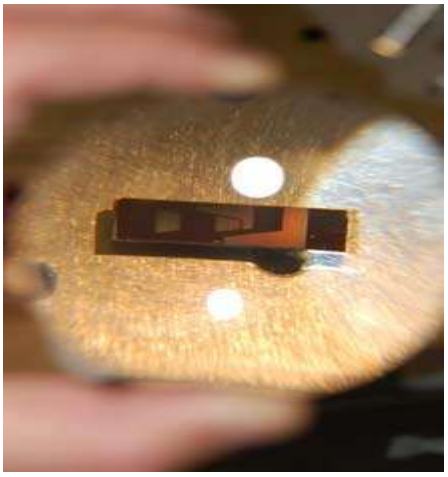
-N.ASHWITHA REDDY, III-A

Time Lens Speeds Optical Data

An energy-efficient silicon device compresses light to make ultrafast signals.

Researchers at Cornell University have developed a simple silicon device for speeding up optical data. The device incorporates a silicon chip called a "time lens," lengths of optical fiber, and a laser. It splits up a data stream encoded at

10 gigabits per second, puts it back together, and outputs the same data at 270 gigabits per second. Speeding up optical data transmission usually requires a lot of energy and bulky, expensive optics. The new system is energy efficient and is integrated on a compact silicon chip. It could be used to move vast quantities of data at fast speeds over the Internet or on optical chips inside computers.



Most of today's telecommunications data is encoded at a rate of 10 gigabits per second. As engineers have tried to expand to greater bandwidths, they've come up against a problem. "As you get to very high data rates, there are no easy ways of encoding the data," says Alexander, professor of applied and engineering physics at Cornell University, who developed the silicon device with Michal Lipson, associate professor of electrical and computer engineering. Their work is described online in the journal *Nature Photonics*.

The new device could also be a critical step in the development of practical optical chips. As electronics speed up, "power consumption is becoming a more constraining issue, especially at the chip level," says Keren Bergman, professor of electrical engineering at Columbia University, who was not involved with the research. "You can't have your laptop run faster without it getting hotter" and consuming more energy, says Bergman. Electronics have an upper limit of about 100 gigahertz. Optical chips could make computers run faster without generating waste heat, but because of the nature of light--photons don't like to interact--it takes a lot of energy to create speedy optical signals.

The new ultrafast modulator gets around this problem because it can compress data encoded with conventional equipment to ultrahigh speeds. The Cornell device is called a "time telescope." While an ordinary lens changes the spatial form of a light wave, a time lens stretches it out or compresses it over time. Brian Kolner, now a professor of applied science and electrical and computer engineering at the University of California, Davis, laid the theoretical groundwork for the time lens in 1988 while working at Hewlett-Packard. He made one in the early 1990s, but it required an expensive crystal modulator that took a lot of energy. The Cornell work, Kolner says, is "a sensible engineering step forward to reduce the proofs of principle to a useful practice."

-S.JAYASHANKAR, III-A

Intel Prototypes Low-Power Circuits

Chips that let errors happen, then correct them, use less power overall

The smaller a silicon transistor becomes, the more electrons it leaks. That can mean unreliable, battery-draining chips. Researchers at Intel have come up with a way of dealing with the problem that subverts the industry's strong preference for precision. The company's prototype chip operates in a low-power but error-prone mode, but it detects and corrects its errors. This approach, researchers have found, saves 37 percent on power compared with running in conventional mode with no loss of performance.

One way to ensure better performance, even as transistors get smaller and leakier, is to operate them at a relatively high voltage all the time. Most microprocessors today are designed to run at a level that represents a kind of worst-case scenario, says Wen-Hann Wang, director of circuits and systems research at Intel and vice president of Intel Labs in Hillsboro, OR. But it's rare that a user is doing so many things at once--say, playing a graphics-rich game, uploading video to Facebook, and surfing the Web--which the microprocessor needs to be running in its highest range. And the high-voltage, high-performance design strategy is becoming a problem for mobile devices, where battery life is important. One way to prolong battery life is to run the chip at a lower voltage, but this leads to errors.

"When a circuit operates at a low voltage, the system gets noisy," says Wang. Circuits running at low voltages are particularly vulnerable to variations in temperature, and to a phenomenon called "voltage droop": running a low level of electrical current through billions of transistors at the same time is like taking a shower while the washing machine and dishwasher are running. Just as this heavy water usage can cause a drop in water pressure, running many operations at low voltage can cause sudden drops in current through an individual transistor, and this can lead to errors. Another source of errors that becomes more of a problem at low voltages are inconsistencies that emerge as a chip ages.

