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# TECHNOBYTES

Department of MCA, Kristu Jayanti College of Management & Technology

## Upcoming Events

### ICCTAC

International Conference organized by the department of MCA on 'Current Trends in Advanced Computing' (**ICCTAC 2013**), in association with International Journal of Computer Applications (IJCA) is scheduled on 15th and 16th of February 2013. The Conference would provide an international forum for the presentation and discussion of the emerging technologies in the field of Computer Science and Information Technology. The Conference Proceeding will be published by IJCA. Further Details visit : [www.kristujayanti.com/icctac](http://www.kristujayanti.com/icctac)

### SHELLS

Our Department is organizing a 2 day annual all-India inter-collegiate Computer fest **SHELLS** for those envisioning their careers through their Post-Graduation. It is a two day technical mélange galore with events that test a participant's skill to the hilt amongst the best from all over India. Shells is not only a Technical Fest, it's also a forum that aims at bridging the gap between the corporate world and the Academia. This will be held in March 2013.

## Current Event

The intra-collegiate fest of MCA department "**Manoeuvre - 2012**" is held on 16th November 2012. It is organized by the final year MCA students for the first and second year MCA students. All prelims were conducted between 5th and 15th November 2012.

### Chief Editors :

Rev. Fr. Sebastian T.A, CMI, Principal  
Rev. Fr. Augustine George, CMI,  
Head of the Department

### Staff Editors :

Mr. Muruganathan A & Ms. Jyothi Manoj,  
Assistant Professor, Department of MCA

## IT in the Indian Economy

The domestic market has seen a sporadic growth in deployment of Information and communication technology (ICT) across all industry verticals since the 90's. This has been accelerated with the economy opening up to the global market and requirement of industry standards for delivering optimum results. India has one of the largest and fastest growing economies in the world.

The evolution of IT to encompass multi-tier architecture and location agnostic solution has entrenched the absorption at all functional levels across finance, supply chain, sales & marketing, production and support functions.

The automation with ICT has been propagated by multiple factors from improvement in connectivity, leaner machines, application software with global reach and configured for the Indian market, domestic competition and good education system producing a highly skilled workforce.

While the right balance



between productivity and innovation is different for every company, they are so intertwined that it may not matter much in the end. History shows that more than two-thirds of productivity growth comes from product and process innovation. For example, many innovations help businesses increase output (using the same amount of input) or the value of their goods and services. The payoff of a strategy centered on productivity and innovation is business growth.

The challenge is in extending the benefits garnered by the mainstream industries to the primary agriculture sector. While the bulk of the economic growth is from manufacturing and service, the crucial primary sector

has not seen widespread innovations to keep in pace with other sectors. ICT offers vast offerings to improve productivity, predictability and efficacy to this crucial segment.

World over, ICT has been in the forefront of a new era in industrial revolution and the Indian economy has been swooped up in this whirlpool due to its inertia. The success lies in exploring avenues in the areas offered by IT and exploit them to deliver a sustained model of growth.

The projected growth of 8%-9% is achievable through innovative means involving ICT methodology and conclusive incorporation to improve processes and functions. More important is the expansive mindset to be the harbinger of new innovations to propel growth and development.

Gopa Nair | Senior Sales  
Consultant  
Oracle Application  
Oracle-India



## Principal's Message

It is a pleasant anticipation to get ready for another issue of 'Technobytess'. The MCA Department of Kristu Jayanti College has been working behind the stage towards the reincarnation of this new baby for quite some time. Cheek and jowl, many heads have been fuming to come out with the new bytes for the

new birth. A lot is happening in the world of bits and bytes and for the discerning it is a matter of judicious choice to select the theme and topics for every new issue.

My earnest wish is that 'Technobytess' will provide the right training and insights into the area of publication and scientific

writing. In the academic world, especially in the scientific arena, dissemination of any new invention or expansion of the existing knowledge is of utmost importance. The ever growing repertoire of scientific achievements keeps the march of civilization faster and easier. May the 'Technobytess' experience provide this valuable hands-on component and let us make it a habit, for the students and faculty, to come out with more and more creative productions in our fields of study and research.

Rev. Fr. Sebastian T.A  
Principal

## HOD Message



Technology is a powerful tool capable of transforming our lives by providing quality products, enduring experiences and a better medium for connecting and communicating with the world around us. Progress in the field of technology can be attributed to a critical mass of proactive and creative people, who believed in the power of their ideas and imagination. The creative destruction of technologies

which happens in a short span of time is the greatest challenge and opportunity of our times.

