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
Sai Charan Theja Reddy B
Karthik A
Jaya Prakash G
Sree Harsha Reddy D

Coordinator of Positron
Mr. J T Pramod
Asst. Professor

Chief of Positron
Dr. S A K Jilani
Professor

Our sincere thanks to review committee

Dr. A R Reddy, Ph.D.

Professor & HOD

Professor Dr. B D Venkataramana Reddy, Ph.D.

Professor Dr. D Asha Devi, Ph.D.

Assoc. Professor Mr. M Mahesh, (Ph.D.)

***Message from the Correspondent*:**

Positron 2K13 offers an excellent opportunity for making each one of the students feels 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.

- Sri. N Vijayabhaskar Choudary (Ph.D)

***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.

- Sri. 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 newsletter "Positron 2K13". 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 newsletter 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:

The Department of Electronics and Communication Engineering was established in the year 1998. It has permanent affiliation to JNTUA, Anantapur. The department offers B.Tech program in **Electronics and Communication Engineering** with an intake of 180 students, and **Diploma in Electronics and Communication** with an intake of 60 Students. ECE department also offers two M.Tech programs **Digital Electronics & Communication Systems** with and intake of 36 students and **Micro & Nano Electronics** with an intake of 18.

A team of highly qualified senior faculty runs it with specializations in Communication Systems, Microwave Engineering, Digital Signal Processing, Digital Image Processing, VLSI and Embedded Systems. The main objective of the department, right from its inception, is to train and develop high quality man power, as well as technical inputs primarily to meet the requirements of Indian Industries and R & D establishments both in India and Abroad. The department is adopting its curriculum, laboratories to stay abreast of Electronics and related areas.

The department is regularly conducting the seminars, guest lectures, workshops and technical symposiums on latest technologies. Apart from the curriculum the department is having project development center to impart the real and practical technical skills to the students. The department has been in forefront for research and training activities in Digital Signal Processing and Digital Image Processing.

The following laboratories are operated by the department:

1 Electronic Devices & Circuits Lab.

2. Analog and Digital Communication Lab.

3. Electronic Circuit Analysis Lab.

4. Pulse and Digital Circuits Lab.

5. Linear and Digital IC Applications Lab.

6. Microprocessor and Microcontroller Lab.

7. Embedded System Lab.

8. Digital Signal Processing Lab.

9. Microwave & Optical Communication Lab.

10. Digital System Design Lab.

11. Communication & Signal Processing Lab.

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.

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.

Department Association:

ECE department has started an association named MITSECA (MITS Electronics & Communication Association) on 31st of January 2013. In this, programs such as Guest Lectures, Illuminatus, sports and extra-curricular activities, symposiums, project exhibitions and other social activities will be organized.

Faculty members:

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 (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-03, NJ-04, NC-02,
2	 Dr. S.A.K.Jilani	Professor	Ph.D, Sri Krishna Devaraya, 2002	Digital Signal Processing	INJ-16 INC-01 NJ-10 NC-02
3	 Dr. B.D.Venkata Ramana Reddy	Professor	M.Tech, Ph.D S.V.U, 1999 Ph.D	Electronic Instrumentation & Communication systems	INJ-13 NC-12 NJ-02
4	 Mr. Mahesh	Associate Professor	M.Tech (Ph.D), J.N.T.U, 2005	Digital System & Computer Electronics	INJ-05 INC-03 NC-01

5	 Dr. D. Asha Devi	Professor	M.Tech, Ph.D,	Web based embedded systems and VLSI applications using FPGA and CPLDs.	INJ-07 INC-12 NJ-01 NC-04
6	 Mr. M.Sreenath Reddy	Assistant Professor	M.E, PSG Tech, 2007 (Ph.D)	Applied Electronics	INC-08 NC-02 INJ-01
7	 Mr. M.Jagadeesh Babu	Assistant Professor	M.E, Anna University, 2006	Applied Electronics	NJ-03 NC-01
8	 Mr. B.Sukumar	Assistant Professor	M.Tech, J.N.T.U, 2007	Digital Electronics & Communication Systems	NC-01 NJ-01 INJ-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, INJ-01
11	 Ms. G. R Hemantha	Assistant Professor	M.Tech, J.N.T.U.A, 2010	Digital Electronics & Communication Systems	NC-01 INJ-01
12	 Mr. J. T. Pramod	Assistant Professor	M.Tech, J.N.T.U.A, 2010	Digital Electronics & Communication Systems	NC-03 INJ-01
13	 Ms. C.K. Hemantha Lakshmi	Assistant Professor	M.Tech, J.N.T.U.A, 2010	VLSI System Design	INJ-01
14	 Mr. R.Ravindraiah	Assistant Professor	M.Tech, J.N.T.U, 2009	Digital Electronics & Communication Systems	INC-04 NC-02 INJ-01

15	 Mr. M.Venkata Srinu	Assistant Professor	M.Tech, JNTUA,2011	Signal Processing	INJ-04 NC-01
16	 Mr. P R Ratna Raju .K	Assistant Professor	M.Tech, NIT,Calicut, 2011	Communication Systems	NIL
17	 Mr. P Sravan Kumar	Assistant Professor	M.Tech, SVNIT,Surat, 2010	Tele Communications	NIL
18	 Mr. L. Ashok	Assistant Professor	M.Tech, NIT,Calicut, 2011	Tele Communications	NC-01

19	 Mr. B. Vamsi Krishna	Assistant Professor	M.Tech, GPREC,Kurnool, 2011	Communications & Signal Processing	INJ-01 NC-01
20	 Mr. V. Satish Kumar	Assistant Professor	M.Tech, NIT,Calicut, 2011	Signal Processing	INJ-01
21	 Mr. D. Balakrishna Reddy	Assistant Professor	M.tech NIT,Calicut, 2011	Signal Processing	NIL
22	 Ms. G. Naga Swetha	Assistant Professor	M.tech, AITS,Rajampet	Embedded Systems	NC-02
23	 Mr. G Sambasiva Rao	Assistant Professor	M.tech, College of Engg, Trivandrum	Micro Wave & TV Engineering	INJ-02 INC-02

24	 Mr. D. Girish kumar	Assistant Professor	M.tech, VR Siddartha Engg Clg, Vijayawada	Communications & Signal Processing	NIL
25	 U.Sreenivasulu	Assistant Professor	M.tech, SVPCET,Puttur	VLSI System Design	NIL

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	 A.Revathi	Teaching Assistant	B.Tech, KSRM College of Engg, 2012
5	 K.Shobha Rani	Teaching Assistant	B.Tech NBKRIST 2011

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	 Ms. K.Keerthi	Assistant Professor	B.Tech, MITS 2011	Electronics & Communication

2	 Ms. M.Haritha	Assistant Professor	B.Tech, MITS, 2008	Electronics & Communication
3	 Ms. N.Hima Bimdu	Assistant Professor	B.Tech IFET 2011	Electronics & Communication
4	 Ms. L.P.Divya Meenakshi	Assistant Professor	B.Tech SSITS, 2011	Electronics & Communication
5	 Ms. A.Jayasree	Assistant Professor	B.Tech MITS, 2011	Electronics & Communication

Supporting Staff of ECE Department:

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

Publications of the Faculty upto 2012-13:

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.
3. Dr A.R.Reddy, Optimization of memory for AES Rijndeal Algorithm implementation on Embedded system, IJERT, Vol. 1, ISSUE 7, SEPT 20112, ISSN:2278-0181

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:

International Journals:

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.
10. Dr.S.A.K.Jilani, The Real Time Vehicle License Plate Identification System, IJERD, Vol. 2, Issue 4, July 2012, eISSN : 2278-067X, pISSN : 2278-800X, PP. 35-39.
11. Dr.S.A.K.Jilani, Animal Sign language recognition using MEMS, IJCER, Vol. 2, Issue. 5, Sep 2012, ISSN 2250-3005(online), PP1210-1214
12. Dr.S.A.K.Jilani, Video Steganography by LSB Substitution Different Polynomial Equations, IJCER, Vol. 2, Issue. 5, Sep 2012, ISSN 2250-3005(online).

