August 2010

Software 2.0 – Emerging Competencies for Software Engineering
Date: 7 August 2010
Organised by: Division II [Software] and Kolkata Chapter
For details contact: Mr. Swarup Chakraborty, e-mail: csical@gmail.com

DCMC-10: Divisional Conference on Mobile Computing
Date: 11-12, August 2010 at Chennai
Organised by: Dept. of CSE & TIFAC CORE, Velammal Engineering College, Chennai in association with Computer Society of India, Div. IV on Communications & Chennai Chapter
For details contact: Prof. B. Rajakrishnai, Convener, DCMC-10 at vedcmc10@gmail.com Phone: 044 - 26590579 OR Mr. H.R. Mohan, Chair Div IV at hrmohan.csi@gmail.com Website: www.velammal.org

NCRITIT-10: 2nd National Conference on Recent Trends in Information Technology
Date: 12-13, Aug 2010 at Chennai
Organised by: CSI Div. IV, Chennai Chapter, SIG-Distributed Systems and IEEE Computer Society, Madras Chapter
For details contact: Dr. T.R. Rangaswamy, convener at ncrtit10@bsauniv.ac.in Tel.: 044-2275 1347/48/50/75 Extn : 216 / 218 OR Mr. H.R. Mohan, Chair Div IV at hrmohan.csi@gmail.com Website: www.bsauniv.ac.in

1st CSI Goa State Student Convention
Date: 16 August 2010
Hosted by: Goa University
Organised by: CSI Goa Chapter
For details contact: shekhar_sahasrabudhe@president.co.in;

Workshop on Cloud Computing
Date: 18-20, Aug 2010 at IIT Madras, Chennai
Organised by: CSI Div. IV, Chennai Chapter, SIG-Distributed Systems and IEEE Computer Society, Madras Chapter
For details contact: Mr. S. Ramasamy, Email: sprüsys@vsnl.com OR Mr. H.R. Mohan, Chair Div IV at hrmohan.csi@gmail.com

National Seminar on Emerging Trends in Cloud Computing, (Hot Cloud)
Date: 20 August, 2010 at Trichy
Organised by: Jayarm College of Engg. and Tech, Trichy and CSI
For details contact: Dr. N. Kannan

All India Seminar on web Technologies: Emerging Trends and Social Impacts
Date: 30-31, Aug 2010 at Cochin Chapter
Organised by: CSI Cochin Chapter, IEEE Kerala section, IETE, Cochin, The Institutions of Engineers (India)
For details contact: Mr. K S Mathew

September 2010

The 26th National Student Convention
Date: 2-4 September, 2010
Hosted by: Mar Baselios College of Engineering and Technology, Trivandrum
Organised by: CSI Trivandrum Chapter
For details contact: Prof. Krishnan Kutty, krishnankuttsy@yahoo.com
Ms. Mini Ulanat, E-mail: mini.ulanat@gmail.com

CSI Region-VI Student Convention
Date: 4-5 September 2010
Hosted by: MIT Pune
Organised by: CSI Pune Chapter
For details contact: shekhar_sahasrabudhe@president.co.in;

The 3rd Tamil Nadu Student Convention
Date: 17-18 September 2010
Hosted by: Jayaram College of Engg. & Tech.
Organised by: CSI Trichy Chapter
Venue : Dr. S A Sahaaya Arul Mary, samjessi@gmail.com,
Mr. S Ramasamy, sprüsys@nids.vsnl.net.in

National Conference on Emerging Trends in Computing and Communication (ETCC - 2010)
Date: 18-19 September, 2010
Organised by: Medi-Caps Institute of Technology and Management, Indore and CSI Indore Chapter.
Venue : Medi-Caps Institute of Technology and Management, Indore

October 2010

National Conference on Mobile and Ad Hoc Networks
Date: 22 and 23 October, 2010
Organised by: CSI Div. III, IV, Region-VII and CSI Coimbatore Chapter
For details contact: Mr. S. Mahendra Kumar, mkumar@sakthisugars.com, Mr. Prashant R Nair, prashant@amrita.edu

National Conference on E-Governance
Date: 8-9 October 2010 at Kolkata
For details contact: Dr. A K Roy

24th CSI Karnataka Student Convention
Date: 22-23 October 2010
Hosted by: SJCE Mysores
Organised by: CSI Bangalore Chapter
For details contact: B G Sangameshwara, bg.bsgangam@yahoo.com, Tel.: 080-2548285, csi_bc@yahoo.com, Tel.: 080-22862215, 22860461

November 2010

CSI Region-VI Student Convention on IT for Defence
Date: 12-13 November 2010
Host: CSI Bangalore Chapter
Organised by: SIG-IS, Div. IV, CSI
For details contact: drchakra32@gmail.com, csi_bc@yahoo.com,
Tel.: 080-22862215, 22860461

National Conference on IT for Rural & Agriculture Development
Date: 23-24 November 2010
Host: Indian Institute of Management, Patna
Organised by: Patna Chapter
For details contact: Prof. A K Nayak

45th Annual Convention
Date: 25-27 Nov. 2010, Mumbai
Venue: Mumbai
Host: CSI Mumbai Chapter
For details contact: www.csi-2010.org

December 2010

COMAD-2010 International Conference on Management of Data
Date: 8-10, December, 2010
Organised by: CSI Division II (Software), SIG-Data, Region VI and Nagpur Chapter
For details contact: P S Deshpande, VNIT Nagpur E-mail: pisdeshpande@cse.vnit.ac.in

Region-I Student Convention
Date: 4-5 December, 2010
Hosted/Organised by: CSI Student Baanch at Graphic Era University, Dehradun
For details contact: Dr. Harish Kumar, harish32us@yahoo.com, Dr. R.K. Vyas, rrvyas_99@yahoo.com

ICAC 2010: 2nd International Conference on Advanced Computing
Date: 14-16, Dec. 2010 at Chennai, India
Organised by: Dept. of Information Technology, Anna University Chennai, MIT Campus and IEEE Madras Section and Supported by Computer Society of India Div IV & Chennai Chapter, IEEE Computer Society, Madras Chapter, Centre for Development of Advanced Computing (CDAC) and University Grants Commission (UGC)
For details contact: Dr. S. Thamara Selvi, Professor, Dept. of Information Technology, MIT Campus, Anna University Chennai, Chromepet, Chennai 600044, India. Phone: 91-44-22563197 / 22561015. Email: thamara.selvis@gmail.com OR Mr. H.R. Mohan, Chair Div IV at hrmohan.csi@gmail.com Website: www.annauniv.edu/coac2010

ICSIP-2010: International Conference on Signal and Image Processing
Date: 15 – 17, Dec 2010 at Chennai, India
Organised by: RMD College of Engineering and University of Mysore in association with Computer Society of India Div IV & Chennai Chapter and IEEE Computer Society, Madras Chapter
For details contact: Prof. Dr. R. M. Suresh, Chair – Programme Committee at iicsip2010@rmd.ac.in or rsrmsuresh@hotmail.com OR Mr. H.R. Mohan, Chair Div IV at hrmohan.csi@gmail.com Website: www.rmd.ac.in/icsip2010

January 2011

ConFIR-2011: The 4th National Conference on Education & Research
Date: 23-24 January 2011
Hosted by: Shambhunath Institute of Engineering & Technology, Allahabad
Organised by: CSI Division V, Region-I and Allahabad Chapter
For details contact: Prof. J P Mishra (e-mail: dean_tpo1948@yahoo.com), Mr. Zafar Aslam (e-mail: zafar.aslam@cmcltd.com)

February 2011

CONSEG-2011 : International Conference on Software Engineering
Date: 17-19 February, 2011
Organised by: CSI Div. II (Software) and Bangalore Chapter
For details contact: Dr. Arunban Basu, arunbanbasu@qualitypsyndia.com

Second International Conference on Emerging Applications of Information Technology (EAIT 2011)
Date: 18-20 February 2011
Host: Kolkata Chapter
For details contact: Mr. D P Sinha

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Vice President & Chair, Conference Committee, CSI
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Prof. P Thrimurthy
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“India is, the cradle of the human race, the birthplace of human speech, the mother of history, the grandmother of legend, and the great grand mother of tradition. Our most valuable and most instructive materials in the history of man are treasured up in India only.”

– Mark Twain

Though specific customs vary from region to region within India, there are different standards of behavior for men and women that carry over into the work environment. Women are expected to be chaste and modest in all actions, which may be a constraint in their ability to perform at par with men.

Thanks to the rapid advance in Information and Communication Technologies [ICT], the position of Indian women has considerably changed. Attempts are on to empower women in the country. Women have made significant strides in all fields, although their number remains insignificant.

Within the various societal constraints, women have been accepted primarily in agricultural or land based occupations. Among activities of the secondary sector, women are predominantly involved in informal, home-based activities. In the organized sector, the women workforce is estimated at less than 20 per cent.

ICT sector seems to be better. Sangeeta Gupta, Vice President, Nasscom, says, “In the Indian software industry, the male to female ratio is 76:24. However, by the end of 2007, this ratio is likely to be 65:35. The trend is likely to continue and in fact gain momentum.”

It is observed that over the years there has been a clear shift in the thinking pattern of women, from seeing their work as a time pass activity until marriage, or work to support family with additional income (provide jam for bread and butter) to that of regarding formal work as integral part of their life space. There has been a transformation from job orientation to career orientation to professional orientation among women. More and more women are entering the world of work through opportunity, capability and motivation. They expect a career to complete their sense of fulfillment and self worth.

According to Gartner, the emergence of women in varied roles in IT is among the 10 converging factors that will change the workforce by 2010. However, it has been observed that Women start careers in business and other professions with the same level of intelligence, education, and commitment as men. Yet comparatively few reach the top echelons.

“Flexi time” started in IT, when business boomed resulting in shortage of manpower. This proved to be a boon for women in the ICT Industry. This trend is technology driven - it’s easy to work ‘remote’. IT Enabled Services [ITES], Business, Financials, Securities and Insurance [BFSI] Verticals, Outsourcing, Web Content Creation and Knowledge Based Services offered all kinds of flex time options which were attractive to women working in Indian conditions.

It is a hard truth that the majority of the poor are women and they experience vulnerability and powerlessness to a much higher degree than men. Equitable access to ICT technology and the autonomy to receive and produce the information relevant to their concerns and perspectives are therefore critical issues for women. While ICT holds a lot of promise, until women know the importance of ICT and how it can empower them, women will still lag behind.

Dr. Netiva Caftori has been kind enough to Guest Edit this issue. The review committee headed by her has put together some pragmatic options for Women to succeed. The review committee included Prof. Kamala Krithivasan, IIT Madras, Chennai, India and Ms. Hema Gopal, Vice President, TCS, India. I thank the review committee for their insightful comments.

The ExecCom Meeting held at Trivandrum was fruitful. I must thank the CSI Trivandrum Chapter for the excellent arrangements and bon homie. CSI has signed MoUs with C-DAC and PMI at Trivandrum. Some details of these MoUs may be found in this issue. I am happy to inform the readers that a new column in the Departments Section titled “ExecCom Transacts” is introduced from this issue.

Dr. Gopal T V
Hon. Chief Editor
gopal@annauniv.edu

“Whatever women must do they must do twice as well as men to be thought half as good. Luckily, this is not difficult.”

- Charlotte Whitton

The phrase “working mother” is redundant.

- Jane Sellman

“I think the world would look a lot different if half the developers were women. Information technologies are shaping the future and if women are not active participants in the product design and development, then their perspectives are not included and it won’t work for them.”