Technology causes startup companies run by very young entrepreneurs to be successful and also causes great firms to fail. Handling this double edged sword of technology which has the power to construct and destruct, is a very difficult balancing act. As a generation we have the privilege to witness and experience the fruits of technical progress in all aspects of our lives. It also gives us the responsibility to take this technical progress forward through our intellectual contributions.

Innovation through research and development is the main propellant which fuels the process of technical progress. Research helps in providing a logical structure to our ideas and innovation helps in transforming these ideas into commercially

viable applications. So a creative idea or a powerful insight is the starting point of this entire process of innovation. But such ideas do not come out of thin air. It requires a conscious and continuous effort to accumulate and assimilate information and associate it with the identified knowledge gap to come up with solutions to bridge this gap. In his famous book 'The Innovator's DNA' Harvard Professor Clayton M. Christensen and his co-authors talk about five skills which are essential for successful innovators. These skills are observing, questioning, experimenting, associating and networking skills.

The objective of education, especially technical education is to provide a nurturing environment and opportunities for students to cultivate and enhance these skills. Unfortunately in many educational institutions, the creativity of the students is

constrained by the boundaries of curriculum. The Department of MCA believes in transcending these boundaries by promoting learning beyond curriculum. This newsletter is an initiative to provide a platform for students to share and discuss their ideas and update information about the revolutionary changes and trends in the field of Information and Communication Technology. The idea behind starting this newsletter is based on our conviction about the power of ideas to change the world and the power of technology to empower people.

I take this opportunity to thank all the people who worked for the success of this endeavor and I wish an enriching knowledge sharing experience thorough this initiative.

**Rev. Fr. Augustine George**  
Dept. of Computer Science

## MCA Programme at a Glance



**Prof. R. Kumar**  
Co-ordinator, Dept. of MCA

The MCA department of Kristu Jayanti College of Management and Technology was established in the year 1994 with the objective of imparting technical education to aspiring youth and also to mould them into professionally competent workforce. At present there are 134 students in the department. As part of enriching the faculty resources, the teachers are encouraged to pursue research in different technical areas. Currently 7 teachers are pursuing their Ph.D, in various universities.

To achieve academic excell-

ence several teaching methods have been followed, like, class room teaching, projects, practical sessions, students seminars, and peer group learning. In order to bridge the knowledge gap between industrial requirements and the curriculum, guest lectures and seminars are organized on certain relevant topics related to various evolving fields in IT industry. These sessions are conducted on a continuing basis by experts from industry.

The special features of the department include the successful conduct of National Conference on Current Trends in Advanced Computing (CTAC) once in a year. The two editions of conferences were sponsored by ISRO. This year the department organizes the International Conference on

Current Trends in Advanced Technology (ICCTAC) in association with International Journal of Computer Applications (IJCA) during 15th-16th February 2013.

Intra and Inter-Collegiate Fests are conducted every year as a part of experiential learning. Industrial visits are also arranged every year. Our students bagged many Championship Trophies and Runners – Up Trophies in various Inter-collegiate IT Fests at National and State level competitions.

To promote professionalism among the student's activities like Attitudinal Work shop, Soft Skills Training, Language Enhancement Programme and Aptitude Enhancement Programme are conducted.

As part of knowledge

sharing, peer to peer teaching is motivated amongst the students. A certificate course in Web Designing is also conducted every year for the UG students. MCA students are the resource persons supported by the faculty members.

The department has collaborated with Computer Society of India(CSI) for organizing seminar, workshops from eminent personalities in IT industry.

The value added programs like CCNA, Dot Net and J2EE are conducted to enhance the students' knowledge in par with the industry requirement. In this academic year students have been placed in Google, NIIT Technologies, UST Global, Alti Source, WOS Technologies, Wipro, Infosys, Keynote and Cognizant.

## Vichaarmanthan



Vichaarmanthan – a platform that gives the students of Kristu Jayanti College an opportunity to interact with Global and Indian Visionaries was conducted on September 26, 2012, in Kristu Jayanti College. A dynamic personality, **Dr. Pawan Agrawal**, CEO, Mumbai Dabbawala Association, was the speaker of the 12th edition of Vichaarmanthan. **Rev. Fr. Augustine George**, Head, Computer Science Department, **Prof. Aloysius Edward**, Programme Coordinator; **Prof. Nelson Michael**, Head, Management Studies and the Student Coordinators, were also present.