13. Dr.S.A.K.Jilani, Shape From Focus, IJERA, Vol. 2, Issue 4, June-July 2012, ISSN: 2248-9622, PP.686-692.
14. Dr. S.A.K. Jilani, Professor, Human activity recognition system using accelerometer & Zigbee, LAMBERT academic publishing, Nov 2012.

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

Dr. B.D. Venkataramana Reddy:

International Journals:

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.
11. Prof. B.D.Venkatramana Reddy, Professor in Electronics & Communication Engineering Department of Madanapalle Institute of Technology & Science, Madanaplle has been awarded a Degree of Philosophy (Ph.D.) by JNTUA in Sept 2012. He has done his research on the topic'' Hyper complex Fourier transforms of color images using Image Processing Techniques'' under the Guidance of Dr. T. Jayachandra Prasad, Professor of ECE Department at RGM College of Engineering & Technology, Nandyal.
12. B.D.Venkatramana Reddy, ''A Neural Network based Face Detection using Gabor Filter Response'', IJNN, Vol. 2, Issue 1, 2012, PP.06-09, Bioinfo Publications.
13. B.D.Venkatramana Reddy, ''QSVD - QFT based Approach to Color Image De-noising'', CiiT IJDIP , Dec 2012.
14. B.D.Venkatramana Reddy et al; ''Texture Segmentation using Multichannel Gabor Filtering'', IOSR Journal of Electronics and Communication Engineering, Vol.2, Issue 6, PP.22-26
15. 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.
16. 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.
17. 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.
18. 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.

3. Mahesh and M.V. Subramanyam "Automatic Feature Based Image Registration Using SIFT Algorithm", Third International Conference on Computing, Communication and Networking Technologies (ICCCNT'12) 2012, Coimbatore.26- 27th July 2012.
4. Mahesh and M.V. Subramanyam "Feature Based Image Registration Using Steerable Filters and Harris Algorithm",LNEE, p. 163-171 ff. Fourth International Conference ARTCom - 2012, Bangalore Oct 19-20, 2012.
5. Mahesh and M.V. Subramanyam "Automatic Image Mosaic System Using Steerable Harris Corner Detector" , International Conference on Machine Vision and Image Processing (MVIP12) ,14th and 15th Dec 2012, psg,tech, Coimbatore.
6. Mr Mahesh, Low - resolution satellite image enhancement using DT-CWT & SVD, IJARECE, Vol.11, Issue 4,OCT 2012 ISSN: 2278-909X PP:40-45.
7. Mr Mahesh, Invariant Corner Detection Using Steerable Filters And Harris Algorithm, Signal & Image Processing, An International Journal (SIPIJ), Vol.3, No.5, October 2012.
8. Mr Mahesh, Image Mosaic Using Speeded Up Robust Feature Detection, IJARECE, Vol. 1, Issue 3, Sep 2012, ISSN: 2278 – 909X.
9. Mr Mahesh, Corner Detection Enhancement Using Steerable Filters, IJSER, Vol. 3, Issue 8, Aug 2012.
10. Mr Mahesh, Sift Based Image Mosaic Algorithm, IJCAE, Vol.3 Issue 1, July 2012, ISSN-0988-0382E, PP 9- 15.

B. Sukumar:

National Journals:

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.
3. B Sukumar, A Qualitative Approach for Denoising of CFA Images by PCA using Co-Variance method, IJHETM, Vol.1,Issue 1 , Aug 2012, ISSN (Print):2319-1767.

National Conferences:

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:

National Conferences:

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.

a. G.R. Hemantha, Audio Steganography by LSB Substitution Using Different Polynomial Equations, IJAST, Vol. 4, Special Issue No.6, Nov 2012, ISSN 2229 5216, PP 35 of 86.

J.T. Pramod:

International Journals:

1. J.T.Pramod, Fingerprint Recognition Using Gabor Filter And Frequency Domain Filtering, IOSRJECE, Vol. 2, Issue 6, Sep-Oct 2012, ISSN : 2278-2834, PP 17-21.

National Conferences:

1. J T Pramod, G.N. Kodandramaiah, Dr. S.A.K.Jilani, 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.
2. J T Pramod, "Design of speech coder using CELP", National Conference on Electronic Communication systems, MITS, Madanapalle, 16th March 2011
3. J T Pramod, "Vowel Recognition through Formant Frequencies of Vocal Tract", National Conference on Electronic Communication systems, MITS, Madanapalle, 16th March.

V. Sai Kumar:

National Journals:

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

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.

S. Arun:

International Journals:

1. S.Arun, G Krishna Mohan Reddy, FPGA Implementation of Canonical Signed Digit Multiplier, IJECR, ISSN 2231-1246 Volume 3, Nov 2 (2012), PP. 115-120.

Ms. C. K. Hemantha Lakshmi:

International Journals:

1. A Qualitative Approach to Design Multi Channel UART Using FPGA and FIFO Technologies, GJRE , Vol. XII, Issue vVv II Version I© 2012 Global Journals Inc. (US), July 2012.

Mr. R. Ravindraiah:

International Journals:

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

International Conferences:

1. R.Ravindraiah. Fahimuddin.Shaik, Dr.M.N.Giri Prasad, E.Sreenivasulu-"Qualitative and Quantitative Analysis of Segmentation of Human Retinal Images" Selected to International Conference on Computer, Communication and Electrical Technology(ICCCET 2011), archieved in IEEE publication and IEEE explorer, National Engineering College, Tirunelveli, Tamilnadu, India, pp 76-80, March 18-19.
2. R.Ravindraiah, Fahimuddin.Shaik, Dr.M.N.Giri Prasad, Dr. Jaya Bhaskar rao, A.Abdul Rahim, A.Somasekhar-"Qualitative Analysis of Segmentation Methods in Detection of Atherosclerosis in Diabetic Patients" Proceedings of International Conference on Emerging Trends in Robotics & Communication Technologies(INTERACT 2010), Published by IEEE Press and IEEE explorer, Sathyabama University,Chennai. India, pp 263-267, Dec 03-05, 2010.
3. R.Ravindraiah, Fahimuddin.Shaik, Dr.M.N.Giri Prasad, "Detection of Anatomic Structures in Human Retinal Images through Edge based Segmentation approach" Proceedings of International Conference on Novel Applications of Nano Technology (NANO-T'10), Arunai Engineering College, Tiruvannamalai, Tamilnadu, pp 102-106, 29th Sep-1st Oct 2010.