- Kaliya Hamlin, Co-founder of the Internet Identity Workshop
Dear Affectionate Members of CSI Family,

While attempts are being made to promote regular activities in CSI, we are continuing our efforts to promote RESEARCH in CSI. We are looking for some of our members who had contributed in promoting research in their chosen disciplines that are relevant to the objectives of CSI and who can contribute in promoting research activities in CSI.

Hon. Research Directors:
Happy to inform you that our distinguished members Dr. Jayasri Choudhuri of Kolkata, Dr. Rattan K. Dutta and Dr. S. Ramakrishnan (Ramki) from Delhi, have kindly accepted our request to be Hon. Research Directors in CSI. On similar lines, we shall consider nominations as Research Directors in CSI. Nominations may be sent to hq@csi-india.org

Knowledge Sharing SIG-e-GOV Summit at Bhopal:
Government of Madhya Pradesh in association with Bhopal chapter of CSI has hosted a Knowledge Sharing Summit on e-Governance that has been steered to success by our SIGeGOV team headed by Prof. Ashok Agarwal. The event has been exceptionally handled by a team of dedicated members of CSI family. The experiences of using ICT for improving the quality of services by Governments in different states and at Centre are shared. It has been a feast of Knowledge sharing experience. Prof. Ashok Agarwal, Mr. Anurag Jain, Mr. Anurag Srivastav, Ms Avanthika, Mr. Vivek Dhavan and their teams have excelled in conducting Knowledge sharing process. The event was so good that I was amused to see many visitors coming and asking for becoming the members of CSI. Dr. Pukhraj Maru, Principal Secretary, Technical Education paid his life membership fee and joined CSI after the inauguration. He said that all educational Institutions be promoted to become Institutional members of CSI so that teachers and students are connected to the practitioners of ICT. It has been a great experience to listen to Mr. Kailash Vijayvargiya, honorable minister of IT in MP, Hon’ble Justice Rajesh Tandon, Chairperson of Cyber Appellate Tribunal, Ministry of CIT, Dr. S.S. Mantha, Chairman, AICTE who have valued the contributions of CSI to the Nation. MP Government deserves my salute for successfully organizing the knowledge sharing process on e-Governance.

Presidents Council:
We would like to have the honor of bringing together our past presidents of CSI and form Presidents Council, which would be convened by the immediate Past President. It is to pool their rich experiences and to help the CSI family on continuous basis in promoting the objectives of CSI. We have requested Shri S. Mahalingam to convene a meeting of the Presidents Council at the CSI 2010, Mumbai.

SEARCC International Schools Software Competition 2010
School Students below the age group of 18 would be participating from member countries of the South East Asia Regional Computer Confederation (SEARCC) at the International software competition to compete and win the F.C.Kohli Challenge Trophy during 22-23 October 2010. This trophy is named after the father of the SEARCC movement Dr. F.C.Kohli of TCS.
RMK Engineering College, Chennai has kindly agreed to host the event. Dr. R.M. Suresh and Shri Ramasamy, Tamilnadu student coordinator would work on the modalities to make the event, a grand success.

CSI – CDAC MoU: Signed on 26th June 2010 at Trivandrum
Mr. Rajan T. Joseph, Director General, CDAC signed the MoU with CSI. The scope of the MoU is to facilitate closer interacting between CSI and CDAC in research, designing and offering new courses in relevant topics, testing and certification of the successful candidates. The joint activities will be primarily in specialized areas such as free/open source software, language computing, cyber security, cloud computing and so on. This is to provide an opportunity to our members for attending/participating in research and education programs on continuous basis. Thanks to the efforts put in by Shri M.D. Agrawal, Mr. Satish Babu, Mr. Srivinasan (past Chairman of Trivandrum Chapter), Mr. Rajesh Kaimal along with the team from CDAC represented by Mr. Sasi P.M, Mr. George L. Arakal for their contributions in bringing up MoU on our request.

CSI – PMI MoU: Signed on 26th June 2010 at Trivandrum
Our professional members of CSI are required to have orientation and develop expertise on project management in order to come up in the ladder of professionalism. Also it is required that our Institutional Members need to keep track of the latest research and developments on project management in order to modify syllabus and organize training programs to faculty and student members.

Our CSI members who are certified as Project Management Professionals (PMPs) by Project Management Institute (PMI) are requested to help us on the above requirements. Mr. Rajesh Kaimal, Shri Satish Babu and Shri Srivinasan of CSI and Mr. Raj Kalady and Mr. Jacob Varghese on behalf of PMI have interfaced this MOU between CSI and PMI. Mr. Raj Kalady, Managing Director, PMI signed the MoU with CSI.

CSI and PMI also would collaborate with each other in Research, Education, exchange publications and involve members to participate in respective events & conferences.

Mr. Rajesh Kaimal, Prof. H. R Viswakarma and Wg. Cdr. M. Murugesan would carry forward the process of implementing the activities on behalf of CSI and a working group from both PMI and CSI would announce the programs.

A model worth considering:
We could meet Dr. Ajay Kumar, Principal Secretary, Kerala state, who informed us that CSI Trivandrum chapter is contributing in several initiatives of the state government. I am impressed that CSI Trivandrum chapter is becoming a part of the IT Mission of the state. CSI objectives are appreciated by the state Government. Our professionals in the chapter are so dedicated that their contributions are appreciated by the state Government. Let this be a model to follow at other places.

Reviews
I appreciate the efforts of our regional Vice-Presidents Mr. Sanjay Mohapatra, Mr. D.P. Mukherjee and Shri Jayant Krishna for their good initiatives with respective chapters, divisional chairmen to identify new activities.

Prof. P. Thrimurthy
President, Computer Society of India
While reading the great variety of articles from many remote countries it became clear that the situation of women in IT depended on the culture and the country where they lived. Some countries and cultures favored women in IT whereas others, mostly in the Western world, excluded them knowingly or unknowingly. It is in the West surprisingly and sadly that we see the numbers of women decline.

The fact that women are actively employed in IT in high positions and in design and represent the majority of professional workers in some countries should be proof enough that women can do it, and remove all doubt that women somehow don’t fit in technology.

In this collection of articles I hope to show that women have the aptitude for IT and other roles in computer science but make other choices for a variety of reasons unrelated to their skills. In view of technology becoming more and more pervasive and many jobs going unfilled, I believe that we should encourage women to seek employment and satisfaction in IT not only for a better compensation, but because it can be a great environment of growth for them and an added diversification of the field, and thus improved products for the society as a whole.

My students in my “Women in Computing” course at Northeastern Illinois University (NEIU) in Chicago have searched and have written many good papers of which I’m introducing only one by Matt which is exploring school children in their computer environment from which we are going to learn that when girls are made to use computers as much as boys, there is not much of a difference between the genders. Some other papers may eventually be found on my site at http://www.netiva.net.

There are many reasons for why girls and women aren’t choosing engineering or IT as a career when so many others nowadays choose sciences, medicine or law. We don’t quite understand however why women’s numbers are dropping in several parts of the world despite many efforts to retain and attract them into the field. Dr Christina Evans attempts to answer this question from the business perspective in the UK.

In most places boys get more exposure to computers from an earlier age and thus gain confidence in using the machine. Girls and women in general have many other interests and obligations in their daily lives and thus use the computer less, or do not have access to one. Eventually when it is time to choose a career or education they arrive unprepared and lose their confidence when confronted with their male counterparts.

The lack of sufficient female role models is yet another contributing factor for the missing critical mass that would have encouraged girls and women to join in. Women also prefer sciences that are clearly connected to helping others as in the medical careers. Other reasons include their nature or the way girls are socialized in our society. For example, girls are sometimes turned off by the “isolated geek” stereotype that dominates their view of a computer scientist.

By creating an environment where girls are using the computer as much as boys and are having fun at it, we can build a new generation of self confident young women.

Other successful approaches include attempts to dispel computing-career myths and stereotypes and provide girls with age-appropriate, hands-on technology activities or enrolling girls in summer computer programs. In higher education the curriculum of computer science programs can be changed to encompass interdisciplinary topics and remove prior experience prerequisites that favor men.

Why should we try to attract girls and women into the computing career track? It is because females can succeed in it and love it, and because these careers need diversity in order to produce successful goods and can provide women with a gratifying career as well.

I suggest our readers read the following just published report and article which explain at a greater length and detail what I’ve summarized above:

Catherine Ashcraft and Sarah Blithe : women in

Netiva Caftori
Professor of Computer Science and Women’s Studies Program
Northeastern Illinois University (NEIU), 5500 N. St Louis Ave. Chicago, Il. 60625. E-mail: n-caftori@neiu.edu
Home Page: http://www.netiva.net
A fresh}

The papers in this section suggest new. In fact the roles were new to both men and women those days.

In summary:

- The papers in this section suggest that the strong barriers to female participation in STEM (Science, Technology, Engineering, and Mathematics) fields continue to fade.
- In some parts of the world female participation is encouraged but women are choosing other fields for a variety of reasons. In some cases women who now have many choices are picking areas they believe are more in tune with their needs.
- Women along with their male colleagues have been pioneers in engineering projects in the past, but the numbers have been small. There is a strong belief that accomplishments by women have been overlooked. Women should continue to be encouraged to participate in STEM fields because the world needs their ideas and diversification makes for better creations.

About the Guest Editor

Born in Tel-Aviv, Israel, Netiva Caftori lived her youth in Paris, France, and graduated from École Alsacienne High School there. Returning to her native land she served in the Israeli military as a 2nd lieutenant.

After completing her compulsory military service, Netiva studied math and French at Tel-Aviv University for 2 years, married and moved to the US to obtain her 3 degrees at the University of Illinois in Chicago. All the while she worked in the IT industry and devoted nearly 30 years of her life to teaching and research at the Northeastern Illinois University [NEIU]. Her research interests include Computer Security, Ethics, Gender and Education. In 2003-04 she spent a year in Benin, West Africa, as a Fulbright scholar. Dr. Netiva Caftori is also a mother of 3 and an artist.

Challenges of ICT use for Women's Economic Empowerment

Women face enormous challenges to use ICT for their own economic empowerment. Using and benefiting from ICT requires education, training, affordable access to the technology, information relevant to the user and a great amount of support [to create an enabling environment]. Access to affordable services and availability of infrastructure is without doubt a major requirement if ICTs are to be used for women's economic empowerment. Availability of electricity, transport and security may also influence the use of ICT.

Radio and television, as the widest form of communication, provide one way of solving information dissemination. In addition to being used as effective ICT for development, radio and television should be considered and used as a means of educating the population on the benefits of ICT for development. Radio and Television programmes can be developed to educate women on various development issues, including the various uses of ICT, thus increasing awareness and knowledge of ICT's uses. When possible, such programmes should be developed and conducted by women and their content should reflect a gender perspective.

Even when infrastructure is available, affordable access is a concern in most developing countries. Universal access policies aim at developing solutions that provide community access at affordable prices. Expansion of public telephone and ICT access points are examples of these solutions. Telecenters, however, do not guarantee affordable access because most telecenters are run as business ventures that need to be sustained and therefore charge for services according to their costs. Lack of local and community related content in local languages continues to be a major barrier in women's use of ICT for economic empowerment. To make ICT more useful and meaningful, particularly for rural and poor women, relevant information and tools need to be provided to address women's needs and demands. Multimedia can be developed to provide information both in spoken and written language. The challenge is to develop content that is relevant and useful to communities in their own language.