These errors are rare, but significant. For example, they might lead an image to freeze as it's being rendered, forcing the user to restart the process. To cope with the errors that occur when running at low voltage, Intel is developing a strategy the company calls "resilient" circuits. "You don't know how

things will vary, and in which circuits errors will happen," says Wang. "But if you don't worry about it, it will be okay most of the time."

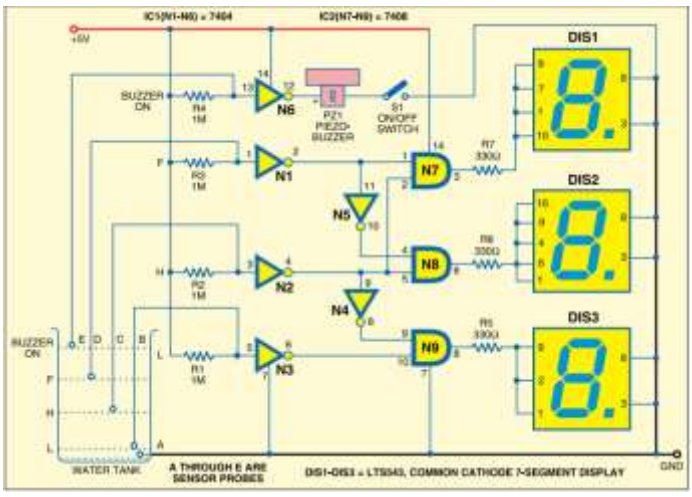
-JAYA PRAKASH, III-A

THIS WATER-LEVEL INDICATOR USES A 7-SEGMENT DISPLAY

This water-level indicator uses a 7-segment display, instead of LEDs, to indicate the water level (low, half and full) in the tank. Moreover, a buzzer is used to alert you of water overflowing from the tank. The circuit shows the water level by displaying L, H and F for low, half and full, respectively.

The circuit uses five sensors to sense the different water levels in the tank. Sensor A is connected to the negative terminal (GND) of the power supply. The other four sensors (B through E) are connected to the inputs of NOT gate IC 7404. When there is a high voltage at the input pin of the NOT gate, it outputs a low voltage. Similarly, for a low voltage at the input pin of the NOT gate, it outputs a high voltage.

When the tank is empty, the input pins of IC 7404 are pulled high via a 1-mega-ohm resistor. So it outputs a low voltage. As water starts filling the tank, a low voltage is available at the input pins of the gate and it outputs a high voltage.



When the water in the tank rises to touch the low level, there is a low voltage at input pin 5 of gate N3 and high output at pin 6. Pin 6 of the gate is connected to pin 10 of gate N9, so pin10 also goes high. Now as both pins 9 and 10 of gate N9 are high, its output pin 8 also goes high. As a result, positive supply is applied to DIS3 and it shows 'L' indicating low level of water in the tank.

Similarly, when water in the tank touches the half level, pins 4 and 5 of AND gate N8 become high. As a result, its output also goes high and DIS2 shows 'H' indicating half level of water in the tank. At this time, pin 9 of gate N9 also goes low via gate N4 and DIS3 stops glowing.

When the water tank becomes full, the voltage at pin 1 of gate N1 and pin 3 of gate N2 goes low. Output pin 3 of gate N7 goes high and DIS1 shows 'F' indicating that the water tank is full.

When water starts overflowing the tank, pin 13 of gate N6 goes low to make output pin 12. The buzzer sounds to indicate that water is overflowing the tank and you need to switch of the motor pump.

Assemble the circuit on a general-purpose PCB and enclose in a suitable box. Use a non-corrosive material such as steel strip for the five sensors and hang them in the water tank as shown in the circuit diagram. Use regulated 5V to power the circuit.

-T.JAGADEESH, III-A

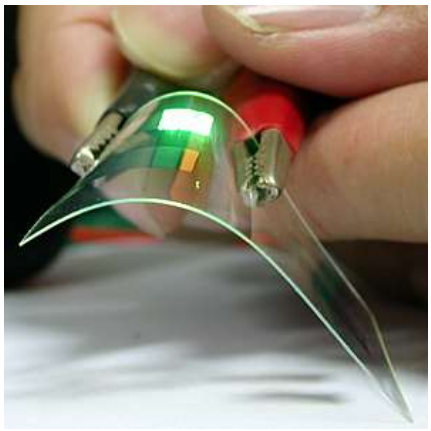
SMS BASED ECG TRANSMISSION PRTOCOL IMPLEMENTATION

The increasing development on mobile communication always design of new applications on different areas. Telemedicine is one of these areas and studies and researches in it are of extremely important to the society. An important application in telemedicine is the use of Electro Cardio Gram (ECG) to transmit ECG test remotely in a compact are portable way. However, ECG transmission technology available today is still expensive and is based on use of modems and, recently, PDAs. On this context, a portable ECG device based on mobile phone is welcome. A basic mobile service is the Short Message Service (SMS) that is present at all mobile phone at extremely low cost. To take advantage of SMS in design of a mobile ECG, it is and efficient compression method that always mobile phone to transmit ECG signal via SMS. A mobile monitoring system utilizing Short Message Service with low cost hardware equipment has been developed and implemented to enable transmission of the temperature and ECG signal of a patient.