National Conferences:

1. R.Ravindraiah. Fahimuddin.Shaik, Dr.M.N.Giri Prasad, E.Sreenivasulu-"A New approach for Detection of Lesions in Non-proliferative Diabetic Retinopathy" Proceedings of DEVICE 2010, ANITS, Vishakapatnam, Andhra Pradesh, pp 219-223, 13-14th, Nov 2010.
2. R.Ravindraiah Fahimuddin.Shaik, "Detection Of Exudates In Diabetic Retinopathy Images" Proceedings of NCEEE 2010, Sathyabama University, Chennai, Tamilnadu, India, 29th July 2010.

Mr. M. Srinath Reddy:

National Conferences:

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.
8. M.Srenath Reddy, Artifacts removing from EEG signals by ICA algorithms, IOSRJEEE,Vol 2, Issue 4,Oct 2012, ISSN:2278-1676 PP:11-16.
9. M.Sreenath Reddy, V.Satish Kumar & M.Venkata Srinu, EMBEDDED SYSTEMS, JNTU College of Engineering, Anantapur, 05 October,2012.
10. M.Srenath Reddy, Artifacts removing from EEG signals by ICA algorithms, IOSRJEEE,Vol 2, Issue 4,Oct 2012, ISSN:2278-1676 PP:11-16.

Mr. M.Jagadeesh Babu:

International Conferences:

1. Training for the building and managing the conference (IEEE Conference workshop), *13 October* 2012, IEEE Hyderabad, Cosponsored by IEEE Vizag Bay Subsection.
2. M Jagadeesh Babu, Radio frequency grid for electronic voting machine theft prevention based on MEMS and GSM, IJARECE, Vol 1, Issue 4, Oct 2012, ISSN: 2278-909X.

Mr. M.Venkat Srinu:

International Journals:

1. Qualitative evaluation of enhancement methods for analysis of acute leukemia images, IJEST, vol.3 No.8 August 2011.
2. M.Sreenath Reddy, V.Satish Kumar & M.Venkata Srinu, EMBEDDED SYSTEMS, JNTU College of Engineering, Anantapur, 05 October,2012.
3. Low –resolution satellite image enhancement using DT-CWT & SVD, IJARECE, Vol 1,Issue 4,Oct 2012 ISSN: 2278-909X PP:40-45.
4. A Modified SVD-DCT Method for Enhancement of Low Contrast Satellite Images, Vol. 2 Issue. 5, ISSN 2250-3005(online), Sept 2012.

Mr. G. Sambasiva Rao:

International Journals:

1. ICACCCT, IEEE Conference, Thanjavur, 24th & 25th Aug 2012.
2. A novel FGMOS voltage reference with temperature & power supply compensation, IJERT, NOV 2012.

Mr. B. Vamsi Krishna:

International Journals:

1. A Game Theoretic Analysis of Fixed Channel Allocation for Multiple Radios in Multihop Wireless Networks. ISSN : 0976-8491 (Online) | ISSN : 2229-4333 (Print), IJCST Vo l. 3, IS Su e 2, Ap ril - Ju n e 2012

Mr. U. Sreenivasulu:

Workshops Attended:

1. Mission 10x conducted by WIPRO in 2012.
2. A National Level Workshop on Digital Image processing in JNTUK, Kakinada in 2012.

Achievements of ECE students in 2012-13:

Paper Presentations:

- D. Hari Krishna (11695A0406), of III B.Tech has presented a paper on " *Meteor Burst Communication* **"** in TECHNOLECT'12, National Level Technical Student symposium conducted in Intell Engineering College, Kalyandurg Road,Ananatapur on 13-10-2012 and won second price.
- S.Safiya (10695A0493) & E.Veena (10695A04B0) of III B.Tech has presented a paper on " Neuromorphic VLSI design using Bat echo location**" in** MAITHREYA'12, National Level Technical Student symposium conducted in Siddartha Educational Academay Group of Istitutions, Tirupati, 07-10-2012.
- D. Hari Krishna (11695A0406) & D. Vijaya Lakshmi (10695A04B4) of III B.Tech has presented a paper on " Communication without Satellite**" in** MAITHREYA'12, National Level Technical Student symposium conducted in Siddartha Educational Academay Group of Istitutions, Tirupati, 07-10-2012.
- Rajesh (10695A0478) of III B.Tech has presented a paper on " Blue Ray Disc**" in** SAMYAK'2012, National Level Technical Student symposium conducted at KLUniversity in Guntur in Oct 2012.
- V. Anusha (10695A0409) and M. Monisha Swarnasree (10695A0456) of III B.Tech had presented a paper on Imbricate Cryptography for Networks Security in PIXEL'12 conducted in JNTUA, Anantapur on 28-12-2012.

Extra-Curricular Activities:

- S. Fouzia Zeehana (10695A0421) of III B. Tech had got I Prize for Rewind Action Replay in Virinchi'12 conducted at Sri Padmavathi Mahila Viswavidyalam in Tirupati on 21st to 23rd Dec -2012.

Articles by Students:

What Will 2013 Bring For Education?

As the time is passing, we all have witnessed many changes and many things have changed since past few decades. There has been a lot of change since the inception of internet and web. People's way of living and doing things has changed. Life; in short has evolved in past few years. But what lies ahead? What is next? After so many things have changed, what else remains to be seen?

In this article we will see the impact of these changes on education, we will also discuss that whether the changes on education has been good or bad and further what impact can be seen on education in year 2013. The first thing we need to analyze is that what impact education had gone through. If we compare the era of our parents with that of ours, we can see that education has made progress in leaps and now the kind of education we are having is totally different and a lot has changed in these years.

Way of doing custom coursework and assignments has changed. The importance of course work has increased and the nature of the work has changed too. This era is marked with competition and survival of fittest. Only those who are able to survive in this race are the ones who get to live a better life. In this sense, world has become a more cruel place to live in, with only those with the power surviving. Power here determines not only the money, but skills and talent.

In all these years we have seen that everything is now linked with internet, students get their assignments and custom coursework all on internet and college portal or slate. The way of doing and assigning things has changed, and those who cannot adapt to this change cannot survive. Now the expectations from the students have increased too. In recent years a lot of news has been in buzz about plagiarism and college drop outs..

The impact on education has been that the importance of education has increased; many private schools and colleges are coming up and the competition to get in a good college in immense. Students try really hard to get in a good college, and once they get in they struggle hard to remain in college. Many students do part time job along with the studies and this is the reason that many students are not able to complete their college. Despite of the fact that they have financial burden on them, teachers are coming up with stricter guidelines and by giving them lengthy custom coursework, they make matters worse for them.

-B.SAI CHARAN THEJA REDDY (II-B)

UNIQUE P-MAIL ADDRESSING

---An internet based application

1. INTRODUCTION:

Internet is a worldwide system of interconnected computer networks. The origin of the Internet can be traced to the creation of ARPANET (Advanced Research Projects Agency Network) as a network of computers under the auspices of the U.S. Department of Defense in 1969. Today, the Internet connects millions of computers around the world in a non-hierarchical manner unprecedented in the history of communications. The Internet is a product of the convergence of media computers, and telecommunications. It is not merely a technological development but the product of social and political processes, involving both the academic world and the government (the Department of Defense). From its origins in a non-industrial, non-corporate environment and in a purely scientific culture, it has quickly diffused into the world of commerce. The Internet is the worldwide, publicly accessible network of interconnected computer networks that transmit data by packet switching using the standard Internet Protocol (IP). It is a "network of networks" that consists of millions of smaller domestic, academic, business, and government networks, which together carry various information and services, such as electronic mail, online chat, file transfer, and the interlinked Web pages and other documents of the World Wide Web. This type of technology that we are using today is facing a lot of problems on the following aspects:

The Security level is not up to the mark.

