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THE ECE DEPARTMENTAL NEWS LETTER

It's my pleasure to introduce department news letter NEXUS for the month of October 2014, which has been giving us an insight into the happenings in the world of technology and being a mirror reflecting the activities of the department. Last two month has been an eventful one wherein the students have enjoyed the opportunity of having interacted with professionals from the corporate world. We are extremely proud to announce that we have conducted a National level conference on Signal and Image Processing (SIP 2014) on the month of August.

we have conducted a various seminars & workshop for ECE students & also we have signed MOU's with Nokia here. The final years have shown a high level of competence in their respective projects, and I wish our students join various technical and non technical forums to explore their Engineering concepts and technology. I congratulate the team who has taken the initiative for producing this Newsletter

EDITORIAL Dear Readers, The memories of the past keep up our confidence and the hope of the future is what we live for, but the present is the one that keeps our essence alive. This is what the VJEC'ians believe in-living in the present with a penchant for excellence in every sphere of activity with confidence and vision of the future. We are extremely glad to bring forth to you the 2nd volume of Newsletter "**NEXUS**" of Department of Electronics & Communication. The 2nd volume of **NEXUS** brings forth a spectrum of multifarious activities in the Electronics & Communication Engineering department.

Mr.Adarsh K.S (Staff editor),
Mr.Diljo Thomas(Student editor)

ACHIEVEMENT

• Mr. Deepak Joseph & Mr.Shahil T P of S5 ECE represented VJEC in Kannur University inter college chess championship held on September 17,18 &19 2014 at St Joseph College Pilathara and got 3rd prize.

• 2011-2015 batch- 6th semester result- 74% pass

VISION OF ECE DEPARTMENT

Lead the students in the Quest for attaining excellence in the ever evolving technical trends in the field of Electronics and Communication

MISSION OF ECE DEPARTMENT

To empower emerging engineers with state of art technology along with high pattern of discipline nurture career improvement and develop human and social intellectual qualities necessary for the successful practice of the profession

MOU with Nokia Here

Department of ECE & CE department conducted **Community Agreement between Here India private limited (NOKIA) & Vimal Jyothi engineering college** on 8th October 2014.The purpose of this agreement is to allow Nokia Here and Vimal jyothi engineering college to collaborate in HERE'S nokia community expert program through Nokia community Map editor tool and other means as the parties may jointly agree on from time to time. the objective of this project is to jointly verify, improve and maintain the freshness of the here map data through the NOKIA community platform based on a collaboration framework ensuring educational ,cultural and technological exchange. On Behalf of **Here, A Nokia Company** Mr Ravindranath IG (Manager – India Operations) and Mr Abhilash P (Geographic Analyst) handled the session.

BRAIN COMPUTER   - Vishnu D ,S7 ECE

The ability to control a computer using only the power of the mind is closer than one might think. Brain-computer interfaces, where computers can read and interpret signals directly from the brain, have already achieved clinical success in allowing quadriplegics, those suffering "locked-in syndrome" or people who have had a stroke to move their own wheelchairs or even drink coffee from a cup by controlling the action of a robotic arm with their brain waves. In addition, direct brain implants have helped restore partial vision to people who have lost their sight.

Recent research has focused on the possibility of using brain-computer interfaces to connect different brains together directly. Researchers at Duke University last year reported successfully connecting the brains of two mice over the Internet (into what was termed a "brain net") where mice in different countries were able to cooperate to perform simple tasks to generate a reward.

National Conference on Signal and Image Processing (SIP 2014)

Department of Electronics and Communication Engineering of Vimal Jyothi Engineering College, Chemperi organized a National Conference on Signal and Image Processing (SIP 2014), on August 23, 2014.The purpose of national conference on signal and image processing was to explore the latest advances in each of the above, identify further research areas and bring together academicians, researchers, designers, developers and practitioners, who were interested in its vast applications. The forum also provided opportunity for interactive discussions and fruitful and concrete recommendations.

3 days Training Programme

The Department of Electronics & Communication Engineering of Vimal Jyothi Engineering College, Chemperi organized a 3 days Training Programme on **Raspberry pi**, **ARM development with Android & ARM -7 / ARM -9** for final year B.Tech ECE students from 17-19 July, 2014.