"Our watches may go wrong, but the dabbawalas will never go wrong", said Dr. Agrawal. He backed his statement by saying

that so far there hasn't been a single error over 120 years of service. A business that has over 5000 dabbawalas, delivering 200,000 dabbas a day and no single error in their service was very surprising. And to add to this, these dabbawalas are mostly illiterate. The reasons behind this flawless service are the simple values that they possess. Dabbawalas firmly believe that Customer is God and Work is Worship. The value of the customer is considered higher than anything. Even money is secondary to them. They haven't gone on a strike nor has there been a single police case against

them since 1890. "Money should not be your main motive in life, take ownership over your work and money will follow you instead of you running behind it", said Dr. Agrawal.

Mumbai Dabbawalas have never been late in delivering their dabbas inspite of delay in public transport and that is because they are committed to their work. They travel around 120 – 140 kilometers every day carrying around 60 -70 kilos of dabbas daily. Their aim is to reach the allotted destination 20 minutes before their committed time. Dr. Agrawal gave these examples so that the students can learn how



important it is to commit yourself to being punctual. "If you decide to reach on time, nothing can ever stop you", were the words of Dr. Agrawal. Even Prince Charles of England came at the allocated time to meet the dabbawalas because they couldn't afford not delivering dabbas just to meet the Prince of England.

Dabbawalas take pride in their work and follow certain disciplines. "They will not consume alcohol or smoke during work hours, they will always wear a white cap, carry an ID card and will never take a leave of absence without prior notification", said Dr. Agrawal. He was more than happy to answer the questions the students had in store for him. All the questions were answered on a more practical approach than theoretical. He ended on an emotional note thanking each and everyone for giving him an opportunity to share his experience and encouraged the students to use every opportunity to contribute to the society.

## Helium-filled hard disks will suit with Cloud infrastructure



**Mr. Rajesh. H**  
Lecturer, Dept. of CS

Good news for all computer users. On Coming 2013, all computer users are going to find new modern hard disks which would be suitable with cloud infrastructure in future. HGST announced a new helium-filled hard disk drive platform, which will increase capacity and reduce total cost of ownership (TCO) for enterprise and cloud customers. HGST's new helium-filled hard drive, which is expected in 2013, will allow them to go beyond the five-platter design to provide a path for higher capacity storage at lower TCO.

Hitachi Global Storage Technologies (HGST), which is now a subsidiary of hard drive manufacturer Western Digital, announced recently that it will soon be bringing to market a sealed hard disk drive filled with helium instead of air.

Hard disk drives today are not sealed—they have breathing holes (covered inside with activated-carbon micro filters) through which air is drawn in and expelled. As the drive's platters spin, their motion drags the air inside the drive along their surface with a shearing force similar to how the bow of a boat drags water along with it, creating what's called an air bearing. The drive's read and write heads float on this air bearing just a few billionths of a meter above the drive's surface.

HGST's new helium-filled drives will contain more platters

and more read/write heads than air-filled disks, which will translate to higher storage capacities. This is possible because helium is far less dense than air, and the lower density of the gas means that turbulence inside the drive (from external motion or from the movement of the head actuators themselves) will have less of an effect on the position of the read and write heads. This makes more precise head positioning possible, which translates directly to being able to read and write smaller data tracks on the surface of the platters. This new platform allows HGST to design seven-platter drives in a standard 3.5-inch form factor that will cost-effectively extend the capacity and cost-per-gigabyte curve, though HGST didn't state the expected capacities these can reach (estimate 6 TB plus).

Though HGST is not

releasing exact number of storage capacity, it is saying that the new technology could lead to 40 percent higher data density on the drive platters. Additionally, replacing air with helium will cause less drag on the platters as they spin, reducing the energy consumed by the drives by more than 20 percent. This is not a huge amount of energy saved for a single disk, but a data center stuffed with thousands of the sealed helium drives would demonstrate very real cost savings over one using traditional air-filled hard disk drives. Indeed, HGST is directly positioning the drives to be used in cloud infrastructure and large corporate data centers.

Pricing and release dates are not yet known, though HGST expects the drives would be available in 2013.

# Li-Fi – A new technology in Wireless Communication



Every one of us are familiar with Wi-Fi(Wireless Fidelity), which use 2.4gm5 GHz RF to deliver wireless internet access around our homes, colleges, offices and other places. We have become dependent upon these services. But like most technologies, it has its limitations.

While Wi-Fi can cover an entire college, its bandwidth is typically limited to 50-100 Mbps. This is speed is good match for the most current internet services, but insufficient for moving large data files like HDTV movies, music libraries and video games. The more we become dependent upon 'the

cloud' or our own 'media servers' to store all of our files, including movies, music, picture and games, the more we will want bandwidth and speed. Therefore RF-based technologies such as today's Wi-Fi are not the optimal way.