- A person can have more than one mailing account and is a big problem to remember many ID's and passwords.
- Person has to carry Mobiles or laptops for communication.
- Complexity in maintaining administration and registration details of people in the country.
- Risk, expenditure and complexity in every field.
- Intelligence privacy is not possible.

To overcome these problems we have introduced a new concept called **Unique P-mail Systems**.

2. TECHNOLOGIES USED:

The technologies that would be used in these systems are Embedded Systems with Digital Signal processing & Biometrics Identifications, VLSIdesign, Boolean algebra, Artificial neural-networks, Artificial Intelligence.

3. INSERTION OF THE CHIP INTO THE BRAIN:

The chip will be inserted into the brain of the child using the most common medical methods such as GUN-SHOT method and LAPROSCOPIC methods etc. The chip so positioned in the brain so that it should fit comfortably to directly interact with one of the main nerves of the brain. A high degree of sophistication and care should be taken by the doctors to find a proper position in the brain where it can comfortably fit into and can easily interact with the main nerve of the brain.

4. ANALYSIS:

In our large solar system many satellites revolve around the earth all the times. The satellites that revolve around the earth 24-hours have the total control over these chips. The collected

information from the chips is sent to the destination by the satellites, where the destination may be base station or another chip. As the person grows, the chip has to be changed once every 10 years since the capacity and capability of the person changes. The chip doesn't have its own read-write memory but utilizes the registers present in the Brain. The up to date information will be stored in the registers of brain.

The information collected by satellites will be stored in the registers of the brain. All the activities that are to be performed by the person will be recoded within the system and guides the user always in every aspect. This process will be done by using the chip present inside the brain. As the chip also has a lifetime it should also be recharged for every 10 years.

Already it is known that the size of chip will be increased for every 10 years, so it is to be recharged.

The satellites will be accessing the information in the chip as shown.

As shown in the figure all the satellites take

Information from well-designed chips and delivers an appropriate response to the user of the system. In this way, the entire system works. The chip is embedded with internal software which has many specifications. The tasks that are to be performed by the chip will be discussed in further part of the paper.

5. ASSIGNING P-MAIL ADDRESS:

According to the concept of P-mail systems, a unique name or a number will be assigned to the person. The name may contain alpha-numeric values.

The format of the number is as follows:

User ID: C000INDAPNLRKTA5656

From the above user ID it is clear that the first letter 'C' indicates whether the particular person is in active or not(C=0→unconscious ,C=1→conscious).The next three numeric digits represent the country name in which he is presently located(A serial number will be given to each country based on alphabetical order for example America→009),the next three letters IND indicates the country to which he is actually belongs to i.e., INDIA. The next two letters determine the state name i.e., AP, Andhra Pradesh, then comes the district name i.e., NLR, NELLORE the last alphabet characters KTA gives the city name i.e., KOTA. Finally, the last 4 numbers render the code of a particular person. In this way, the P-mail address will be given to a particular user and he will be identified with that ID. Now, we need security for that so, password is needed, but there is a great problem with passwords is that it may be hacked and leads to change in information which results in abnormal conditions. So, considering these problems with passwords, on behalf of alphanumeric passwords, we use finger prints of the particular person. This will be more secure way to identify a person as no two finger prints will match each other. By this way of using finger prints the security enhancement is achieved.

User ID: C000INDAPNLRKTA5656

Password:

Thus a unique identification number and a

Password will be given to every person.

- Public resources, government schemes can be effectively implemented, and cheatings, scams, frauds in public schemes can be easily avoided. this brings the actual freedom and democracy for people to protect their rights.
- We can bring revolutionary changes in education system, by avoiding difficulties in providing hall-tickets for various exams separately, mass copying, cheating. Education profile will be maintained with perfect database.
- Providing ultimate, extreme level security for museums, famous temples such as Tirumala, Kanipakam etc... With reduced expense and police power.
- Social crimes such as murders, rapes, harassments can be easily reduced.
- Stress on police department will be reduced by detecting the criminals through GPS.
- Marital issues such as multiple marriages, cheating marriages can be easily handled.
- Makes the INDIA limited population country.
- Expenses needed for advertisement, promotions will be avoided by on- line buying's and selling's.
- Stuff needed for communication is reduced.
- Totally it will change the entire life style of humans as painless, loss less and luxuries.

In future, the computer will also be changed and will be as follows.

6. COST ANALYSIS:

As far as market knowledge concerns an approximate analysis is done. Cost of individual components is approximately analyzed as follows

1. Cost of simple transmitting and receiving antenna is Rs.25

2. Transmitter and receiver circuit is Rs.125.

3. Cost of signal shaping circuit is Rs.329.(Including all).

4. Cost of Digital signal processor is Rs.2000.

5. Cost of all interfacing circuits is Rs.600

6. Total cost is Rs.3079

On integrating all these devices on the single chip using VLSI technology the overall cost of the chip will be drastically reduced to 250(approximately)

7. CONCLUSION:

In today's life Internet plays an important role in every aspect of our life starting from mailing to very large businesses. So, it is very essential to learn it in a more effective way and also motivate all illiterates about this.

The above discussed concept of P-mail systems also plays an important role in human life. It exclusively takes care of all the activities done by the human in his lifetime.

This application may not be working this time but it is an Idea that will be implemented in the coming future. Seeing all these evidences we finally conclude that in the next generation, it is sure that Internet is everything and everything is Internet.

-E.SANTHOSH (II-B)

Low down on Electronics and communications engineering

For the souls who hate programing and fear the academic pressure in Civil Engineering and yet want to be among the most coveted fields of engineering welcome to the world of Electronics and Telecommunications engineering. This is a low down on the life of a student pursuing Electronics and Telecommunications engineering.

The first year of Electronics and Telecommunications engineering (EXTC) is cramped with academics. You spend nights after nights working on writing or in most cases copying assignments for a variety of subjects like Applied Science (one of the most boring subjects) C programing, Applied Mathematics, Basic Electronics and Electronics. However one the most challenging and demanding subjects is Engineering Mechanics. A subject which majority of the students find it difficult to clear at first attempt. The same goes for engineering drawing however they are very essential in getting the basics right.

After the academic rigor of the first year the student steps into SEXTC (This is what 2nd year students are called fortunately or unfortunately). This is the year of focus. The subjects include Analog and digital electronics, Basic Control system, Mathematical transforms and basic of communication engineering. These subjects keep the student busy for majority of the year.

After the feeling of being technical seeps in, the third year sees an introduction of Microprocessors and Microcontrollers. You learn about the mechanics of computer architecture. Mathematics will dominate the third year with focus on Probability and random processes which form a core subject for career in wireless networks and telecom.

The final year is the most taxing year for the student. He has to submit his final year project along with academics and other extracurricular activities he would be involved in. The subjects of Discrete Time Signal Procession (DTSP) and Digital Communication (DCOM) are the toughest subjects in four years of EXTC. Hence a student is advised to be academically inclined in his fourth year.

The 8th Semester of the fourth year is the easiest semester in EXTC as there are only four subjects. Subjects like Optical Fiber Communication (OFC) are the simplest. Students who are interested in a career in networking do study Computer Communication Network (CCN) in-depth.