- Suman Jain, ICTs And Women’s Empowerment: Some Case Studies From India
“Understanding the Expectations of Women Professionals in Information Technology from their Organizations”

– A Research Initiative of Empowering Women in IT (eWIT)

Vijayalakshmi Rao*, Sumitra Seshan**

*President, eWIT, Director & COO, Scope e-Knowledge, Scope Corporate HQ: Scope eKnowledge Center, II Floor, Temple Towers, Nandanam, 672 Anna Salai, Chennai - 600 035, India. E-mail: viji@scopeknowledge.com

**General Secretary, eWIT, COO, Fifth Generation Technologies India, RR Tower IV, Ground Floor, Thiru-Vi-Ka Industrial Estate, Guindy, Chennai, Tamil Nadu 600032. E-mail: sseshan@fifthgentech.com

Empowering Women in IT (eWIT)
No. 6, Kalakshetra Avenue, 2nd Street, Tiruvanmiyur, Chennai - 600 041, INDIA. http://www.ewit.co.in/

Objective of the Study:
Empowering Women in IT (eWIT) as one of its key initiatives embarked on a study to understand and evaluate the Women-friendly policies/facilities that are currently in place in various organizations in the both Information Technology (IT) and Information Technology Enabled Services (ITES) space and whether these facilities in fact meet the expectations of the women workforce. The key findings of the study, in our opinion, will aid organizations in formulating strategies and policies that would cater to the needs of women workforce, thereby increasing the share and sustainability of women in these industries.

Methodology:
The research team of eWIT adopted a structured approach for this study, by designing a survey questionnaire with basic objectives of collecting information on various women-friendly policies/facilities that currently exist in organizations, and whether these policies match the needs of individuals.

The questionnaires were circulated to women employees of IT/ITES companies during the various events conducted by eWIT and the information thus gathered from 300 responses were collated and analyzed, the findings of which are summarized in the following sections. The 300 responses came from 61 IT/ITES companies based in Tamil Nadu. The study was conducted over the last one year.
Also, 47% of the respondents were from companies that have employee size in the range of 100 to 500, while 19% of them were from small companies that had less than 100 employees and only 11% from large organizations that employ more than 5000 employees (see Fig 2 for the segmentation based on Size of Companies).

Key Findings:

(i) Women-Friendly practices/policies:
- Among the various women specific policies such as Maternity Leave, Flexi-Time, Reduced-Time, Reduced Pay, Work from Home, Sabbatical Leave, Sexual Harassment, and Gender Sensitization, Maternity Policy has been more or less formally implemented in almost all of the organizations. It was found that some policies exist in an informal manner, that is, while they may have management approval, they are not formally documented and communicated to employees. It is also possible that such women-friendly measures are offered on a case-to-case basis.
- Next to Maternity, Flexi-time as a policy has been formally implemented in at least 45% of the organizations. However almost in equal percentage terms (43%), the policy is practiced informally; it is to be noted that the percentage of informal implementation is quite high (59%) as far as ITES companies are concerned.
- The least implemented policy across the various organizations is the concept of ‘Reduced-Time, Reduced Pay’. While 42% of ITES seems to have this policy implemented either formally or informally, this is not so prevalent in the IT segment.
- Formal ‘Gender Sensitization’ as a policy is almost non-existent in the ITES segment, whereas at least 35% of the IT companies seem to have a formal practice/policy in place.

What women want?
- Based on Order of Priority, Work from Home and Flexi-time were the first two choices in terms of policies, that women wanted implemented in their work place. (the provision of Maternity Leave as a policy was taken for granted, while indicating this order of priority)

<table>
<thead>
<tr>
<th>Type of policy</th>
<th>IT %</th>
<th>ITES %</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work from Home</td>
<td>40%</td>
<td>64%</td>
<td>45%</td>
</tr>
<tr>
<td>Flexi timing</td>
<td>37%</td>
<td>29%</td>
<td>35%</td>
</tr>
<tr>
<td>Day care / Crèche facilities</td>
<td>23%</td>
<td>7%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Facilities currently available in IT & ITES companies (%)

- Physical Security
- In-house Training for Job Enhancement Skills/ Leadership Skills
- Pick-up & Drop Services
- Retiring rooms for Women
- Counseling/Mentoring specific to Women
- Surveillance Systems such as CCTV etc.
- Access to Lady Doctor on site for Women
- Crèche

Fig. 4: Facilities currently available in IT & ITES companies as indicated by women employees
(ii) Facilities currently available: What companies offer?
- From the above, we can see that approximately 90% of the companies do have physical security but only 25% of the organizations have implemented other security measures such as surveillance cameras etc.
- A very high percentage of the organizations do have in-house training programs specifically catering to the needs of women employees; also pick-up & drop services seem to be a common facility that most of the IT companies provide.

What women want?
- Facilities that women would like in their order of priority are (i) Retiring Rooms for women (ii) Crèche facilities (iii) Access to in-house Lady Doctor (iv) Pick-up & Drop facilities. However, at present only a meager 4% of the organizations offer Crèche facilities.

<table>
<thead>
<tr>
<th>Type of facilities</th>
<th>IT %</th>
<th>ITES %</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retiring room</td>
<td>38%</td>
<td>43%</td>
<td>39%</td>
</tr>
<tr>
<td>Lady Doctor</td>
<td>20%</td>
<td>24%</td>
<td>21%</td>
</tr>
<tr>
<td>Pick-up &amp; Drop facility</td>
<td>15%</td>
<td>17%</td>
<td>15%</td>
</tr>
<tr>
<td>Crèche Facilities</td>
<td>27%</td>
<td>17%</td>
<td>24%</td>
</tr>
</tbody>
</table>

- On probing, it was found that women want a place where they can take a short break to relax while at work, either because of the stressful nature of the job or at times when they face regular/occasional medical problems. For similar reasons, access to a Lady Doctor was sought for.

Conclusion:
The study highlights the fact that there are gaps in what women professionals would like from their organizations to provide and what is currently being offered by the companies. The other interesting aspect is that although many organizations do have certain women-friendly practices, they do not have these policies and practices structured within their corporate HR policies. This in turn opens up a new thrust area for eWIT—namely act as a third-party agent that can help companies formalize and implement such women-friendly policies within their organizations.

About the Authors

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A postgraduate in Management from Indian Institute of Management, Ahmedabad, Vijayalakshmi (Viji) has almost 27 years of experience in Knowledge Management and consulting. She is in charge of all project execution and oversees the Human Resource Function in Scope. She has consulted with several leading public and private organizations in the engineering, health care, supply chain & logistics and IT domains. She has worked in the Marketing & Corporate Planning functions for TCI Cycles of India, a part of the Murugappa Group, S.B. Billimoria & Co. (now Ernst & Young India) and was formerly Executive Assistant to Chairman and part of the core turnover strategy team at Steel Authority of India Ltd., India’s largest and one of the world’s leading steel companies.

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“In matters of style, swim with the current; in matters of principle, stand like a rock.”
– Thomas Jefferson

“The brain is a wonderful organ; it starts working the moment you get up in the morning and does not stop until you get into the office.”
– Robert Frost
Increasing women’s employment in ITEC – overcoming the ‘revolving door syndrome’

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Introduction

Information Technology and Communications (ITEC) is a key source of economic wealth and a major driver of change in the global business world. Within the UK, ten percent of GDP comes from the ITEC sector. To compete in the knowledge economy, knowledge-based businesses in particular require highly developed ICT skills. It is against this changing context that many organisations have sought to attract people with diverse backgrounds and skills, particularly women, to work in ITEC and related businesses. Indeed, as will be discussed below, one of the key business case arguments for diversity in the workplace involves a ‘mirroring’ the employee-customer base.

The growth in ITEC should be good news for both men and women’s employment and career prospects. In some ways this is the case. However whilst women’s participation in the labour force more broadly has been steadily increasing, the proportion of women employed in the ITEC sector, particularly in technical and strategy and planning roles, has been declining. This is despite numerous initiatives by businesses and government agencies to develop a more diverse ITEC workforce. In the UK, currently fewer than one in five ITEC professionals and managers are women according to the 2006 Annual Survey of Hours and Earnings (ASHE).

Drawing on the findings from two applied research projects conducted by the author and colleagues at Roehampton University, this article discusses the recruitment and retention strategies that organisations seeking to build a diverse workforce could adopt to help achieve this aim. Both of the projects were made possible through funding from Equalitec, a UK-based partnership organisation, established with European Social Funding under the Equal programme. The research involved interviews with senior HR and hiring managers in well-known private and public sector organisations that have acquired a reputation for being successful recruiters of women. The overall aim of the research was to gather examples of good practice for wider dissemination.

The business case for increasing women’s participation in ITEC

With organisations chasing fewer and fewer skilled workers there is a strong business case for increasing the number of women employed in the ITEC sector. A report published by e-Skills UK in 2009 predicted a need for 141,000 new entrants into the ITEC sector in the next few years alone.

Given that technology permeates all of our lives – work, education, health and social welfare - it makes sense that women are involved in designing IT systems and products that meet their needs. Research commissioned by the Department for Innovation, Universities & Skills indicates that women in the age category, 22-39, are one of the biggest groups of computer users.

Recognising the business benefits, and indeed the wider societal benefits, of adopting a ‘mirroring approach’ to human resource planning has acted as a catalyst for change in some organisations. A senior manager from Microsoft who participated in the Effective Recruitment Research project commented: “The key thing that underpins Microsoft ethos is our software is used by every type of person in the world, so therefore the same diverse people should be involved in the creating of our software, right from planning to manufacturing, to selling it, to supporting it afterwards. And that includes women.”

"The key thing that underpins Microsoft ethos is our software is used by every type of person in the world, so therefore the same diverse people should be involved in the creating of our software, right from planning to manufacturing, to selling it, to supporting it afterwards. And that includes women."
Despite the growing recognition of the business benefits of employing more women in ITEC they still face many employment and career barriers: the off-putting geeky male image of IT work; the long hours culture, often involving working away from home on client sites; lack of transparency in recruitment and selection methods, as well as appropriate career support. We found the area of career support, especially for occupational returners i.e. women who have taken a career break and want to re-enter the sector, or join the sector as part of a career change, was particularly problematic. Although it was recognised that the recruitment pipeline needs more occupational returners, to help address the shortage of skilled ITEC workers, not all organisations have been quick to adapt their recruitment and retention practices so that these are more inclusive. However some of the good practices that we identified in our research included:

**Adopting a ‘competency-based’ approach**

According to research by the CIPD an increasing number of organisations have adopted a competency-based approach for recruitment and selection. This is felt to be more equitable as it provides a mechanism for assessing both ‘hard’ (e.g. technical skills) and ‘soft’ skills (e.g. communication, relationship management, skills, flexibility). Several of the participating organisations in our research had introduced competency frameworks. One HR manager commented:

“*I think that competency-based interviewing helps because you are looking back at real skills and real achievements...it comes back to what we were saying about women only applying for what they know they can do; so they can refer to all of the things they’ve done.***

The use of competencies in the recruitment and selection process was felt to be good news for women returners, as it would enable them to draw on their transferable ‘soft’ skills, developed possibly in other roles. We found a growing demand for ‘soft skills’ in project and programme management roles, particularly given the growth in offshoring and outsourcing: roles that several of our participating managers felt that women are particularly suited to, as it enables them to demonstrate ‘hybrid’ skills i.e. a combination of ‘soft’ and technical skills. That said, colleagues and I have raised concerns about the longer-term career implications of women being channelled into roles that utilise these ‘hybrid’ skills.