Li-Fi (light fidelity) is the next step in communication technology after Wi-Fi and yes, it is leaps and bounds ahead. Li-Fi uses light for the purpose of transfer of information. Li-Fi technology is based on LEDs for the transfer of data. The transfer of the data can be with the help of all kinds of light, no matter the part of the spectrum that they belong. That is, the light can belong to the invisible, ultraviolet or the visible part of the spectrum. Also, the speed of the internet is incredibly high and you can download movies, games, music etc in just a few minutes with the help of this technology.



## The technology used

Li-Fi came into being due to a technology that is known as the visible light communication. This technology is known to have the ability to get switched off and on at speeds that the human eye is unable to detect without the help of a strong visual aid. Thus, the light appears to be on at all times, which is not really the case and each time the light gets switched off, it is taken to be the binary off mode that is denoted by 1 and when it is switched on, it is considered to be the binary on mode and is denoted by the number 0 and this how the data is passed from one place to another.

**Mr. Amjad Hassan Khan MK**  
Lecturer in Electronics

Li-Fi has applications unimaginable. The internet will become available to practically everyone who has LEDs in the place where they are stationed and that can be underwater, in an aircraft, under the street light on the highway or anywhere else.

Also, the LEDs that will help in making the world even smaller than it presently is will perform their primary function, that is to provide light without any hitch and thus, there will be no trouble faced by people on that front. The technology is known to be much cheaper than the Wi-Fi technology that is presently ruling the world and it is being touted that Li-Fi will soon dethrone Wi-Fi to become the number one form of data transfer as it will be favored by business enterprises and households as well.

# A Research on and IPV6 Low Power Wireless Premise Area Networks



**Mr. G. Prathap**  
Lecturer, Dept.of.CS

In order to comply with future requirements related to the Smart Power Grid, wireless sensors will need to be embedded in household appliances. These appliances, through their embedded sensors, will communicate with the Utility Companies, as well as customers, and provide information related to energy consumption. In order to communicate this information, these sensors use radio signals that require special protocols in order to communicate with a central home gateway as well as a Utility Company's Smart Meter. In this project the "IPv6 over 802.15.4" protocol, also called 6LowPAN, is used to construct a Wireless

Sensor based Home Area Network. This is the same wireless technology that will be embedded in appliances in order to form a wireless sensor network. Specific topics addressed include the radio signal protocol, the operating system needed to run in the target device as well as the host machine, the programming language needed to create applications that could run on the target device and the actual hardware used to host the operating system and run the applications. In addition, a chapter is dedicated to the discussion of security issues that this type of network is likely experience. The project culminates with the procedure employed to construct a small Home Area Network using the 6LowPAN protocol and related technologies. All of topics

related to 6LowPAN have been documented on this report to help readers understand the key ideas needed to construct a home area network using open source tools and the 6LowPAN protocol. The use of wireless embedded devices in home appliances to report electricity consumptions in homes is one of the most important features in the Smart Grid infrastructure. This implementation not only gives information to the utility company to record energy consumption, but at the same time, it could provide accurate information to home owners in terms of dollars being spent per appliance. This will in turn help consumers to plan, modify, and reduce energy consumption accordingly. In this project, an IP-based wireless

sensor home area network will be constructed to simulate a Smart Home network where wireless devices already live inside appliances. This network will be accessible from a remote server, which will act as a utility server to monitor the status of the home area network nodes. But how do you build such an infrastructure? What are the technologies and protocols available in order to implement such a vision? In order to answer these questions, let us first consider the challenges that need to be met by these wireless-embedded devices and the building of this type of network, which will be part of the Smart Grid infrastructure.

One of the main goals of the

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Smart Grid is to have the ability to obtain information about energy consumption of customers, as it happens in order to meet energy demand. This can help utility companies to plan when energy supplies dip low due to heavy demand. This energy consumption information is transmitted back to the utility company as it happens. To make this possible, the Smart Grid is relying on technology and protocols that will serve as vehicles or conduits to bring this information back to administrators and regulators. Figure shows various sections of the Smart Grid, where the 'Electric, Gas and Water Meters' represents some of the

components found in a Smart Home. For our purposes, we will be concentrating on a leaf of the Smart Grid, namely the Smart Home where a Wireless Home Area Network will be used to relay information through a smart meter, which in turn will relay the energy consumption back to the utility company's Data Center.