"Information collected from seniors"

-S.PHANEENDHAR RDDDY (II-B)

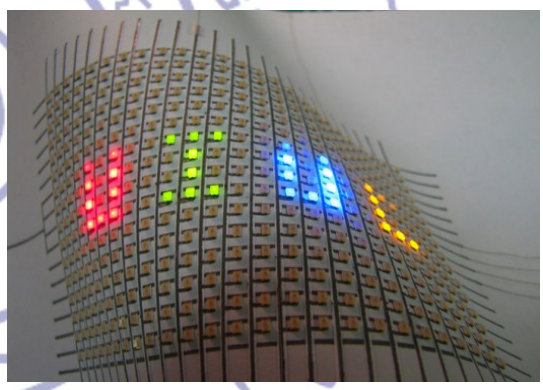
Factual - 10 Biggest Brain Damaging Habits

1. No Breakfast.
2. Overeating.
3. Smoking.
4. High Sugar consumption.
5. Air Pollution.
6. Sleep Deprivation.
7. Head covered while sleeping.
8. Working your brain during illness.
9. Lacking in stimulating thoughts.
10. Talking Rarely.

-D.SREE HARSHA REDDY (II-B)

3D-HANDWRITING TECHNOLOGY

The basic method for making electronic circuits is by designing a PCB or a Vera board for the purpose. This technology called 3-D handwriting simplifies the whole process by just drawing the layout on a paper with a silver colored liquid metal ink. The same method of making an electronic circuit can now be done by drawing on a paper with a silver colored liquid metal ink. This whole basic process has been named 3-D Handwriting by its inventors – researchers at the University of Illinois at Urbana-Champaign.



The device consists of a normal looking pen in which an ink with conducting property is filled. This pen is then used to draw the closed electronic circuit on the paper. This circuit is then powered with the help of a battery.

In the image shown below, an LED display with the university initials, UIUC was made through this method. A flexible array of colorful LED's are mounted on a sheet of paper, where some interconnected lines are drawn between the LED's with the help of silver ink. The whole circuit is made conducting by connecting it to an external power.

Researchers had to make a detailed study on making the property of the ink suitable for its purpose. The ink must have some characteristics like; it should stay as a liquid as long as it is kept inside the pen. When drawn with it on any surface like wood or paper, it should dry off quickly. To make this possible, the ink was made from silver nanoparticles and its size was further decreased using an acid. To provide more viscosity and smoothness, the ink was modified with cellulose. One of the main advantages of this method is that it is easy to use, cheap (as soon as it is marketed abundantly), and portable. There is no need of any special software to design the electronic circuit. It can be drawn on any surface. All you need is a steady hand.

To know how much wear and tear the ink can withstand, the paper was folded many times. After about a 1000 folding, the ink lines were seen to be broken.

Some of the applications of such a device are that electronic circuits and displays can be made more flexible and can also be used to make 3D objects.

-C.TEJASVI (II-B)

Future of robotics

Types of robots

Humanoid robots:

- Lara is the first female human robot.

Robot with artificial muscles (metal alloy strands that instantly contract when heated by an electric current) instead of electric motors (2006).

Asimo is one of the most advanced projects as of 2009.

Modular robots: can be built from standard building blocks that can be combined in different ways.

- Utility fog
- M-Tran - a snake-like modular robot that uses genetic algorithms to evolve walking programs
- Self replicating robots - modular robots that can produce copies of themselves using existing blocks.
- Swarmanoid is a project that uses 3 specialized classes of robots (footbots, handbots and eyebots) to create an effective *swarm*. Such a swarm should be able to, for example, clean a bedroom with each robot doing a specialized task.
- Self-Reconfiguring Modular Robotics

Applications

- Caterpillar plans to develop remote controlled machines and expects to develop fully autonomous heavy robots by 2021. Some cranes already are remote controlled.
- It was demonstrated that a robot can perform a herding task.
- Robots are increasingly used in manufacturing (since 1960s). In the auto industry they can amount for more than half of the "labor". There are even "lights off" factories such as an IBM keyboard manufacturing factory in Texas that is 100% automated.
- Robots such as HOSPI are used as couriers in hospitals, etc. Other hospital tasks performed by robots are receptionists, guides and porters helpers, (not to mention surgical robot helpers such as Da Vinci)
- Robots can serve as waiters and cooks

Market evolution

Today's market is not fully mature. One or more software compatibility layers have yet to emerge to allow the development of a rich robotics ecosystem (similar to today's personal computers one). The most commonly used software in the robotics research is Free Software solutions such as Player/Stage or cross-platform technologies such as URBI. Microsoft is currently working in this direction with its new proprietary software Microsoft Robotics Studio. The use of open source tools helps in continued improvement of the tools and algorithms for robotic research from the point one team leaves it.

Projected robotics timeline

- 2015-2020 - every South Korean and many European households will have a robot, The Ministry of Information and Communication (South Korea), 20072018 - robots will routinely carry out surgery, South Korea government 20072022 - intelligent robots that sense their environment, make decisions, and learn are used in 30% of households and organizations - TechCast
- 2030 - robots capable of performing at human level at most manual jobs Marshall Brain
- 2034 - robots (home automation systems) performing most household tasks, Helen Greiner, Chairman of iRobot
- 2050 - robot "brains" based on computers that execute 100 trillion instructions per second will start rivaling human intelligence]

Military robots :

- 2015 - one third of US fighting strength will be composed of robots - US Department of Defense, 2006.2035 - first completely autonomous robot soldiers in operation - US Department of Defense, 2006Developments related to robotics from the Japan NISTEP [10] 2030 report :

- 2013-2014 — agricultural robots (AgRobots,[11][12]).
- 2013-2017 — robots that care for the elderly
- 2017 — medical robots performing low-invasive surgery
- 2017-2019 — household robots with full use.
- 2019-2021 — Nano robots

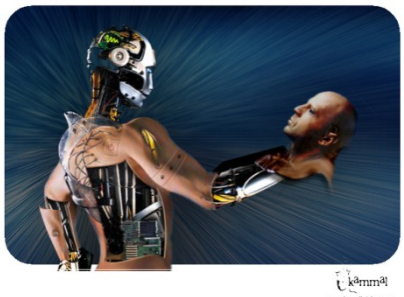
Robot rights

According to research commissioned by the UK Office of Science and Innovation's Horizon Scanning Centre, robots could one day demand the same citizen's rights as humans. The study also warns that the rise of robots could put a strain on resources and the environment.

-V.SAFFIYA AZMI (II-B)

CYBORGS [HUMAN COMPUTER INTERACTION]

Cyborg is a cybernetic organism who's mental and physical abilities are far extended by the machine technology. It's partly human and partly a machine in the years ahead we will witness machines with intelligence more powerful than that of humans. This will mean that robots, not humans, make all the important decisions. It will be a robot dominated world with dire consequences for humankind. The question is - Is there an alternative way ahead? Humans have limited capabilities. Humans sense the world in a restricted way, vision being the best of the senses. Humans understand the world in only 3 dimensions and communicate in a very slow, serial fashion called speech. The possibility exists to enhance human capabilities. To harness the ever increasing abilities of machine intelligence, to enable extra sensory input and to communicate in a much richer way, using thought alone. This

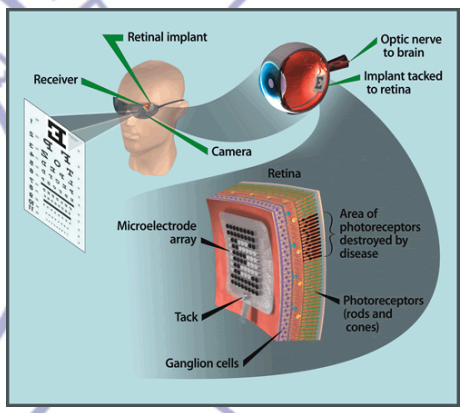


possibility is made possible in the form of Cyborgs. A Cyborg is a Cybernetic Organism, part human part machine; it thrives on the inputs both from the living senses and from the machine interface which acts as an enhancement module. It is obvious that the process of technical penetration of consciousness is inseparable from the development of the cyborg, and involves the replacement, augmentation and integration of parts of the human body with machines. And this process has obvious evolutionary implications and may be simplified and schematized in a mode.