**Widening the recruitment net**

A couple of broad strategies that organisations have adopted to increase the diversity of the applicant pool include: widening the recruitment net i.e. drawing from broader educational and experiential backgrounds, as well as more targeted outreach i.e. honing in on a particular group, such as women, when advertising employment opportunities and running recruitment events.

Given the changing skillsets, discussed earlier, several organisations had begun to question the type of formal qualifications needed for a career in ITEC. Rather than sorting from a narrow pool of maths and /or computer science graduates, several spoke of benefitting from attracting graduates from other disciplines, such as the arts and humanities. This type of mindset shift appears to have come about through effective partnering between HR and line managers. Indeed the importance of education and training for line managers was something that was stressed on several occasions as being crucial to bringing about long-term change.

In addition, several of our participating organisations were using specialist job sites such as ‘WhereWomenWantToWork’ and ‘Women in Technology’ to advertise vacancies, especially when trying to attract occupational returners. Others had worked with specialist recruitment agencies to ensure that their overall approach to recruitment was consistent with a diversity agenda.

**Retention strategies**

Our research identified that a focus on recruitment alone is not sufficient to address the under-representation of women in ITEC. Having invested resources in attracting more women into the sector organisations clearly need to protect their investment by working on retention strategies. As one diversity and inclusion manager, cited in our research, commented:

“If you only have metrics in place for hiring and ignore promotion, development and retention, then you could have the revolving door syndrome.”

One of the more common retention strategies identified in our research was that of developing a culture of flexible working, by making various flexible work arrangements available to employees. Other research indicates that women are often attracted to organisations that offer such work arrangements. However despite the demand for flexible working many of our participating organisations appeared not to promote flexible working at the recruitment stage. Discussions with managers identified that new employees often need to ‘prove themselves’ before being able to negotiate access to flexible work arrangements; something that was confirmed in interviews with specialist recruitment agencies.

Even where flexible work arrangements are on offer, the nature of IT work e.g. long hours, the requirement to work away from home on client sites, can make it difficult to make flexible work arrangements work effectively in practice. As a consequence, this can restrict the type of roles that women are feel able to apply for and take up. However we found encouraging examples of where, through proactive management e.g. ensuring that staff working on client sites spend at least one day a week working back in their own office, or at home, the situation seems more manageable. Although flexible work arrangements can have short-term benefits for individuals, there is much research that indicates that this can have longer-term career implications for women in particular.

Another key retention strategy identified was providing on-going support for career development. Our research indicates that organisations’ that have developed a reputation of providing on-going career development opportunities acts as a key attractor for women. What is crucial is adopting a proactive approach. Some organisations had conducted internal surveys to identify why staff had joined them. Others had held focus groups with groups of female employees at different stages in their career to identify factors that would encourage them to stay. Some organisations, particularly those in the public sector, had linked career development programmes to the national Skills for the Information Age (SFIA) framework. This approach was felt to be particularly important for employees recruited from non-traditional IT backgrounds. Several of the private sector companies had introduced women-only development programmes, as well as enhancing the mentoring and coaching support available to women.

In conclusion, whilst our research identified some very encouraging practices designed to increase the diversity of employees working in ITEC, reversing the trend of women’s declining employment in the sector requires further investment and partnership working to bring about sustainable long-term change. In the UK E-skills, the UK sector skills council responsible for developing ITEC skills, has recently launched its Industry Leadership Board. This is an alliance of major IT sector businesses that plan to work together to develop a long-term e-skills, e-inclusion and digital literacy agenda. However, only time will tell what impact further initiatives like this will bring for women’s future employment position within ITEC. Clearly
NABANNA –
A Success Story of Empowerment

“Networking Rural Women and Knowledge”, a UNESCO project in Nabanna, India, explores innovative uses of databases, intranet portals and web based partnerships in the local language for the benefit of poor women. The project puts emphasis on building a framework for information sharing, content creation, offline information dissemination and web based partnership with organizations located outside the region. The purpose of the project is building women’s local information networks by providing simple facilities and training at five ICT centers in Baduria, Rudrapur, Taragunia, Arbelia and Punda.

Through this project a core group of 60 information agents aged 20-40 years have gained access to and control of information and communication technology through using ICTs. Through the Nabanna Network women share local indigenous information as well as information obtained at the information group meetings or newsletter, e.g. women in Baduria have exchanged information on income generating activities, specific education projects, microfinance and health. Therefore, young educated women have obtained access to and control of ICTs where less educated and older women have obtained access to information through the human network.

Women in Baduria have enhanced their agency through ICTs. UNESCO [2004] reports the following changes in women’s agency after gaining access to information and communication through Nabanna:

- Women gained more respect in their local communities as a result of ICT skills acquired at the center – learning to use a computer and accruing and distributing the information to local people. This resulted in greater respect both at family and community level.
- Younger women felt they were able to approach the job market with greater confidence than before. ICT skills help them to find jobs and increase their income.
- Women became more creative after learning a program like Paintbrush in Paintbrush in Window XP.
- Women have achieved an increase in income as well as enhancement of solidarity among women in the community.

While learning to use computers together at the ICT center women often discuss their problems, creating a sense of unity and developing leadership qualities. ICT increases women’s agency in the household, community and the market. In the household, information obtained through ICT enables them to negotiate and bargain with their family members. Thus women have enhanced their sisterhood and experienced collective empowerment through the Nabanna network. This sisterhood in the community empowers women as a group and allows them a greater voice in the community, hence increasing their influence on local government for implementing projects to promote maternal health, girls’ education and sanitation. However, although the Nabanna project has tried to include marginalized women in the information network, illiterate and indigenous women still have difficulty accessing ICTs.

- Suman Jain, ICTs And Women's Empowerment: Some Case Studies From India

Notes
3. The aim of Equalitec is to support and advance women’s employment in ITEC and related businesses. See www.equalitec.org.uk for more details about the work carried out by Equalitec and to access their free reports.
6. CIPD (2006) Recruitment, Retention and Turnover Survey. www.cipd.co.uk. The CIPD is the UK-based membership organisation for HR professionals. It has a membership of around 130,000 HR professionals internationally.
9. ‘Where Women Want To Work’ – see www.wherewomenwanttowork.com; ‘Women in Technology’ – see www.womenintechnology.co.uk
Role of Gender in Children’s Uses and Attitudes towards Technology

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Over the past several decades, studies showed that society expected boys to outperform girls in the areas of mathematics, science and technology; and like a self-fulfilling prophesy most research did show that boys tended to perform better than girls in these areas. However, emerging research is pointing to flaws in study design as a probable reason for the differences. When students were first exposed to an interactive classroom communications system, boys easily showed more involvement and general positive attitude towards technology than girls did. However, when variables such as applications and comfort levels were improved from the perspectives of the girls, many gaps were eliminated, and a few others were reduced significantly (Kay, 2009).

Increasing number of new studies is pointing to gender sensitive applications and designs as important ingredients necessary to attain equity between boys and girls. Researchers found that when factors that motivate the use of educational technology are identified and carefully designed to address the needs of each gender, the attitudes of the girls towards educational technology tools significantly improved (Heemskerk, Dam, Volman, & Admiraal, 2009).

Some researchers have proposed a feminist approach as remedy to the technology gap between the genders. They suggested that the use of technologically capable female teachers as role models in conjunction with carefully selected technology as possible solution (Li, 2008). Based on this suggestion, Li designed a model aimed to bridge the technology gap for K-12 students in Mathematics and science. The model addressed K-12 schools and colleges that trained K-12 teachers. Specifically, pre-service teachers, in-service teachers and students were targeted. Through careful teacher training, and interactions with students using video-conferencing, girls were able to interact with technologically adept female positive role models. At the end of the study, Li’s data reinforced the belief that technologically proficient female teachers and mentors; working with effective technology can enhance the attitude of girls towards science and technology (Li, 2008).

An earlier study undertaken to explore how girls and boys relate to computer-mediated communication and computer-supported collaborative learning, researchers discovered the effect of gender distribution in the classrooms. In situations where classes were either male-dominated or equally balanced between boys and girls, boys tended to dominate. However, in classrooms where there were significantly more girls than boys, girls played a more prominent role than boys (Prinsen, Volman, & Terwel, 2007).

For adults, who grew up before the current technological explosion and in the midst of gender stereotypes about technology, the expected gap in a highly technical and technology driven area such as online learning is surprisingly absent. Research found that women taking courses online had equal access to computers and the Internet, were confident and may perform better than men (Price, 2006).

Another earlier study conducted among university students found that female students achieved higher academically than their male counterparts in online courses. The researchers noted that female students preferred a different learning strategy from males. While females rated “clear and concise learning content, usefulness of class assignment and projects, review and repetition of previous learning and opportunity to use learning” more important contributors to learning; male students judged “high interest and personal motivation to learning” as more important factors (Lim & Kim, 2003). These finding are especially important for this group because a groundbreaking research study conducted in the late 1950s found that high school students, both girls and boys, reflected stereotypes of the time in their personal beliefs. The study titled Image of the Scientist among high-school students, found that in general boys easily envision themselves or other males as scientists, while girls saw themselves or other females as possible wives of scientists (Mead & Metraux, 1957). In a later study in 2006, researchers investigated the role of gender and experience among girls and boys in
the sixth and eighth grades. The researchers found that students in both grades tend to envision males as the typical knowledgeable computer user based on their experiences, but they overwhelmingly rejected the notion that a profile exists for a computer-type person. The younger students, the sixth graders were relatively less stereotypical than the eighth graders (Mercier, Barron, & O’Connor, 2006). This finding is supported by another study that found that primary school girls were more positive in their attitude towards new technologies than secondary school girls (Volman, Van Eck, Heemskerk, & Kuiper, 2005).

Another study of sixth graders found that there were no gender differences in attitudes, perceptions and uses of computers; and that both boys and girls needed to see and interact with technologically proficient female mentors and teachers for the benefit of girls. The girls were able to see themselves in the capable position of their role models, and thereby overcome stereotypes that have been placed on them by their environment. The boys were able to adjust or even change their negative prejudgment of the capability and roles of females (Bain & Rice, 2007).

Girls in the fifth grade showed a significant increase in their beliefs that they could successfully work with computers when computer technology was integrated into their science curriculum. They also expressed their conviction about the positive role of computers. However, those students who were exposed to traditional methods, hence the control group, were not impressed by computers and the functions they played around them (Cady & Terrell, 2008).

The group of children that are referred to as Generation Z, Generation I, the Internet Generation, net generation, iGeneration, Generation Quiet, or Silent Generation represent are ushering in a society than Generation Quiet, or Silent Generation, net generation, iGeneration, to as Generation Z, Generation I, the Internet impressed by computers and the functions, hence the control group, were not students who were exposed to traditional technology in a science curriculum on male students’ self-efficacy attitudes. Journal of Educational Technology Systems, 36(3), 277-286.


Bibliography


It was the late 1970’s when I walked in the door at my parent’s house after returning from my second year in college and my grandparents were sitting in the living room. I began telling my Grandfather about college and my plans to become an accountant, to which he retorted “You should find a nice young man and get married, you don’t need to waste all that money going to college.” That made me even more determined to be successful in my career and show my Grandfather that women could succeed in a man’s world. I just did not know at that time that my career would be with computers; after all I was going to be an accountant.