#### Smart Grid Network

Implementing a Wireless Home Area Network (WHAN) to



be compatible with smart meter brings several challenges. First, the type of wireless devices that are to be implemented in this type of network needs to support current and future smart meters. Second, embedded devices that will live inside appliances must be energy efficient so that they do not create so much energy overhead that energy conservation is overwritten by the embedded device. Third, the information provided by these appliances needs to be secure and

confidential, as this may expose a customer and even a utility company to theft or fraud. And last, the implementation of such a network needs to be inexpensive in terms of price and time required to implement. Taking one step at a time, the first item to consider constructing a network would be to see what wireless technologies are available in order to implement the wireless network. Using an IP Based Protocol for 802.15.4

The question at this point would be which protocol to use for the layer above the 802.15.4. A proprietary protocol would be out of the question for this project due to cost and source code unavailability.



**Prof. Sevuga Pandian**  
Dept. of MCA

#### INTRODUCTION

Moodle is a low-cost solution for successful e-learning. It is a free web application that educators can use to create effective online learning sites, which is called a course management system (CMS) also known as a learning management system (LMS) or a virtual learning environment (VLE). It is a global development project designed to support a social constructionist framework of education; the word Moodle is an acronym for Modular Object-Oriented Dynamic Learning Environment. We, Jayanthians are going to follow this new move in blended learning. The purpose of this article is to address the basic key features which support the blended learning concept. (Combination of face to face and online teaching and learning)

#### MOODLE FOR THE STAKEHOLDERS

Moodle is the alternate set up for the physical classroom. It allows us to add an electronic version of the classroom, where students can have access to the teaching materials and keep them updated about their activities i.e. completing and uploading the assignments in a specified time. Teachers as the stakeholders need to create a learning space called courses. Each course has its own set of resources and activities called modules. Both of these courses and modules can be customized in terms of organization and appearance. Let's look in more details at some of the core features

used in Moodle set-ups; the Assignment module allows the student to upload their assignment for grading. The arrival of the new assignments will be notified to the teachers with an automatic alert.

Even grading can be done over the assignment based on the criteria and Moodle grade book can store the grade for individual student. The built-in chat module is a handy teaching tool for groups of student working with or without teacher to discuss an issue, or answering questions set by teacher. These conversations can be reviewed by the teacher at any time. The lesson module allows the teacher to write a series of lesson pages; each one ending with a question. If the students answer it successfully they may continue to next lesson, otherwise they can be sent back to review the current lesson. The Journal module is an online diary – useful for keeping notes and writing reflections on activities. The Quiz module offers a wide range of quizzes and tests with which teachers can create revision activities.

The best way to learn about Moodle is to play with it. As an adjunct to this article, I have set up a local host site at <http://192.168.6.219>.



[Fig 1.1] The front page of this site gives the

collection of courses available under the category Information Technology.

#### CONCLUSION

Even though the technology renders its support for this postmodern, technical savvy generation, "Chalk and Talk" is still predominant method of delivering instruction in our classrooms. While the traditional face to face meetings can be effective, applying the tool listed above opens up new possibilities for teaching and learning that weren't possible twenty years ago. I've touched on some of the most commonly used and appealing features of Moodle, but you can explore more features when you play with it yourself. The reason behind choosing Moodle for our prestigious institution is to stand ahead in teaching and learning practices and introduce hybrid courses for the stakeholders. Let us adhere to the new move and satisfy our stakeholders' demand with this new suit of tool called Moodle.

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# JINI Technology



Vinod Krishnan,  
V Sem MCA

## 1. Introduction To Jini:

Technology from Sun Microsystems that seeks to simplify the connection and sharing of devices, such as printers and disk drives, on a network. Currently adding such devices to a computer or network requires installation and boot-up, but a device that incorporates Jini will announce itself to the network, provide some details about its capabilities, and immediately become accessible to other devices on the network. Under this technology it would be possible to create distributed computing, whereby capabilities are shared among the machines on a common network. This would allow users to access the power and features of any device on the network and would free the desktop computer from

holding all the memory, storage and processing power it needs for any job. For example, if a disk drive on a network had Jini capabilities, any computer on that network could use the drive as though it were its own. Because Jini has the potential to make operating systems incidental to the power of networks, some have seen Jini as an attempt to reduce the influence of Windows.