–P.MADHAVI (III-A)

ARTIFICAL VISION USING EMBEDED SYSTEMS

'When you are in the dark even your shadow evades you', this might sound cliché but its true in the case of millions who cannot see. Injuries or genetic defects may cause blindness at any stage of life and this is really unfortunate. This paper looks at an adept way to overcome this adverse glitch in humans and visionise the blind. Since vision depends mainly on nervous system, it would mean trying to heal or change the nervous system. It would be better to say -"we see with our brains than with our eyes". The sole principle used to visionise a blind is – "DECEIVING OUR BRAINS".



Miraculous innovations occur when two branches of science merge and in this case medical and engineering sciences come together with such methods to evade blindness. The credential part of this paper focuses on these methods,

a) Microchips. b) Nano tube implant. c) Digital artificial vision.

d) Ocular prosthetics. e) Braille type writer.

Revolution in miniaturization, nanotechnology, image processing etc. has can be averted. Adaptability of humans made implantations flexible.

-G.JAYAPRAKASH (III-A)

Xbox 720, the Future of Gaming

Xbox fans are anxiously anticipating the formal announcement of the launch of a new gaming system. The Xbox 720, as fans are already calling it, may not be announced for some time yet, but that hasn't stopped the rumor mills from turning out guesses at games and features. While some may be wishful thinking, others are likely to be true, and gamers are thrilled.

Microsoft has hinted at a late 2013 launch of the new console, which is likely to be sleeker and smarter than its predecessor, and will provide more than just gaming. It will probably feature Blu-ray and a DVR, and is designed to be the only box needed in the living room, offering movies, music, and more.

Sources say that the processing power of the Xbox 720 will be six times as powerful as its predecessor, the 360. This would certainly bring more power to the gaming experience. It would

also make it the most powerful of the three leading consoles currently on the market, beating out the PlayStation 3 and even the upcoming Wii U.

Of course, many gamers are more interested in the more in depth graphics and more realistic gaming experience, and Microsoft are not likely to disappoint. Already, there are talks of a Halo 5 game and open world action adventure game 'Watch Dogs' being released around the same time as the console itself. Gaming critics believe the amazing graphics displayed in the Watch Dogs demo indicates that they are designed for a new generation console capable of providing better, more realistic graphics than consoles currently available, and more similar to those Produced on high end PCs.

With the new Xbox 720 will also come a second generation Kinect, and likely many new games to accompany it? The Kinect will also likely be more integrated with the control of the console, although handheld controllers will still be used.

With a release date likely to coincide with next year's holiday shopping season, gamers have plenty of time to get themselves on Santa's nice list, in hopes of receiving what is surely set to be the new future of in home gaming consoles.

-THEJA REDDY.P (II-B)

COMPUTER FORENSICS

Computer forensics is a branch of forensic science. Forensics is the scientific analysis of people, places and things to collect evidence during crime investigations that helps to prove innocence or guilt in court. Computer forensics, sometimes called digital forensics. But it specializes in the scientific analysis of computer communications and the data on computer storage devices, such as disks and CDROMs. Consequently, computer forensics experts are often called "Cyber Cops", "Cyber Investigators" or "Digital Detectives". Investigators use a variety of techniques and proprietary forensic applications to examine the hard drive copy. After physically isolating the computer in question to make sure it cannot be accidentally contaminated, investigators make a digital copy of the hard drive. Once the original hard drive has been copied, it is locked in a safe or other secure storage facility to maintain its pristine condition. All investigation is done on the digital copy, searching hidden folders and unallocated disk space for copies of deleted, encrypted, or damaged files. Any evidence found on the digital copy is carefully documented in a "finding report" and verified with the original in preparation for legal proceedings that involve discovery, depositions, or actual litigation. In a homicide forensics investigation, law enforcement agencies present photographic and physical evidence. Similarly, in Computer Forensics, after initiation of the special boot procedure of computer, the investigator utilizes computer forensic software to create a bit-stream image or "exact snapshot" of the target hard drive and all other external media, such as floppy or zip disks, which are subject to the investigation. Computer Forensics software allows the investigator to recover all deleted files that have not been overwritten, as well as other forms of unallocated or temporary data. Information contained in swap files, printer spooler files, file stack and other temporary or buffer files are examples of data residing on a computer drive that are not normally visible to the user.

Some of the typical applications of Computer Forensics

1. Investigate and uncover evidence of illegal activities conducted via computer, such as credit-card fraud, intellectual-property theft, pedophilia, terrorism and computer system intrusion (hacking). Illegal activities conducted via computer are generally referred to as "computer crimes" or "cyber-crimes".

2. Investigate and uncover evidence of crimes that weren't directly committed via computer, but for which the accused might have stored evidence on computer data storage devices

3. Detect and close computer system security holes through "legal" hacking.

-D.SREE HARSHA REDDY (II-B)

HUMAN AREA NETWORK

Human society is entering an era of ubiquitous computing, where everything is networked. In addition to the WANs (Internet) and LANs, there are applications best served by Human Area Networks (HANs) that connect the last meter. RedTacton is a new Human Area Networking technology that uses thesurface of the Human body as a safe, high speed network transmission path. In addition to the human body, various conductors and dielectrics can be used as transmission media; they may also be used in combination. Perhaps many of us have imagined the future as a place crawling with antennas and emitters, due to the huge growth of wireless communications. RedTacton involves initiating communication with a touch that could result in a wide range of actions in response. So, NTT combined touch and action to coin the term Tacton, and then added the word Red -- a warm color -- to emphasize warm and cordial communications, creating the name RedTacton.

According to NTT Laboratories, our whole body is the perfect conductor for electronic data, meaning that information such as music and films could be downloaded in seconds via your elbow. Wireless networks — often hampered by intermittent service — will eventually be replaced, NTT says, by "human area networks".

-T.NITHIN (II-A)

Reasons to Switch from Dialup to Broadband Internet

Broadband Internet transmits Internet signals sometimes more than 40 times faster than dialup Internet. If you're still using a telephone line to get a signal and search the web, it's time to upgrade to broadband. You deserve the speed of broadband!

Unlike dial-up, broadband isn't going to tie up your phone line when you're trying to surf the web. What if someone important is calling? If you're online and it's engaging your phone line, you could be missing important calls and that's not conducive to a healthy lifestyle. Instead, make the switch to Broadband Internet. Broadband is going to mean you won't miss another important phone call.

Downloading music, photos and even webpages with a dialup connection can be likened to waiting for a turtle to cross the Brooklyn Bridge…the long way! It's slow. You don't have to suffer those slow speeds anymore. Upgrading is going to have profound effect on you, as songs, pictures and more will download and upload in mere seconds. You can stream movies, music and more without any interruption to the connection.