My computer career began shortly after completing my bachelor degree in accounting. The company that hired me was looking for people that understood the complexities of bookkeeping, had a few people skills and were willing to travel. The travel part was probably more of a deterrent to most women than the computers. In fact the first “computer” that I installed was a paper spreadsheet with part numbers that was mailed to Minneapolis for processing over a weekend and returned with updated quantities and a computerized parts order the following Monday. Over the next several years the paper was updated with a terminal connected to a mainframe computer and finally computer networks were installed in the workplace. During all of these transitions, my primary job was to teach the technology to new users.

When working with computer technology, there are three things that can possibly go wrong. The first is that the hardware might malfunction and need to be replaced. Another failure can occur when the software does not respond as it is supposed to due to a bug, a virus or programming error. Finally and most commonly the users of the technology do not understand and use the software as it was designed to be used.

I have found over my years in this business that this is where the approach to solving issues tends to be different for men and women. As a woman, I will work with the users to understand how they are using the software and exactly when and where does the problem occur. My male counterparts begin troubleshooting that hardware and software formulating possible solutions, half listening as the users describe their issues. Geeks and nerds with their Blackberry’s, Blue Tooth’s and laptops may be really good at fixing hardware and software, but they leave the average user frustrated and confused. That is where women with their instinct to protect and nurture, can help users to understand and feel at ease with the technology. Granted not all men are geeks and not all women make good teachers, but over the years of teaching computers, I see most of the guys jumping into troubleshooting like an out of control toddler at an amusement park, while the women sit back and let the men play. Women are not as aggressive when it comes to troubleshooting, but they will spend more time diagnosing the issues and less time fixing time. Overall, both sexes can be successful in the field of computing.

I think my Grandfather would be proud, of my twenty plus years of working with computers and I think I have proven that I can be successful in the business world. After all I am now a Mom, housewife and teacher. Wait a minute – I think women were teachers 100 years ago when my Grandfather was growing up. Maybe he knew all along that women have a place in this world, to make life better for everyone, including kids and computer users.

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Women in FOSS: Technology, Liberalization, Freedom and Women

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A number of studies relating women and technology/computing are made every year ranging from gender in computer games to statistical studies on these from psychological perspectives. If one considers the fraction of women in computing to be extremely small, the number of women who use Free and Open Source Software (FOSS) is even more miniscule. This is rather surprising since FOSS is a movement based on the ideas of freedom, spread of technology and improved accessibility. Moreover, the use of FOSS tools has a number of advantages for women, ranging from the ideological (the founding principles of freedom and access for better development) to the financial (such software is typically also “free” as in “free beer”, alongside “freedom”). FOSS has the ability to facilitate bringing technology closer to women, and also provide ample opportunity for women to do developmental, evangelical, applied, research and/or documentational work, amongst other things. Essentially, FOSS has the potential to do for women and computing, what the suffrage did for their liberation. This article is a study on how FOSS can help bridge the gap between women and computing and this includes some statistical observations, apart from suggesting avenues for participation, and recommending fora and communities that aim to aid form symbiotic relationships between women and computing.

Keywords: free and open source software, computing, women, technology, freedom, development.

1. Introduction

Free and Open Source Software (FOSS) is the umbrella term by which software that offers the freedom to “run, copy, distribute, study, change and improve the software” [1] is known. It is also known as Free/Libre/Open Source Software or FLOSS in some circles, and has at its base the three pillars of open source, open standards and open content [2]. The word “Free” here stands for “Freedom”, and is not necessarily from a “cost” perspective.

There are a number studies dealing with different aspects of women in Science, Technology, Engineering and Mathematics (STEM) [3] that are conducted periodically, including women and Information and Communication Technologies (ICT) [4] [5]. Many of these studies are centered around the involvement of women [6], the related statistics, etc. in “developed” countries, and not with issues relating women and ICT in “developing” countries. In many countries, especially with respect to women and FOSS, a study of the relationship can be difficult due to sheer paucity of numbers, which explains the disparity in the countries in which such studies are conducted. There also exist inherent differences in the way women relate to technology in the two types of countries – due to differences in access, applications, ways/mechanisms of involvement, reach, scope, awareness, etc.

The ratio of number of women to men in many fields is arguably low in the dichotomous broad classification of countries mentioned, but it is alarmingly lower still in Computing [7]. Some statistical studies say that the percentage of women who are part of the computer science workforce is roughly 30% in the USA [9], and a lot lower in countries like India. Similarly, the numbers for women using proprietary software in the USA is about 28% [16] of the total user base, while according to a study by FLOSSPOLS [17][15], women contributing to FOSS projects account for about 1.5% of the contributors. The number of women in India who use FOSS and/or contribute make an inordinately tiny fraction.

There are many stereotypes with respect to women, especially in association with engineering and technology. Even more so for women involved in computing, math and allied fields involving theoretical work, and applied Computer Science [8][9]. Here, computing encompasses the use of technology for developmental, applied, theoretical, scientific and/or
research work, under the aegis of engineering, science, humanities, and interdisciplinary fields. The numbers speak for themselves when it comes to the use of technology by women, for personal, professional and research work, on a regular basis [10]. FOSS has tremendous potential in providing a basis for affordable and sustainable development and solutions to address different issues particularly with respect to the information and communication needs of developing countries and women. One of the key advantages of using FOSS is that steep licensing fees associated with proprietary software can be avoided, thereby increasing accessibility.

A lot of FOSS projects and movements have realized the disparity in the gender ratio [14] and while not many take explicit effort to include women, most do not explicitly “exclude” women either. Frequently, the reason for the tilt towards more men is because of lack of conscious acknowledgement that there exists a problem, whatever may be the reasons for it, and also a lack of awareness that initiatives are required to fix the gender “gap” [14] [36]. Many projects exist for improving access to women with respect to technology and some include FOSS. It is thus worthwhile looking at developing a “symbiotic” relationship between women and FOSS. The problems that exist and need to be addressed, and modifications to the systems in place that might help FOSS projects be more inclusive of women through conscious and sustained efforts are discussed in the following sections.

2. Women and FOSS

FOSS has been considered by many, justifiably, to be an excellent tool not only diminish the digital divide, but also the gender divide [12][13][14]. Apart from the viability of using FOSS from an economic perspective (of avoiding licensing fees, etc.) [41], other advantages include a customized fit into localized needs, and scalability while attending to individual user needs. With affordability, consistency, adaptability to evolving user needs and a growing user base and support system targeted at women, unlike proprietary software, FOSS has tremendous scope in bringing ICT to the disadvantaged, at a large scale. We will explore this a little further with actually acknowledging the problem (“the divide”), evaluating the advantages of solving the problem (“the bridge”) and how to solve the problem (“the crossing”).

2a. The “Divide”

The fact that there are significantly fewer women in FOSS has been established [16]. Moreover, that this is a reflection of the involvement of women in other fields in science and technology, especially the ICT, is rather obvious. When it comes to development, there are fewer programmers who are women (both in FOSS and proprietary software, although the disparity has been quoted earlier) than men. In addition, the needs of end users who are women are typically not explicitly addressed. As a consequence of these, there are far fewer women FOSS developers, than men.

There are diverse users and a variety of applications in and of FOSS. With such a large base, the dearth for women in FOSS is a rather blatant problem, since a majority of software seems to be developed by male programmers for a predominantly male user-base. While there are larger problems to address, FOSS seems to be the best mechanism for not only bridging the digital divide, but also to evaluate and address user needs better, and directing and improving the flow of technology, so as to be inclusive of the disadvantaged. The best method to implement this is to include more women under the umbrella of FOSS, making the problem cyclic – to increase the number of women using FOSS, it needs to be more accessible and for that, more women need to be included.

2b. The “Bridge”

For women, FOSS has far reaching advantages ranging from the ideological to the technological. Philosophically, FOSS was built on the ideas of “openness” and “freedom”, with approaches targeted at addressing user needs, and a community-based development process, make it an ideal platform for women to use. This is so, both as a means of making women more independent and self-sufficient, but is also a process of liberation, from steep costs and more.

From a societal perspective, FOSS provides two essential advantages – it helps empower women by bringing ICT closer and making it more accessible, and apart from this, also offers a tremendous support system for entrepreneurship. In FOSS, entrepreneurship is encouraged, since anyone can develop and modify a software package they feel is necessary, and it is socially established that entrepreneurship among women will definitely help in growth and development at various levels, technologically and otherwise.

2c. The “Crossing”

There are multiple ways to facilitate inclusion of women in FOSS, and helping women get involved. Important for this is an understanding that women might have different user-needs, and evaluating if that is the case, since this is crucial to actually getting more women involved in FOSS. It is essential to provide software and services, that are both women-friendly [11], and accommodative of any special needs that women may have, from a user perspective. Moreover, a development environment that is friendly and conducive to women, is essential. This should be devoid of any gender bias and/or offensive conduct [11][18], and be more inclusive. FOSS projects should also ensure that a nurturing collaboration environment exists, where healthy competition and gender balance can be ensured, so as to maximise innovation, and establish a symbiotic relationship between FOSS and women.

3. Types of involvement

Popular notion (now declining) is that involvement in FOSS comprises primarily of coding and development. While development does form a significant portion of FOSS, there are many ways [19] [18] for women to get involved in it. Many FOSS projects comprise predominantly of developmental work of some form, but there are many ways to go about it and this can be done with explicit efforts to include women. Listed below are some popular routines to contribute, participate and/or get involved, but are not necessarily women-centric. FOSS offers women the ability to suggest and add new features and capabilities, and fix bugs, apart from offering choice and change.

3a. Usage

The most important and fundamental mechanism to get involved is to “use” FOSS. This is fairly intuitive – without practice, knowledge or at least a basic understanding of a system, there cannot be much involvement or contribution. Essential to this is the actual and frequent use of FOSS, and the more one uses it for regular needs, the better the functionality can be understood. One reason many “end users” give for not transitioning from proprietary to open source software is the ease of use of proprietary systems, and that the transition would mean entering new
territory and leaving a comfort zone. This arises from the fact that proprietary software are frequently bundled with computers and other hardware (and software) leaving end users with few options, or paying the fees for the bundled software and then purging the system and using FOSS over the proprietary system which kills the “open” philosophy. Open hardware is another avenue worth exploring. There are plenty of incentives for the transition to actually happen - right from avoidance of hefty licensing fees, to embracing an "open" and transparent philosophy which is satisfying and rewarding from a social perspective, once the inertia is overcome. The various FOSS tools that beginners could use include OpenOffice.org (for word processing, creating documents, presentations, spreadsheets, etc.), Tux Paint (a drawing program for children), Gimp (creating images and editing images and photographs), Mozilla Thunderbird (email and news client) [28], VLC media player, various Linux [22] (such as distributions of Ubuntu [23], Debian [24], Gentoo, Slackware, Red Hat, Mandriva etc.), BSD-based operating systems (OS) [31], and even Google's Android OS for phones. FOSS can be widely used for more focused or advanced applications - from programming and scripting to visualization, machine learning, symbolic computing, business intelligence and multimedia-related development. Frequently used open source software include Google for web search and Wikipedia.

3b. Development/Projects

There are hundreds of FOSS projects that encourage contribution from different strata of people. Many of the operating systems listed in 3a. elicit contributions in different forms – ranging from tracking bugs and fixing them, to documentation. This applies for many projects. The Google Summer of Code (GSoC) [39] program coordinates between various open source projects and student contributors, with a stable feedback and remuneration system in place. A lot of web development can also be done using frameworks such as Django, and Content Management Systems (CMS) such as Drupal [27] and Plone. Programming languages that are popularly used for open source development include Python, Perl, PHP [30], Ruby, Lisp, Java, Lua, Tcl, and C/C++. Version control systems such as Bazaar, Git, Mercurial and Subversion are extremely useful for project management, and many Integrated Development Environments (IDEs) are available for development. Women can contribute to any developmental work through projects such as Ubuntu- Women [23], Debian-Women [24], etc. Although any open source project would welcome contributions from women, these help provide a support system to flag off developmental work and cushion them from gender bias. A lot of development [33] in FOSS projects also involve involvement from employees of FOSS-based companies, apart from hobbyists, and those who develop FOSS as a means to solve a given problem or come up with an application.