Several technology development efforts are underway to answer the call for more inter connectivity and an easier way to build, manage, and use the services of digital networks. One of the most exciting of those developments is Jini technology. Built on Java technology, it is designed to enable users to simply connect any number of digital devices, and to access those valuable services provided by rich, dynamic communities of systems such as personal digital assistants (PDAs), televisions, digital cameras, fax machines, cell phones, even smart card readers. Jini technology is just

one of the components of an emerging plug-and-participate world. Other complimentary network technologies, such as Bluetooth, JetSend™, and HAVI, are also in development.

### JINI service oriented architecture:



### Why Use Jini Technology :

#### Unique Qualities

- a. Code Mobility: Extends the Java programming model to the network; i.e., moves data and executables via a Java object over a network
- b. Protocol agnostic: Provides the ultimate in design flexibility
- c. Leasing: Enables network self-healing and self configuration; i.e. improving fault tolerance.

#### Unique Benefits

- a. Resiliency—Networks readily adapt to changes in the computing environment
- b. Integration—Allows fast, easy incorporation of legacy, current, and future network components
- c. Licensing—Jini network technology is available free of charge with an evergreen license.

#### Some Jini Scenarios

- Digital camera and pictures
- Camera finds network printer to print pictures
- Camera finds network disk drive to save pictures
- Camera turns on lights in the room before taking a picture

#### Palm Pilot

- Student uses Palm pilot to select classes and downloads class schedule into Palm pilot calendar

#### Conclusion:

Jini can turn your machines into a networked multicompiler. Together, with Java Spaces can even be used to create a personal supercomputer at work or in the home.

# Secunia - Personal Software Inspector (psi)



Alisha Antony,  
1 Sem MCA

The Secunia Personal Software Inspector is a free security scanner designed for home computer users. The new version detects insecure programs from all software vendors that need updating, then downloads and installs the required security updates automatically every seven days.

The Secunia PSI works by scanning files on a computer (primarily .exe, .dll and .ocx files) that contain non-specific meta information provided by the software vendor. This data is the same for all users and originates from the installed programs on a computer.

After examining all the files on the local hard drive, the data is sent to Secunia's servers, which compare the data to the Secunia File Signatures engine. This information can then be used to provide a report of the missing security updates for the user's system, and any updates are performed automatically.

PSI 3.0 also includes a redesigned interface, non-intrusive authenticated vulnerability and patch scanning, auto-update of programs and plug-ins from thousands of vendors and security status reports for each.

#### HISTORY

##### Founders

Secunia was founded in 2002

by Niels Henrik Rasmussen, Thomas Kristensen, Michael H Zaman, Thomas Pill and Jakob Balle, on a budget of \$26,000. Their focus was the development of applications to address vulnerabilities in software and operating systems.

#### WORKING

It examines all the files on the local hard drive. Then the data is sent to Secunia's servers, which compare the data to the Secunia File Signatures engine. This information provides a report of the missing security updates for the user's system and any updates are performed automatically.

PSI 3.0 also includes a redesigned interface, non-

intrusive authenticated vulnerability and patch scanning, auto-update of programs and plug-ins from thousands of vendors and security status reports for each.

#### FEATURES

It detects insecure versions of common/popular programs installed on your PC. It verifies that all Microsoft patches are applied. It assists you in updating, patching, and protecting your PC. Great supplement to other security measures such as anti-virus and personal firewalls as it helps prevent exploitation of often overlooked exposures. It runs through your browser and no installation or download is required.

## Microsoft Surface



Shinto Peter, III Sem MCA

Microsoft Surface is launched on October 26, 2012 along with Windows 8 initial version. It was announced by Steve Ballmer, CEO of Microsoft at Los Angeles event on June 18, 2012, at Milk Studios. Microsoft surface is a series tablets designed & marketed by Microsoft which is going to

compete with other tablets of Samsung and Apple. It is of 2 models one with Windows RT and another with Windows 8 Pro.

Windows RT model was released on October 26, 2012 and Windows 8 Pro will be released on January 2013. Both have screens of 10.6 inches with Clear Type HD display technology. Windows RT uses Quad-Core ARM Cortex-A9 and Windows 8 Pro will use Dual-Core Intel i5. It is having a Touch Cover and Type Cover



which can be connected to the Surface via a magnetic strip. Windows RT has 2 types i.e. one with 32GB and another with 64GB internal memory. It is having front and rear-facing cameras. And 32GB cost \$499 with no keyboard cover, with keyboard cover cost \$599, 64GB with keyboard cover cost \$699.