The broadband connection does not disengage. The connection is always on and can be engaged at any time, often wirelessly from devices and more. This means you don't have to listen to a long period of buzzing and squawking as your dial up connects to the Internet. Instead, whenever you sit down at your computer, you'll find you're always connected. Broadband Internet will only disengage if there is an underlying technical issue to deal with.

Acquiring a broadband connection isn't difficult or expensive. Many cable providers also offer a broadband cable upgrade. This simply requires you to make a phone call to your cable provider and request they send a technician to set up with cable Internet. Another broadband option engages your telephone line, without tying it up. This is called Asymmetrical Digital Subscriber Line (ADSL). Lastly, you could contact a satellite company for broadband satellite Internet.

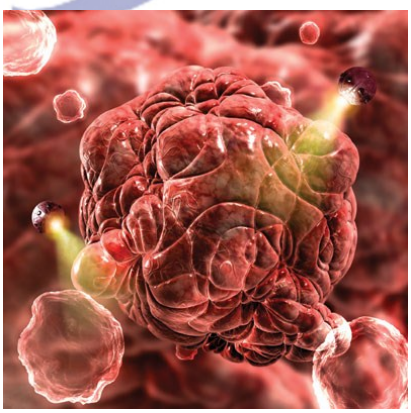
Satellite is sometimes the only option for those living in very rural areas.

Price is likely a flat-rate monthly payment for Broadband Internet, somewhere between $30 and $80. This may seem expensive compared to your dialup connection, but you're getting better speeds and you don't have to worry about having a second phone line, which should be factored into your dialup bill. If you don't have a dedicated second phone line, you're still engaging your active phone line. One important missed call could have a disastrous impact on your life. It's not worth the risk.

When it comes to upgrading your Internet, you'll be doing yourself a favor by abandoning your old dialup connection in favor of something faster. These days in order to get the most from the web you need to have a fast connection that's able to download the complicated technologies many sites now use. Now is the time to upgrade to broadband. Broadband Internet keeps your phone lines clear and means you can stay online for longer.

-SUNIL KUMAR (II-B)

NANOMEDICINE



It is the application of nanotechnology (engineering of tiny machines) to the prevention and treatment of disease in the human bodies. More specifically, it is the use of engineered Nano devices and nanostructures to monitor, repair, construct and control the human biological system on a molecular level. The most elementary of Nano medical devices will be used in the diagnosis of illnesses. A more advanced use of nanotechnology might involve implanted devices to dispense drugs or hormones as needed in people with chronic imbalance or deficiency states. Lastly, the most advanced Nano medicine involves the use of Nano robots as miniature surgeons. Such machines might repair damaged cells, or get inside cells and replace or assist damaged

intracellular structures. At the extreme, Nano machines might replicate themselves, or correct genetic deficiencies by altering or replacing DNA (deoxyribonucleic acid) molecules.

We need to find a way of introducing the Nano machine into the body, and allowing it access to the operations site without causing too much ancillary damage. We have already made the decision to gain access via the circulatory system.

The first is that the size of the Nano machine determines the minimum size of the blood vessel that it can traverse. We want to avoid damaging the walls of whatever blood vessel the device is in, we also do not want to block it much, which would either cause a clot to form, or just slow or stop the blood flow. What this means is that the smaller the Nano machine the better. However, this must be balanced against the fact that the larger the Nano machine the more versatile and effective it can be. This is especially important in light of the fact that external control problems become much more difficult if we are trying to use multiple machines, even if they don't get in each other's way.

The second consideration is we have to get it into the body without being too destructive in the first place. This requires that we gain access to a large diameter artery that can be traversed easily to gain access to most areas of the body in minimal time. The obvious candidate is the femoral artery in the leg. This is in fact the normal access point to the circulatory system for operations that require access to the bloodstream for catheters, dye injections, etc., so it will suit our purposes.

-D.SHAKEER HUSSAIN (II-B)

NANOROBOS

Like primitive engineers faced with advanced technology, medicine must 'catch up' with the technology level of the human body before it can become really effective. Since the human body is basically an extremely complex system of interacting molecules (i.e., a molecular machine), the technology required to truly understand and repair the body is molecular Machine technology. A natural consequence of this level of technology will be the ability to analyze and repair the human body as completely and effectively as we can repair any conventional machine today.

Nanotechnology is "Research and technology development at the atomic, molecular and macromolecular levels in the length scale of approximately 1 -100 nanometer range, to provide a fundamental understanding of phenomena and materials at the Nano scale and to create and use structures, devices and systems that have novel properties and functions because of their small and/or intermediate size."

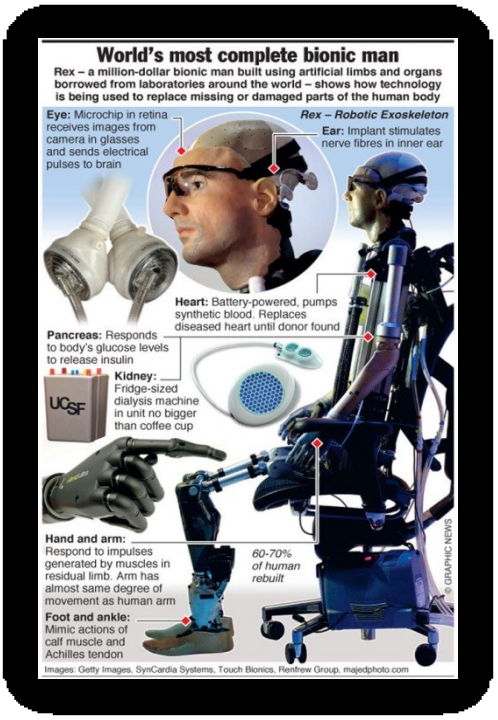
This paper will describe a micro/Nano scale medical robot that is within the range of current engineering technology. It is intended for the treatment and/or elimination of medical problems where accumulation of undesired organic substances interferes with normal bodily function.

-KARTHIK A (II-A)

WORLD'S MOST COMPLETE BIONIC MAN (REX)

When Luke Skywalker received a perfect bionic replacement for the hand that was cut off in Star Wars Episode V, the idea of replicating human organs and body parts seemed far-fetched.

Thirty years later, the idea is no longer just science fiction. Scientists, among them the creators of "Rex" – the world's most complete bionic man, unveiled in London this week – believe they can now replicate about two-thirds of the human body. "We were surprised how many of the parts of the body can be replaced," said Rich Walker, managing director of the robotics team Shadow, who built Rex. "There are some vital organs missing, like the stomach, but 60 to 70 per cent of a human has effectively been rebuilt." This is heralded, then, as the dawn of the age of bionic man – although specialists caution that we are still feeling our way.



Social psychologist Bertolt Meyer, who also worked on Rex, has an interesting perspective: he was born without his left hand and has prosthesis. "I have looked for new bionic technologies out of personal interest for a long time and I think that until five or six years ago nothing much was happening," he said. "Suddenly we are at a point where we can build a body that is great and beautiful in its own special way."

Not everyone in the field believes the recent progress, impressive as it is, places us on the road to complete replication of human limbs, organs and tissue. "We have motors which can lift things but, if you want to mimic the dexterity of a hand, we are not there yet," said Professor Steven Hsiao of the Johns Hopkins University in Baltimore.