3c. Documentation and Technical Writing

Almost all open source projects require proper documentation that frequently includes tutorials, since use of the software in these cases hinges significantly on knowledge gained by users from the documentation. Moreover, project documentation software. Any user can contribute to the documentation right from cleaning up and editing the document pages, to actually documenting information, maintaining and updating changes, etc. Documentation offers a simple platform for involvement from women, and such involvement too goes a long way in the spread of FOSS since documentation frequently is equivalent to the “user guide”.

Technical writing is another avenue for contribution, for women. This typically involves describing "technically" different technology and software in various media and platforms including tutorials, reviews, etc. This aids dissemination of the technology and is a particularly powerful method for propagation of FOSS, and involvement of women can be rewarding from multiple fronts – from the financial to the social.

3d. Translation to Regional Languages

Entire projects can be translated to regional languages, and not just the documentation. This helps both the spread of FOSS and expansion of the user base. It helps in the reach of the technology to more people, thereby leading to cyclic development - for instance with more applications developed leading to more involvement. Translation to regional languages is a boon to women especially, being a means to improve access, since in many countries such as India and China, regional languages are more widely spoken than, say, English or popular European languages. To learn a new language in order to learn a technology is rather difficult and having the technology accessible in a known language helps bridge the gap. Translation helps improve access to women, bringing technology closer to them, and thereby increasing popularization of FOSS in the process.

3e. Evangelism, Education and Research

Evangelism involves propagation of FOSS and the philosophy behind it, to aid it's spread. This can be done in many ways- by word of mouth, writing, propaganda through any media, conducting workshops, installation fests, conferences, seminars, publishing material, broadcasting, making tutorials, teaching, outreach programs, etc. Many projects are now in place to increase the use of FOSS in education. The Free and Open source Software in Science and Engineering Education (FOSSEE) project [34] at the Indian Institute of Technology Bombay (IITB), which comes under the aegis of the National Mission on Education through ICT aims to increase the use of FOSS in collegiate education in India. Project OSCAR (Open Source Courseware Animations Repository) [35], also based in IITB, is another project aimed at improving teaching in classrooms with the use of animations to explain different concepts, at various school and college levels. The Kerala state government revamped the computing infrastructure in schools and other government offices by transitioning into FOSS for their computing needs [40]. A number of other states have started following this lead, starting at smaller scales as of now. Exposing teachers to FOSS will help increase the user base, starting at the grassroots level, and involving more women will aid the process of education. If exposure to FOSS starts right at the school level, where there are more women than in higher education, skills learned will improve employability, and has the potential to increase number of women in higher education as well. The avoidance of licensing costs in FOSS is a boon, since frequently access to the same licensed software, when out of a school or workplace that uses the software, is difficult and thereby affecting employability and smaller companies [41]. FOSS is being used in applications in a plethora of fields ranging from the use of visualization tools such as Mayavi (3-D) for weather data and other modeling and matplotlib for generating 2-D plots for different types of data, NiPy for neuroimaging using Python, SAGE for symbolic computing, R for statistical computing, Pentaho and Jasper for business intelligence, etc. Different packages and libraries have also been used for machine learning, Natural Language Processing (NLP), image processing and analysis, and FOSS tools exist for processing various kinds of scientific data, apart from uses in technology, hardware etc. Women researchers can access and use FOSS for their scientific and technological needs,
predominantly free of charge. FOSS is used in many areas by researchers in the humanities as well – such as LaTeX for formatting and publishing, Scribus for desktop publishing, Blender for 3-D content including movies, Inkscape for vector graphics etc. The sheer diversity of applications, scalability, costs involved, and ease of access, among other incentives, make FOSS a viable proposition for all researchers and developers, especially women. They have potential to make more women entrepreneurs, and help women become more independent and self-sufficient, both technologically and socially.

4. Avenues for Participation

The avenues of participation are related in many ways to the types of involvement, as given in section 3. Unlike the mechanisms of involvement which are not gender-specific, the avenues available for participation include many women-centric communities, whose agenda include increasing the number of women using FOSS, and bringing technology closer to women.

4a. Fora and Communities

There are many fora [32][22], communities [25][26][29][31], mailing-lists and wikis [18] to aid women use and contribute to FOSS. Typically, such avenues will be a combination of the above mentioned. For example, the Ubuntu-Women [23] community has under it’s aegis a mailing-list, wikis, websites, projects, programs, internet relay chat (IRC) for meetings, and other platforms to aid and assist women embrace Ubuntu. These women-centric fora and communities help form a cushioned and more understanding support system, where discussions can be held sans any genderbias, and are typically more comfortable for women starting out in a FOSS community. They help include more women in FOSS through a combination of mechanisms that help form a symbiotic relationship between FOSS and women. Moreover, since these typically have more women than a lot of other communities and mailing lists, women find it easier to “fit in” and have a more conducive environment to learn and question. Women-centric communities exist for the reason that the agenda of existing FOSS communities is understanding, exploration, collaboration, development, etc. of a particular piece of free software, while the former deal explicitly with encouraging more women to use that software and increasing popularity of the software among women, as a mechanism of fostering growth of FOSS and helping women receive better access and support for it. There are many women-centric user groups, events, and conferences [37][38].

4b. Projects, Movements and Mentoring

They include specific programs [20], code sprints, installation fests, scholarships, studies focusing on women in FOSS and related topics, outreach, seminars, computing groups, networking and collaboration, etc. Mentoring [18] women in FOSS is taken rather seriously and many focused programs are in place to provide exposure to different FOSS projects and mentor women in a sustainable fashion. Typically, these involve introduction and exposure to some tool, apart from guidance and help whenever required, as part of mentoring. Moreover, mentors can belong to either gender and the one-to-one interaction helps foster involvement much better.

5. Conclusions

The percentage of women in FOSS is very low, which is unusual considering that FOSS offers an excellent platform to make technology more accessible, taking various things into perspective, such as the initiation cost, usability, scalability, address of user needs, etc. It was mentioned earlier that FOSS has the potential to do for women and computing, what suffrage did for women and liberation. This is made clear from the discussions on the technological and social changes possible for women, through FOSS. Different mechanisms to foster the establishment of a symbiotic relationship between women and FOSS have been discussed, including the scope, the various avenues for participation and the different ways women can get involved.

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Why is there a lack of women in the field of Computer Science? After conversing with a number of people in the Computer Science field we came to a common conclusion that the disdain, by women, for the Computer Science field was something that occurs during the early years. Therefore, it was my hypothesis; going into this survey that this problem of having a lack of women in Computer Science had its roots in the elementary schools.

Our purpose in developing this questionnaire was to ascertain whether Chicago Public Elementary Schools had available computer technology and if so, how was this technology being used in their classrooms? Specifically, we wanted to come to a conclusion as to how many males and females were given access to computers and for what purpose were they being used.

We discovered that both schools surveyed, had established Computer Labs where all 7th and 8th graders receive mandatory class time two hours per week. One must remember that the mandatory part of this only applies to these two schools and not all the Chicago Public Schools. These classes introduce students to Microsoft Office Suite of programs (Word, Excel, & PowerPoint). All students are given a research project that requires using the Internet to gather information for their written report.

Furthermore, we revealed the fact that an equal number of boys and girls were using computers in school for about two hours per week and also the same number were using a computer at home for three to five hours per week. Another interesting statistic was the fact that approximately 25% of all the children surveyed did not use computers at all in the home. When I presented this question to the Principal of each school their reply to this anomaly was that a magnet school has children from low income areas of Chicago bussed to their schools and many do not have a computer available to them at home.

A conclusion that one can come to after analyzing this data from the elementary school children is that the cause of there being fewer women in the computer science field is not due to any occurrence at the elementary school level. At this point in a child’s life, the computer and its potential for future advancement is looked at more as a toy or something to play with rather than a potential tool for the future.

Upon doing some additional research, it appears that the problems for women begin at the high school and college levels. Carnegie Mellon University conducts a summer program where they invite more than 240 high school computer science teachers who participate in a program for training on gender-equity skills and how they can become effective in increasing the number of girls that take classes and go on to choose computer science at the college level.

Part of this summer program is for these teachers to develop lists of what influences girls to enroll or not enroll in computer classes and to establish effective intervention strategies to actively recruit girls into high school computer science classes. In the past, high school teachers have mainly concentrated their efforts on teaching the subject matter of a particular course without explaining the potential benefits of continuing forward taking additional classes in computer science.

We can now see that my initial hypothesis was incorrect and the point of impact for girls in the realization and understanding of how important a career in computer science is actually begins at the high school and college levels.

Hopefully, more summer programs such as the one provided by Carnegie Mellon University will enable the high school teacher to, not only teach the contents of a particular computer science course but, additionally make students aware of all the possibilities that are available to students who major and get a degree in computer science.
Early MicroVAX chips - Luck and Skill

The top level managers on the MicroVAX chip effort had considerable experience managing large projects at Digital, but knew relatively little about VLSI. The advantage we had is that we were not alone in the industry, i.e. the most experienced VLSI design shops were good at memories but generally lousy at building and using computers.

One thing we knew at Digital for instance is that engineers had design styles. If an engineer believed that fast computers had to be physically large every product they built would occupy a room sized enclosure, independent of the physics that dictated that fast computers needed to be physically small and take little power.

So we knew when we staffed the MicroVAX chip effort to work with the concepts developed at Caltech while Dr. Craig Mudge, a Digital Equipment Research Staff member, worked their, we needed a team that would base their designs on what the media allowed, not old concepts.

As one of the organizers for the effort and later as group manager I often looked to women for key roles. I observed that experienced women often got to that position because they were exceedingly capable as the environment of the 1960’s and 70’s was generally unfriendly to technical females. In a later time at another company a second generation technical woman said to me that the difference between her career and her mother’s an engineer on the Apollo Moon Landing effort is that she did not have to hide her major like her mother did.

I am going to discuss the contributions of several key women on the MicroVAX project. Note that this project happened over 35 years ago, long before the gigahz and gigabyte hand-helds such as this iPad.

Process Development Mgr Ruth

As best I know Ruth was the only female FAB manager of that era. About a year into the 5 year effort we made a key high risk decision. we needed to move from a single level of metal interconnect to at least 2 levels. This had to do with the problem of moving signals across the chip. The RC dominated rise time of a signal on the chip was more than 1000 times faster on metal than on poly-silicon. By agreeing with the direction of using 2 levels of metal and allowing her team to work with engineering Ruth sided with the enemy as far as manufacturing was concerned. Of course, later we were all glad that this decision had been made. FABs were sometimes nasty places with toxic chemicals and expensive machines. I remember once when a million dollar machine fell through the raised clean room floor.

CAD Development - Carol

CAD for chip design developed as an industry in the mid to late 1980’s. Due to a limit processing power and memory in the time-shared environment, CAD was of marginal real help to engineering design in the late 1980’s. CalTech had built one experimental workstation using a LSI-11, but it was hopefully underpowered for real design work. Certain concepts such as design capture and hence verification from a simple but effective terminal entry diagram capture package was possible. It was Carol’s job on several different occasions to separate wild ass dream from practical. She made the practical happen on time and highly functional and avoided the dreams.