The classes are handled by **Mr. Arun Babu S,** Chief Operating Officer from Bitsforge Technologies Pvt.Ltd**,** Eranakulam, **Mr. JIJU YESUDEVAN** from Invade Technologies, Kannur   & **Dr.A.Athif Shah** of ABE semiconductor designs, Chennai. The following topics covered in this training programme .Introduction to image processing, Introduction to Python Programming, Introduction to Raspberry and Programming, arm technology introduction, familiarization of arm architecture and instruction set ,market surve, familiarization of Beaglebone,introduction to embedded OS ,familiarization with android ,porting of android jellybean 4.2.2 on Beaglebone,install and run applications (c, android apps) on Beaglebone.,sensor interfacing with Beaglebone and android. Introduction to Embedded Systems and Designs-A Hawk Eyed Applications, .Embedded Designs with different Embedded CPU-A Kick Start Designs, .Embedded Designs using ARM and RTOS Architectures. The program coordinated by Mr.Jubin Sebastian & Mr.Manoj K C (A.P ECE)

Workshop on PCB design held on 11th & 12TH AUG 2014

The Department of Electronics & Communication Engineering of Vimal Jyothi Engineering College, Chemperi organized a workshop on PCB Design on 11th & 12th Aug 2014, for S5 ECE students. Workshops deal with Introduction to Circuit diagram Editor, Simulation, PCB Design Structure, Component Placement and Design, Testing, Board Analysis, Fabrication output generation. The pedagogy included lectures, dis-

iMouse

- Arun Shajan ,S7 ECE

The remarkable advances of micro sensing micro electromechanical systems (MEMS) and wireless communication technologies have promoted the development of wireless sensor networks. A WSN consists of many sensor nodes densely deployed in a field, each able to collect environmental information and together able to support multihop ad-hoc routing. WSNs provide an inexpensive and convenient way to monitor physical environments. With their environment-sensing capability, WSNs can enrich human life in applications such as healthcare, building monitoring, and home security. A wireless sensor network (WSN) is a wireless network consisting of spatially distributed autonomous devices using sensors to cooperatively monitor physical or environmental conditions, such as temperature, sound, vibration, pressure, motion or pollutants, at different locations.
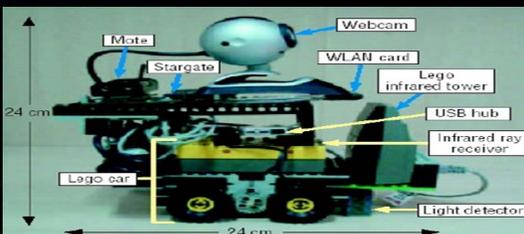
Super Capacitors

- Joseph Mathew,S7 ECE

Super capacitors also known as Electric double-layer capacitors, or electrochemical double layer capacitors (EDLCs), or Ultra capacitors, are electrochemical capacitors that have an unusually high energy density when compared to common capacitors, typically on the order of thousands of times greater than a high capacity electrolytic capacitor. For instance, a typical electrolytic capacitor will have a capacitance in the range of tens of mill farads. The same size super capacitor would have a capacitance of several farads, an improvement of about two or three
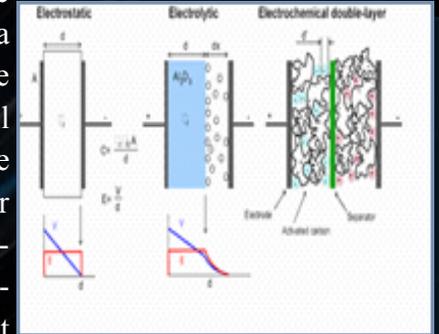
orders of magnitude in capacitance but usually at a lower working voltage. Larger, commercial electric double layer capacitors have capacities as high as

ACTIVITIES

- Students fro m S5 ECE had their industrial visit to UST Global & Unitek power solutions on 26 ,27,&28th Sept 2014

- Technical talk on Linear Circuits by PROF. DINESH BABU ,GEC KANNUR for S5 ECE students held on 23rd AUG 2014.

- Teachers day celebration

- ISTE Student Chapter in Vimal Jyothi Engineering College has been inaugurated by DR P T RAJAN NAMBIAR (National executive council member).