"What we are beginning to achieve is building prostheses which look like human body parts, but we are a long way away from making ones which relay sensory information the way the human body does."

Professor Hsiao drew the comparison between Star Wars and real life, saying: "The goal is the scene in the film where Luke Skywalker gets his new hand tested and is able to feel pain: we are not there. In 10 years, we will be able to build a robot which has the dexterity to pick up a pen and write with it, but it will not be able to send back sensory information."

Rex, billed as the pinnacle of robotics achievement to date, will meet his public from tomorrow at the Science Museum in London. Dubbed the Million-Dollar Man (that's how much he cost to make), he consists of a prosthetic face, hips, knees, feet and hands, all of which are commercially available. Other off-the-shelf items include an artificial retina, cochlea and heart.

Rex's other internal organs, among them a pancreas, a set of artificial lungs and bladder, are still in development. Some of the technology cannot work without human input; bionic hands, for example, need muscles and signals from the brain to function. Other parts, such as the heart and pancreas, are designed to work on their own.

Other body parts remain out of the reach of scientists. Mr. Walker says: "The only artificial stomach we have seen is very large and generates electricity, so you couldn't use it to replace a

human stomach, but I am sure there are people in the regenerative medicine community working on that."

And replication of the human brain, the most complex structure known to man, was not even on the radar, Mr Walker said. "This is a showcase for prosthetic parts; it shows exactly where we've got to in being able to replace parts of a human."

Bertolt Meyer adds: "I'd say it's highly unlikely that, in our lifetimes or in that of our grandchildren, we will see a fully articulate human body with an artificial intelligence."

Mr. Meyer said there would be ethical issues surrounding prostheses if they began to outperform human body parts. "Should I be allowed to cut off my real hand and replace it with something, does that gives me an unfair advantage over people who cannot afford this? I'm not saying that is going to happen but these are questions that should be on the table before that technology becomes available."

M.G.RAVIVARMA (II-B)

V---Velour=bravery
I---Impel=to drive an action against something
C---COMPLIANCE=TO BE OBEDIENT
T---TOROTUOUS=FULL OF TWISTS & TURNS
O----ORDEAL=HORRIFIC EXPERIENCE
R----RECIPIENT= RECIEVES SOMETHING
Y----YIPPEE=EXPRESSING DELIGHT (or) EXCITEMENT

-G.SUNIL (II-B)

Unbelievable Facts

Top 50 Unbelievable Facts (General)

Here are 50 outstanding ones to start you off…

1. If you are struck by lightning, your skin will be heated to 28,000 degrees Centigrade, hotter than the surface of the Sun.

2. If you trace your family tree back 25 generations, you will have 33,554,432 direct ancestors – assuming no incest was involved.

3. The average distance between the stars in the sky is 20 million miles.

4. It would take a modern spaceship 70,000 years to get to the nearest star to earth.

5. An asteroid wiped out every single dinosaur in the world, but not a single species of toad or salamander was affected. No one knows why, nor why the crocodiles and tortoises survived.

6. If you dug a well to the centre of the Earth, and dropped a brick in it, it would take 45 minutes to get to the bottom – 4,000 miles down.

7. Your body sheds 10 billion flakes of skin every day.

8. The Earth weighs 6,500 million million million tons.

9. Honey is the only food consumed by humans that doesn't go off.

10. The Hawaiian alphabet has only 12 letters.

11. A donkey can sink into quicksand but a mule can't.

12. Every time you sneeze your heart stops a second.

13. There are 22 miles more canals in Birmingham UK than in Venice.

14. Potato crisps were invented by a Mr Crumm.

15. Facetious and abstemious contain all the vowels in their correct order.

16. Eskimoes have hundreds of words for snow but none for hello.

17. The word "set" has the most definitions in the English language.

18. The only 15 letter word that can be spelled without repeating its letters is uncopyrightable.

19. Windmills always turn counter-clockwise.

20. The "Sixth Sick Sheik's Sixth Sheep's Sick" is the hardest tongue-twister.

21. The longest English word without a vowel is twyndyllyngs which means "twins".

22. 1 x 8 + 1 = 9; 12 x 8 + 2 = 98; 123 x 8 + 3 = 987; 1234 x 8 + 4 = 9876; 12345 x 8 + 5 = 98765; 123456 x 8 + 6 = 987654; 1234567 x 8 + 7 = 9876543; 12345678 x 8 + 8 = 98765432; 123456789 x 8 + 9 = 987654321

23. The word "dreamt" is the only common word in the English language that ends in "mt".

24. Albert Einstein never wore any socks.

25. The average human will eat 8 spiders while asleep in their lifetime.

26. In space, astronauts cannot cry because there is no gravity.

27. Hummingbirds are the only creatures that can fly backwards.

28. An ostrich's eye is bigger than its brain.

29. Cockroaches can live 9 days without their heads before they starve to death.

30. A flamingo can eat only when its head is upside down.

31. The lighter was invented before the match.

32. The average left-handed person lives 7 years LESS than a right-handed person.

33. The average person has over 1,460 dreams a year!

34. Scientists with high-speed cameras have discovered that rain drops are not tear shaped but rather look like hamburger buns.

35. The first Internet domain name ever registered was Symbolics.com on March 15, 1985.

36. When Alexander Graham Bell invented the telephone back in 1876, only six phones were sold in the first month.

37. Approximately 7.5% of all office documents get lost.

38. Business.com is currently the most expensive domain name sold: for $7.5 million.

39. In 2001, the five most valuable brand names in order were Coca-Cola, Microsoft, IBM, GE, and Nokia.

40. In Canada, the most productive day of the working week is Tuesday.

41. In a study by the University of Chicago in 1907, it was concluded that the easiest colour to spot is yellow. This is why John Hertz, who is the founder of the Yellow Cab Company, picked cabs to be yellow.

42. It takes about 63,000 trees to make the newsprint for the average Sunday edition of The New York Times.

43. On average a business document is copied 19 times.

44. The largest employer in the world is the Indian railway system in India, employing over 1.6 million people.

45. Warner Chappel Music owns the copyright to the song "Happy Birthday." They make over $1 million in royalties every year from the commercial use of the song.

46. All babies are colour-blind when they are born.

47. Children grow faster in the springtime than any other season during the year.

48. Each nostril of a human being registers smells in a different way. Smells that are made from the right nostril are more pleasant than the left. However, smells can be detected more accurately when made by the left nostril.

49. Humans are born with 350 bones in their body, however when a person reaches adulthood they only have 206 bones. This occurs because many of them join together to make a single bone.

50. May babies are on average 200 grams heavier than babies born in other months.

-D.SHAKEER HUSSAIN(II-B)

Tongue twisters:

I wish to wish the wish you wish to wish, but if you wish the wish the witch wishes, I won't wish the wish you wish to wish.

-B.SAI CHARAN THEJA REDDY (II-B)

List of students placed:

- M. K. Fayaz
- K.Karthik Acharyulu
- G. Jaheer Ahamed
- G. Reddy Madhukar
- M. Archana
- C. Naga Deepika
- B. Naveen
- G. Bhavya Reddy
- N. Naveen Kumar

"We heartily congratulate them and hope they should have bright future."

-Department of ECE

"To every man upon this earth,
Death comes sooner or later.

And how can a man die better

Facing fearful odds

For the ashes of his father

And the temple of his Gods"

-DEPARTMENT OF ECE