Carol could do this for herself or for an entire team. I would trust Carol with my career or my life as she was good, smart, and honest. With some people who were important, it was difficult to know when they went from knowledge to lunacy. Carol did not have lunacy.

Computer Planning Helen

Helen was a business intern from a woman’s college in Boston. Never would she have gotten job in high tech. However Helen was a great reorder. She could assemble information coherently by listening it out of people. Most engineering groups in that era under resourced engineers with computers. How could they use so many MIPS and disk. Our group had 17 GB of disk. One of my managers found this out and swore he would eliminate the junk.

Women Leads on the early MicroVAX Chip Team

Steve N. Teicher

650 Plantation Dr Titusville, Florida 32780. E-mail: steve_teicher@me.com
I had a different view. Long ago I had simulated the financial risk to a product of being late. I asked Helen to find out how many computers the engineers needed such that computer cycles never limited their work.

I did get a few notes about the way I was wasting Digital’s money, but I knew the truth.

Computer Operations - Margaret

Given a barely adequate number of cycles and memory needed to design and verify our large new chips we needed the computing environment to work all the time.

Essentially we needed a term that I had not heard before in engineering, a SLA or service level agreement.

Margaret, a former school teacher intuitively knew what to do. A great teacher has to demonstrate logic and reliability. This is what she did. When the weather was bad, she was in with her early crew. She negotiated agreements favorable to us and them.

Summary

MicroVAX was a flagship effort that allowed Digital to market the VAX architecture over a range of more than a 1000 to 1, the original goal. The technology skills developed to build MicroVAX allowed Digital to explore high volume super computing with the Alpha series of processors. The path from the technology of the 1970’s to 1980’s and beyond involved many more people than I named. They got direction from management but most of the advances came from inside the teams who did the work. When Digital collapsed for many reasons, the groups that participated in MicroVAX and more were sold to other companies. People who did not stay to the end found themselves in leadership roles other places.

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Call for proposals from Academic Institutions, Faculty members and other Individuals/Organizations for partnering with CSI to organize workshops at all Cities

In pursuant to the above mission and objectives of the Computer Society of India, it is proposed to conduct a series of workshops across the Nation, by partnering with experts and organizations to enable the stakeholders move up the value chain. An indicative list of topics for the workshops is appended hereunder:

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<tr>
<th>Indicative Topics (but not restricted to these)</th>
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<td>Business Analysis</td>
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<td>Computer Forensics</td>
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<td>Data Mining using SQL 2008</td>
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<td>Documenting Software Requirements using IEEE standards 830-1998</td>
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<td>Frauds and crime in Digital world</td>
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<td>ISO9001:2008(Revised Standards)</td>
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<td>ITIL (R) V.3 Foundation</td>
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<td>Payment Card Industry Data Security Standard (PCI DSS 1.2)</td>
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<td>Cryptography</td>
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<td>Network security</td>
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<td>Project Management Foundation Course for PMI-PMP</td>
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The workshop will be conducted by the chosen Academic institutions, Faculty members and other Individuals/organizations in collaboration with the CSI chapters. The CSI Education Directorate will extend necessary support in organizing these workshops and accredit the training institution/individual. The directorate will also complement (if required) by team augmentation with professional subject matter expert.

Submission Guidelines: Interested Academic institutions, Faculty members and other organizations / resource persons may submit complete details along with an outline of the proposed workshop contents on or before 15th August 2010 by e-mail to admn.officer@csi-india.org along with copy to Vice President to vp@csi-india.org.

The proposal should include following details:
1. Title of workshop
2. Details of the proposer (Full name, address, e-mail id, organization, designation, educational qualification, years of experience)
3. Track Record of past delivery/Competence demonstration data
4. Duration of proposed workshop (No of Days)
5. Break up into individual sub-topics with their respective duration
6. Potential sponsors
7. Target audience, entry qualification and class size
8. Training aids required
9. Courseware availability
10. Training delivery model
11. Complementary skill required (to be sourced by CSI), if any
12. Preliminary budget (Estimated expenditure and Expected revenue)

Special Notes: The organizers of quality and well received workshops will be considered for special recognition in addition to CSI accreditation and award by the CSI. The particulars of key resource persons of the above workshop will be shared with the host Academic institutions, Faculty members and other Individual/organizations for conducting workshop at all locations across India.

M D Agrawal
Vice President, CSI

Wg. Cdr. M. Murugesan
Director (Education), CSI
The legal department in an organization, perennially plays the Devil’s or Angel’s Advocate, as per the nature of the case or issue. As such, legal in corporate is bestowed with the very difficult responsibility of protecting companies from clients and vendors, employees from employers and also at times safeguarding employee from employee. Even in a traditional organization, where norms, rules, policies and guidelines are drawn, vetted and implemented, there is an enormous range of responsibilities for the legal department. In an IT industry, even more so as the IT employees’ work style, right from work timing to output and measure of performance is very different.

Legal issues in IT industry are predominantly in the areas of information. Security of information, copy right issues, warranty and indemnification are the chief aspects that need focus. While this is in the legal perspective, the HR issues in IT industry, on the other hand, are many.

Resources need constant upskilling with respect to emerging technologies; communication skills and technical skills seem to be mutually exclusive while sound communication is a must skill for requirement gathering, project management and people development. Furthermore, IT companies are bitten more than any other, by the attrition bug. Rain or shine, recession or boom, IT industry is a high traffic zone for people movement. With so much uncertainty in the market, HR and Legal join hands to plug or at least control the attrition by placing numerous checks and balances in the company’s policies. While HR strives to retain people with various benefits and facilities, Legal monitors employees with the aid of IT systems and also defines the Do’s and Don’ts at the workplace and beyond with explicit policies and procedures.

Major study has gone into deciding the kind of benefits that HR provides for employees in IT organizations. The regular benefits include: Provident Fund, Gratuity, Group Mediclaim Insurance Scheme, Personal Accident Insurance Scheme, subsidized food and transportation, company leased accommodation and such basic perquisites. In addition, IT companies provide interesting amenities like:

- **Recreation, Cafeteria, ATM and Concierge facilities:** The recreation facilities include pool tables, chess tables and coffee bars. Companies also have well equipped gyms, personal trainers and showers at facilities.
- **Corporate Credit Card:** The main purpose of the corporate credit card is enable the timely and efficient payment of official expenses such as travel related expenses.
- **Cellular Phone / Laptop:** Normally provided on the basis of business needs. The employee is responsible for the maintenance and safeguarding of the assets.
- **Personal Health Care:** Some IT majors provide facility for extensive health check-up. For employees with above 40 years of age, the medical check-up can be done once a year.
- **Loans:** Employees can avail loans on three different occasions: Medical emergency, personal needs like wedding expenses, and, for new recruits, interest free loans to assist in initial settlement at the new location.
- **Educational Benefits:** Highly critical for IT companies for building the knowledge of their employees. Reimbursements towards expenses incurred for tuition fee, examination fee, and even purchase of books. Employees are expected to sign a minimum contract period with the company in return of this perquisite.
- **Performance based incentives:** The parameters for calculation are process performance i.e. speed, accuracy and productivity of each process. The Pay for Performance can be as much as 22% of the salary.
- **Flexi-time:** Pretty much prevalent in IT companies, the objective of this policy is to provide opportunity to employees to work with flexible work schedules based on project needs. Flexible work schedules are initiated by employees and approved by management to meet business commitments while supporting employee’s personal life needs.
- **Flexible Salary Benefits:** Helps employees plan a tax-effective compensation structure by balancing the monthly net income, yearly benefits and income tax payable. Benefits cover House Rent Allowance, Leave Travel Assistance, Medical Reimbursement, Special Allowance and so on.
- **Employee engagement:** Work Life Balance being the key word to a successful professional,
IT companies are very aware of the pressure employees handle during project delivery time. Cultural programs are organized in which all the employees are given an opportunity to display their talents, for instance, in music, art, and dramatics. Various sport events such as cricket, football, etc at intra company levels and also on inter organization scale are conducted. Camaraderie, team spirit and expression of innate skills come into play thereby rejuvenating the individual.

- Employee Referral Scheme: In several companies employee referral scheme is implemented to encourage employees to refer friends and relatives for employment in the organization. Apart from these benefits, paid days off, maternity/paternity leave, employee stock option plan are also provided to help employees focus on work without worrying about personal issues.

When there are so many benefits associated with IT industry and so many privileges for the IT employees why would they even look out for a change of job? With these benefits coupled with fast track career growth, why is the attrition rate in IT industry consistently high? What prompts an employee to leave? Why people leave an industry consistently high? What prompts career growth, why is the attrition rate in IT industry globally.

The obvious attraction would be salary increase; companies are known to vie with each other to pay above market value to IT professionals. A contradictory theory, supported by surveys conducted internationally, opines that quality of the organization and quality of job and tasks matter to an individual more than pay and benefits. Some possible reasons for wanting to change jobs would be:

- No growth opportunity/lack of promotion
- Higher education, specially overseas education
- Misguidance and empty promises by the company
- Policies and procedures not conducive
- No personal life
- Physical strains like commuting distance, uncomfortable work stations etc.
- Uneasy relationship with peers or managers

With so much of uncertainty in the market people are trying their best to stop or to at least have a control on the attrition rate. The key skills that Human Resources professionals need to have to work on people engagement, employee care and achieve low attrition rate are personal credibility, sound knowledge of HR practices, strategic contribution, good understanding of the company’s business and above all, adeptness in IT technology.

Assume that the HR team professes the skills required to handle the entire gamut of HR functions successfully in the company, what best assessment than the HR audit would prove that it is indeed true?

Human resource audits are conducted by professional setups on a regular basis; the HR audit urges the organization’s strategic intent to make an in-depth and objective assessment and evaluation at its HR policies, procedures and practices. This type of comprehensive review of the company’s current state can help to identify whether specific practice areas or processes are enough, absolutely legal and very effective. The data obtained from this exercise can aid in identifying gaps in HR practices, and these gaps can systematically attended to, with the objective of minimizing lawsuits and blocking any perceived violations.

The legal areas also cover issues like poaching between companies and moonlighting by employees, overseas work termed as onsite placements and many other areas which need total compliance to laws and legalities. Blanket agreements may not be possible as issues and cases that arise due to legal boundaries or the lack of it, may be very unique or specific in nature. But basic norms are put in place and code of conduct is stressed upon with respect to HR and legal practices. After all, whether it is the employee or the employer, both should be benefitted by the company’s practices; neither should be the victim of the same practices that profess neutrality and objectivity, with stress on HR perspective within legal boundaries.

A thoroughly regulated employee environment is essential in the competitive IT world so that there is minimum ambiguity on the myriad of HR functions from hiring to exit management. Employers spend time, effort and money to ensure there is not even a distant possibility of a legal tangle involving the company and the competition or the company and the candidate. On the one hand, policies on internet usage, software licence and Intellectual Property are evolved and implemented with the seriousness that is certainly not inappropriate. The other side of this is that companies are equally determined to ensure no employee is wronged or deprived. The whistle blower policy that most companies are now adopting provide a platform to employees to openly or anonymously record a misdeed/ill treatment/bias by a colleague, boss or even the management.

Amongst all these dimensions, the web has emerged the winner. Information Technology has helped HR people and Legal experts to network and share knowledge, expertise, insights and experiences to deal with the triangular aspects of HR, IT and Legal. As domain and industry experts post their learning on the World Wide Web, professionals access and benefit from the high quality research as well as from the happenings and developments in the industry globally.