-R.V.CHANDRAKANTH, III-A

OLED

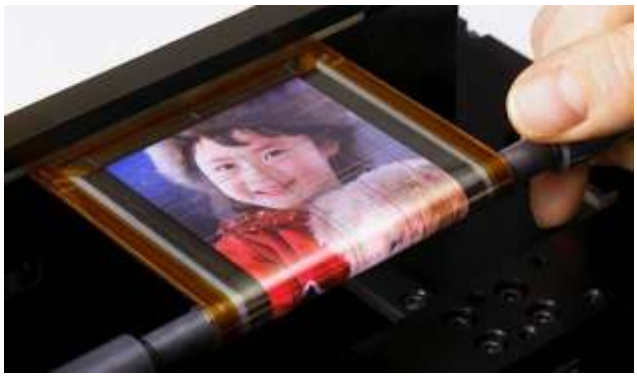
The most ubiquitous new display technology at the show is the organic light-emitting diode, or OLED. These thin, exceptionally bright, low-power displays are already starting to appear in car stereos and cell phones, but more exciting uses loom as the technology advances.



Companies such as Kodak and Tohoku Pioneer have prototypes of small, active-matrix color OLED panels intended for a Palm or Pocket PC. They're much brighter than the dull transflective or reflective color screens in some of today's handhelds.

Organic LED is formed of aggregates of Amorphous and Crystalline molecules without definite arrangement. The OLED has many thin layers of organic material which emit light through the process of Electrophosphoresence. The organic material uses substances that can emit red, green blue and white lights. When a potential is applied to the cathode and anode, OLED creates light which appears as the display.

Because they are luminescent (naturally light-emitting), OLED panels don't require backlighting, which makes them both thinner and less power hungry than LCDs used in other PDAs. And OLEDs also have a faster response time than LCDs, so they're better at displaying video. When these panels appear initially in PDAs, probably no sooner than a year and a half from now, they will cost a bit more than today's backlit LCDs, especially as LCD prices level off. Still, OLED prices could drop as manufacturing ramps up.



- P MADHAVI, II – A

POTENTIAL DANGERSOTENTIAL DANGERSDUE TO NANOMATERIALS

In recent years, Nano science and technology is emerging as one of the most important and exiting areas of interest in all fields of science and technology. Nano means 10^-9.when the material size is reduced to Nano scale then it exhibits different properties than that of in bulk form The flip side to these benefits is the possibility of assemblers and disassemblers being used to create weapons or being used as weapons themselves, or for them to run wild and wreak havoc. Other less invasive, but equally perilous, uses of nanotechnology would be in electronic surveillance. Potential dangers include:

- Weapons 1.Miniature Weapons and Explosives 2. Disassemblers for Military Use
- Rampant Nano machines 1.The Gray Goo Scenario 2.Self Replicating Nano machines
- Surveillance 1.monitoring 2.tracking
- "The Gray Goo Scenario:" disassembling every molecule encountered by nano weapons. Weapons are an obvious negative use of nanotechnology. Simply extending today's weapon capabilities by miniaturizing guns, explosives, and electronic components of missiles would be deadly enough. However, with nanotechnology, armies could also develop disassemblers to attack physical structures or even biological organisms at the molecular level. A similar hazard would be if general purpose disassemblers got loose in the environment and started disassembling every molecule they encountered. This is known as "The Gray Goo Scenario." Furthermore, if nano machines were created to be self-replicating and there was a problem with their limiting mechanism, they would multiply endlessly like viruses. Even without considering the extreme disaster scenarios of nanotechnology, we can find plenty of potentially harmful uses for it. It could be used to erode our freedom and privacy; people could use molecular sized microphones, cameras, and homing beacons to monitor and track other Address ethical issues before the technology is irreversibly developed.