Windows RT tablet has

plenty of good features such as solidly built hardware, useful add-on keyboard/covers, looks clean and works well with touch screen and with office 2013 pre-installed. It's having some drawbacks such as no support for existing windows apps, no 3G broadband, low-resolution cameras, no GPS and NFC. HP, Lenovo, Samsung and Dell applauded Microsoft's decision to create its own Tablet PC and said that relationships with Microsoft have not changed. It cannot run third-party desktop Windows application. If it can run all the application then there will be no problem

## Research Cell Activities

The faculty members of MCA department are actively involved in research activities.

- During this semester Ms. Ambika P presented 3 papers. (1) Paper entitled 'A framework for multimedia information security with secure user authentication' was presented in a two day National Conference on Information Security conducted by Sastra University, Tamilnadu. (2) Paper entitled 'Visual Query Exploration Process and Generation of Voluminous Image Database for CBIR Systems' was

presented in the International Conference on Computing Communication and Networking Technologies, SNS College of Engineering, Tamilnadu.

- (3) Article 'Image Classification – Ontology based semantic web CBIR by utilizing content and model annotation' was presented in the International Conference on Multimedia and Content Based Image Retrieval PESIT, Bangalore, and it was published in ICMCBIR 2012.

- Ms. Dhanamalar M and Ms. Ayshwarya B presented paper entitled 'World Wide Middle ware Technologies' at Dr. MCET Engg college, Pollachi, Tamilnadu.
- An article by Prof. Jyothi Manoj 'A study on Self Esteem of Post Graduate Students' was published in International Journal of Social Science Tomorrow
- Prof. Kumar R, Prof. Muruganathan A, Prof. Velmurugan R, Prof. Suja S and Prof. Ambika P attended a Two days National Level Seminar on Web Services by Mohammed Sathak Engineering College, Tamilnadu.

## Industry Interaction

The department in association with resource person from industry, organizes various seminars and workshops for the MCA students to give them an exposure on the requirement of industry. The seminars organized this semester are:

- A seminar by **Mr. Raghavan M**, Product/Delivery Manager, IBM India Ltd, Bangalore, on 'introduction to EjBand middleware conducted on 17/03/2012 gave an insight to the concepts of 'packages', interface, thread, Java Naming Directory Interface and much more.
- Dr. Samir Kalekar**, Development Director, MCA Kristu Jayanti College, Bangalore, addressed the students on the topic – 'Network security' on a two day workshop held on 19th and 20th April 2012. The workshop was indeed an eye-opener for students on the various nuances of security features.
- A seminar by **Mr. Ram Dayal Goyal**, Principal Scientist and Head Architect R&D, B'llore was held on 25th August 2012

on the topic "Applied Artificial Intelligence". **Mr. Goyal** interacted with the students about the various facets of Artificial Intelligence. He also talked about precise and non-precise answers and gave a detailed lecture on how artificial intelligence is used for non-precise answering.

- A Technical Seminar on 'OPEN SOURCE TECHNOLOGY' by **Mr. Anish Samuel**, Technical Operation Specialist, Google on 1st September 2012 highlighted applications of open source technologies including Python, Django, Google Charts and other basic data types, the advantages of these languages in the fields of software development. He also spoke on various open source software's such as Apache, PHP, Linux etc. Mr. Anish Samuel is an alumnus of Kristu Jayanti College.
- On 8th September 2012 a seminar by **Mr. Anil Menon**, Software Consultant, Honeywell B'llore, was conducted on the topic "Current Trends in Information Technology" He emphasized on the need

among students to bring up the right skills and achieve it and the need to focus on creativity, right attitude, passion. He insisted on the need to have a motivational and inspiring personality to be successful in the field of IT. Mr. Menon gave an overview on various future employment opportunities where the MCA students can focus based on the individual characteristics such as empathetic, independent, interactive, and meaningful etc.

- Mr. David Vikrant**, Software Engineer, NIIT Technology, on 15th September 2012, ex-student of Kristu Jayanti College currently a Software Engineer with NIIT technologies interacted with the students on "Windows Communication Foundation". The discussion on the core topic WCF (Windows Communication Foundation) which is a framework for building a service-oriented application. The session was very informative and guidance for the development of academic projects using WCF that in fact makes the project development process easier for the students of MCA.