Ethical issues & analysis:

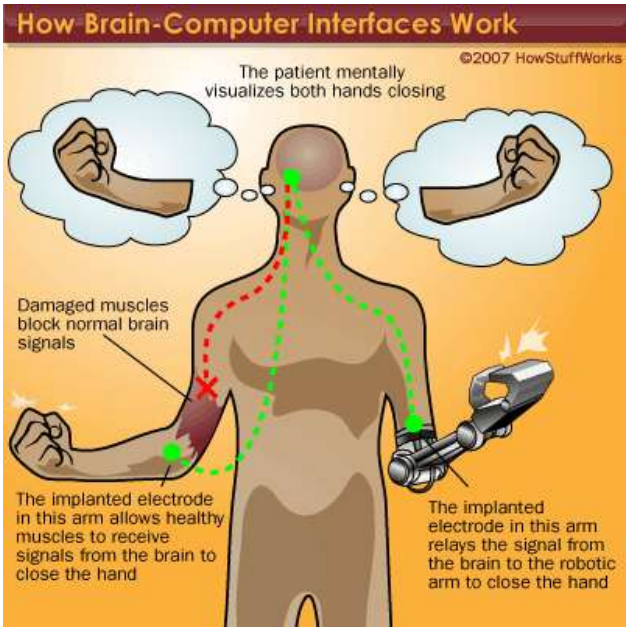
With such awesome potential dangers inherent in nanotechnology, we must seriously examine its potential consequences. Granted, nanotechnology may never become as powerful and prolific as envisioned by its evangelists, but as with any potential, near-horizon technology, we should go through the exercise of formulating solutions to potential ethical issues before the technology is irreversibly adopted by society. We must examine the ethics of developing nanotechnology and create policies that will aid in its development so as to eliminate or at least minimize its damaging effects on society.

- .K.R LIKITHAREDDY, II-A

BRAIN COMPUTER INTERFACE

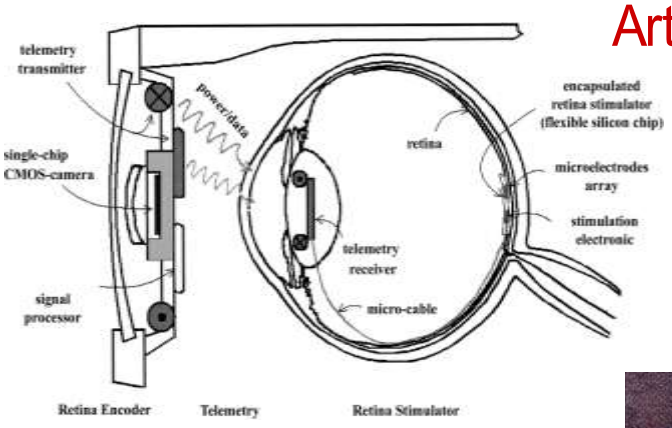
Brain computer interface research has targeted repairing damaged sight providing functionality to analyzed people .Researchers have built devices to interface with neural cells and entire neural network in cultures outside animals. One of the most exciting areas of BCI research is the development of devices that can be controlled by thoughts. Once the basic mechanism of converting

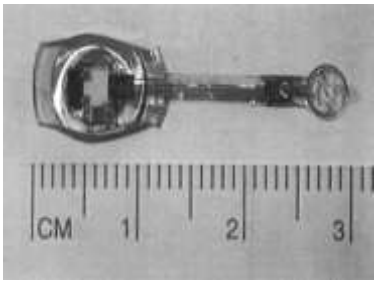
thoughts to computerized action is perfected, the potential uses for the technology are almost limitless. Instead of a robotic hand disabled users could have robotic braces attached to their limbs allowing them to move directly and interact with environment.



A more difficult task is interpreting the brain signals for movement in someone who can't physically move their own arm. With a task like that, the subject must "train" to use the device. With an EEG or implant in place, the subject would visualize closing his or her right hand. After many trials, the software can learn the signals associated with the thought of hand-closing. Software connected to a robotic hand is programmed to receive the "close hand" signal and interpret it to mean that the robotic hand should close. At that point, when the subject thinks about closing the hand, the

Artificial Vision





http://www.wired.com/wired/archive/10.09/vision.html

signals are sent and the robotic hand closes.

A similar method is used to manipulate a computer cursor, with the subject thinking about forward, left, right and back movements of the cursor. With enough practice, users can gain enough control over a cursor to draw a circle, access computer programs and control a TV.

Once the basic mechanism of converting thoughts to computerized or robotic action is perfected, the potential uses for the technology are almost limitless. Instead of a robotic hand, disabled users could have robotic braces attached to their own limbs, allowing them to move and directly interact with the environment. This could even be accomplished without the "robotic" part of the device. Signals could be sent to the appropriate motor control nerves in the hands, bypassing a damaged section of the spinal cord and allowing actual movement of the subject's own hands.

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