## Value added Courses

Department has organized a few certificate courses for the students, to mention a few;

1. Quantitative aptitude training by Prof. Uma Vinod of Dept. of Mathematics for the MCA students
2. .net for III sem MCA students by Prof. Aishwarya of Dep of CS
3. J2EE for V MCA students conducted by industry corporate trainer
4. Life skills training to I MCA by faculty members of CLSE

## Technical Communities

In order to enhance knowledge in various technical domains in IT, six technical communities are formed, viz Networking, System Administration, Security, Enterprise solutions, Mobile Computing and Embedded Systems. Students seminars are held every week. The seminars held in this semester are as follows:

Presented by	Topics	Description
Souma Kumar Paul (2nd year)	Messing with Operating Systems – walkthrough linux	Introduction of the linux systems, major linux distributions of a linux operating system, the different interfaces
Cyril Varkey and Chonesprakash (3rd year MCA)	Virtualization Techniques	Essential features of virtualization, different types of virtualization
Lebi Jean Marc Dali (3rd year)	Human Analogy	Discussion of topics like Human Analogy, Brain for reasoning, Knowledge representation, Network securities, Network threats, Cryptography techniques, and cipher techniques used in network environments
Prinly D Bastin Kadavy, (3rd yr) Niranjan Shah (2nd yr)	Windows Azure	What is Windows Azure, various features of Windows Azure, services of the Window Azure, introduction about the real time implementation of Windows Azure .
Kailash, Ashwini (2nd yr)	GPRS (General Packet Radio Service)	Introduction on GPRS, its benefits and applications and also explained about pervasive computing that majorly help in decision making.
John Bosco, Vimal Reshma, Sawant Pradnya Surendra (3rd yr)	Anti-spam	Anti-spam, How it works and various Virus scanning techniques.
Baburay Gouda (2nd yr)	4G Technology	In telecommunications, 4G is the fourth generation of mobile phone with communications standards. It is a successor of the third generation (3G) standards. A 4G system provides mobile ultra-broadband Internet access.
Vinod K (3rd yr)	Scalability of Cloud	Introduction to Cloud, Scaling factors, Need for scalability& Types of scalability
Sherin Rappai Nisha (3rd yr)	Mobile Cloning	What is 'mobile cloning, its merits and limitations.
Abin K Baby, Dilip Jacob (3rd yr)	Biometrics	Finger Print Recognition, Optical Sensors, Ultra sound sensors and thermal Sensors etc.
Cyril Varkey, Chonesprakash (3rd year MCA)	New trends in internet privacy	General Social Networking Statistics, DNT(don't track me),Cookies & DNT+

## Research Colloquium

It is one of the unique practices of the department to organize in-house research colloquium. The objective of this programme is to promote research culture among the faculty members and to provide a platform for teachers to share the developments happening in the researches undertaken. This academic year's first session of "Research Colloquium" organized by the department of Computer science was held on 25th August . Mr. Aswin Herbert , Faculty member, dept. of computer Science, presented a paper entitled "Brain Finger printing" which highlighted on the science behind brain mapping technology and its scope, advantages and limitations. Mrs. Mary Jacob Faculty member, dept. of computer Science presented the paper – "DNA computing" which highlighted the Development , Biochemical work involved, advantages and limitations, scope of research in DNA computing.

## Students Achievement

Fest: The students of MCA department participated in various events of different inter-college fests organized by CMR Institute of Technology and Christ University during this semester and won many prizes.

Vinod of 3rd year MCA , who is a member of Southern Blue Basketball Club, represented the Bangalore University Team in North Zone and Inter Zone Basketball matches.

## Extension Activities

Department of MCA conducted a certificate course on 'Spreadsheet for Business Application' to the first year MBA students and the III semester B.Com students

## Placement News

No. Name	Company
1. Sinto V Varghese	UST Global
2. Deepa Elizabeth Joseph	UST Global
3. Thapan Chand A	UST Global
4. Rani Maria Joseph	NIIT Technologies
5. Muhammed Fazil C	NIIT Technologies
6. Mohammed Shamir Haris	NIIT Technologies
7. Jewel Roy	NIIT Technologies, B'lore
8. Maheta Dhaval Kamlesh Bhai	Web technologies
9. Anu Kurian	Altisource
10. Santhosh K U	Altisource
11. Tijo Matheus	Vibrant technologies
12. Nickey Joseph	Vibrant Communications
13. Andikat Jacob Dennis	JC Connexion
14. Rahul Rajeev	M.H.Alshaya Co.WLL
15. Loy Colaco	Keynote Systems
16. Rajila Mohan	Certes Innovative solution- TVM
17. Ramila Mohan	Certes Innovative solution- TVM
18. Sithara.M.K	DVS Technologies Pvt Ltd
19. Nithin H K	KPMG
20. Allen Thomas	Vibrant Communications
21. Priya Tandon	Unisys