This, of course, does not take away from what one needs to do in crisis situations. What truly becomes a HR or legal expert is to leverage on plain wisdom supported with balanced decision making skills. And, be responsible as well as accountable for the actions and outcome.

**About the Author**

Prasanna Sai handles finance and strategic planning at Ma Foi Randstad. He has over 17 years of experience in HR, finance and strategic business planning. Prasanna has been instrumental in preparing focused annual business plans and manages cash flow projection, forecasts and long term plans, budget planning and quarterly and annual operating results of the company. Prasanna has graduated from the ICWA and holds a Doctorate in Human Resource Development from the University of Madras, India.
Introduction
In the past few years, weblogs or blogs have emerged as an important type of web page and there is an exponential growth of blogs. Blogs create a huge knowledge base: a torrent of facts, and insights. Unlike text, the contents of blogs are random, unstructured and chaotic. Bloggers publish their thoughts on any topic without any constraints. This creates a community of shared interests that lead to potential business value for the companies such as getting insights, and generating revenue opportunities in the areas of advertising, product development and campaign management. Blogs are relatively new and more research studies are needed to address various issues. In the recent years, analysis and mining of blogs has become an important field of research. The scope of this Article limits to the discussion of analysis and mining of blogs. In this Paper an attempt has been made to discuss how blogs are analyzed or mined, used in various applications and the business opportunities it creates. The Paper also discusses several research issues in the areas of mining blogs as well as future scope of research.

Blog and its Characteristics
Blog is defined as a webpage that contains a series of posts typically characterized by brief texts that have minimal editing, providing online commentary, and is presented in reverse chronological order. Some blogs utilize photos and other media. The personality, expertise, and views of bloggers are reflected in the blog. Bloggers write posts in an random way whatever comes to their mind at the time of writing. A blog is a permanent archive and it is searchable. Bloggers keep on writing various blog posts in their own blog home page and these blogs are more or less permanent in nature. Blog posts are usually written in short, rambling, paratactic sentences and employ informal, non-standard constructions, unstructured content and slang. The postings are on real-time basis and information in the blog is current and relevant. Blog posts have limited length and time-bound. Bloggers add comments to their own blogs frequently. The home page contains posts, hyperlinks to posts on the other blogs as well as some commentary on that post. At the same time, using web browser, any Internet user can access online blogs of others. They can add comments or hyperlinks to comments to other blogs. The process of writing and modifying the blog is very simple and non-technical thus making it popular. Bloggers quickly change topics in their blog entries, update their blog entries frequently unlike web pages and hence might cover a wide variety of topics. Blogrolls create dense network of bloggers who read each other blogs regularly.

Blog Analysis and Mining
Blog mining is defined as an integrated discipline of web, text, and data mining, with refined techniques from social network analysis. The characteristics of blogs demand different methods, techniques and tools for analysis and mining as compared to general web pages and ordinary text. The rich content, form and presentation of blogs provide wide scope for analysis and mining. Words, sidebar links (blogroll), visual appearance of blogs, inclusion or non-inclusion of images, trackback links, graphics, colors and other design elements help in doing various network analysis and mining. Similarly title, body, space for adding html links and graphics of weblog entries increase the scope for analysis and mining. Blog posts may also include audio or video files, and non-standard punctuations to express bloggers’ emotions. The patterns of sounds, rhythm, stress, and intonation can be studied, analyzed and mined. The rhetoric style of language bloggers use demands different tools for analysis. Thoughts or emotions of a blogger may not be in one of the posts and may be dispersed in several posts of blogger’s own blog as well as comments to blogs of other bloggers. Bloggers can write and publish using freely available automated blogging software and server space thereby increases the complexity of the characteristics of blogs.

Some of the popular commercial websites available in the market to mine and analyze blogs are Blog Pulse, Technorati, and Google Blog Search. Traditional word segmentation tools and techniques such as mutual information, hidden markov models,
decision and neural networks are not useful and effective in applying to blogs as compared to applying on text due to the noise and unstructured part of blog. The popular mathematical and statistical probabilistic models such as LSA (Latent Dirichlet Allocation), PLSA (Probabilistic Latent Semantic Analysis), and LDA (Latent Dirichlet Allocation) have been used in analysis and mining of blogs.

Preprocessing of Blogs

The quality of analysis and mining of blogs depends on how the blogs are extracted from blogosphere, and how the blogs posts in each blog are parsed to get various parts. Hence preprocessing of blogs is required before analyzing the same. There are various ways how preprocessing is done. In shallow summarization technique, specific characteristics of blogs such as themes, time interval between posts, and body-title composition of posts are considered as input and then uses dimensional reduction techniques to preprocess and summarize the blogs. The technique produces a bag of words as output. Similarly some preprocessing methods extract key phrases from each blog. A stochastic graph based method is developed to recommend or select a small subset of blogs that best represents a much larger set within a certain topic. Information can be lost (e.g. titles) in the archiving process. This feature of blogging is also a factor of efficient pre-processing of blogs.

Some of the areas of analysis and mining of blogs are given below:

(1) Analysis of Relationships Among Bloggers

Sidebar links and the main posts establish the link between bloggers. Blogging creates network phenomena. Over a time period bloggers remove or modify some links from their posts, some links remain as it is. The relationships among the bloggers are analyzed by considering permanent links as input and conducting network analysis on them. In this analysis, individual blogs are considered as nodes or vertices and links connecting them are known as edges. The number of links to a particular blog is known as degree. Using network analysis and typology, one can find out the relative degree of centralization of the network and relations among sub-groups of actors within the network.

Bloggers share a common topic and syndicate content from one another by providing hyperlinks in their own blog entries to others’ entries. By parsing each blog entry direct hyperlinks or relationships to another blogger’s entry are identified. Similarly implied relationships between blogs are discovered by applying expectation maximization clustering (EM) and LDA. The contents of blogs from different bloggers are taken as input and a set of clusters are created. Hidden nodes sharing a cluster are discovered and links between bloggers are inferred from the blog entries that are part of the same cluster. Each cluster is considered as a topic. LDA is a framework of topic modeling and dimensionality reduction in natural language processing. Similar topics for bloggers can be inferred. By using LDA, non-intuitive as well as intuitive links can be discovered that works on any data set. Of course as the dimensionality of topic components is reduced, it is easier to give a topic name. Depending on the ambiguity of tokens, different topics are inferred.

By leveraging structural properties of blog networks, network relationships among bloggers are analyzed. The network analysis techniques that are applied include network topology, centrality analysis, and community analysis. Social groups in blog communities are identified. Similarly using cosine similarity between bloggers, LDA, and bloggers coarse similarities, latent friends are discovered. Latent friends are those friends who share similar topic on their blogs.

A blog community is created from a set of blogs that communicate each other in a synchronized manner i.e. communication is triggered by some events such as a news article. Extraction and analysis of blog community as graph problems have been studied extensively. Extended LDA, maximum flow, minimum cut algorithm, Markov chain model, and transmission graph are used to capture static/ dynamic behaviour, macro/ micro structure and aggregate/ temporal trends of individual communities. Here a community graph indicates how often one blog communicates with another A technique called community factorization (based on link analysis) is used to extract communities from the blogosphere. The blog network is also analyzed to discover and understand how coherent racist hate groups or communities are created and maintained. Familiar strangers, as coined by Stanley Milgram, do not know each other and not directly connected, but exhibit some common patterns in their blogging activities frequently. These strangers are also detected. Influential bloggers in both community as well as individual blogs are also detected by using Euclidean based distance metric. A blogger is called influential based on the number of influential blog posts. Using clustering aggregates individual blogs with similar interests.

(2) Blog Classification

The key phrases extracted in preprocessing are analyzed by applying standard text mining techniques such as classification. Depending on the word meaning blogs are classified in different ways. Standard models used in analysis of traditional Web pages such as Support Vector Machines (SVM), feed-forward/ back propagation neural networks, or naive Bayesian classifiers are used to classify blogs. The special characteristics such as comment content, blogger profiles, and links to other blogs are captured. Various categories of blogs such as political blogs, tourist blogs are modeled and analyzed considering spatio-temporal nature of blogs in the context of personal experiences. A model is developed where bloggers are identified by gender. Here the correlation between gender of bloggers and their writing style is studied and based on degree of correlation bloggers are discriminated based on gender. The writing style includes keywords, background colors, type of fonts, and punctuation marks etc.

(3) Clustering Blogs

Blogs are grouped into different categories (clustering) based on their features. Content similarity between blog entries based on a similarity score such as the cosine product or the Jaccard measure between the term features, is used. Clustering techniques are used as part of the analysis and mining in many areas.

(4) Opinion Mining

Opinion mining (OM) consists of identifying what opinion a particular blogger expresses such as positive or negative opinion, and degree of opinion in a scale. Blogs are modeled as a classification problem. Supervised learning approach such as SVM (Support Vector Machines) is used that uses linguistic features. The classifier learns from generic linguistic features. Some blog posts, not all, express an opinion about any entity or event or a concept. Blogger uses some subjective words that indicates his or her own bias (opinion). Text classification algorithms and its extensions are used to identify the subjective words thereby detecting blog posts carrying opinion. The techniques consider the word order and syntactic relations. Using PLSA with Maximum A Posterior (MAP) Estimator, the expert review opinions are integrated with many similar ordinary opinions scattered in blogs. Similarly opinions and feelings of blog author as well as comments from other users can be mined or analyzed.

In the lexicon based approach, the features in sentences are considered for
opinion retrieval. A sentence may contain multiple features. Different features may have different opinions. For example, the look of laptop is great (+ve), but the laptop is heavy (-ve). All the opinion words in a sentence are identified. These words then aggregated to give the final opinion of each feature.

Several studies have already done to discover opinions by using techniques such as NLP, machine learning. Discovering opinionated and non-opinionated blog posts is a big challenge. The subjectivity features or comments on some aspects distinguish both. Different approaches are implemented to discover these subjective features from a collection of blogs such as external resources, manual efforts and automatic dictionary-based statistical approach.

(5) Detection of Information flow

Detection of flow of information through blogs has been studied extensively in research. In a scale-free network, popular blogs tend to become even more popular on blogosphere. There was study on how information is propagated through a blog network. Researchers of the HP Information Dynamics lab and IBM Almaden Research Center studied how the information memes are propagated in the blogosphere, who is infected by whom with what topic and what timing. Various concepts and techniques such as epidemiology, innovation diffusion in social networks, and game theory are used.

The patterns of information flow through blogs are also captured. Advertisers can select an optimal set of blogs as their target audience or to estimate the extent to which individual will be influenced by a campaign. Information diffusion models are used to measure WOM in blogosphere. Influence of terms, postings, and bloggers are detected by applying data mining techniques.

(6) Discovery of Communities

Using topology analysis, Kohenen’s self-organization map, and content analysis discovers natural community around a specific blog. The logic works around content, linking to similar resources and linking each other. Connecting blogs as a form of social hypertext discovers virtual communities in the blogosphere. Bloggers’s social networks are also studied. Crawlers are used to locate specific blogs. Based on the numbers of in- and out-links from each page, the blogs are ranked on popularity and significance. Hyperlinks and recommendations have been used to study bloggers’ social networks.

The contribution of comments by other users in blogs provide useful insight such as reader’s perspective. Compare to the main blog posts, comments are difficult to be extracted, and analyzed. Analyzing comments one can understand social network that assists in identifying blogging communities. Similarly blog posts as well as comments can further be analyzed to find out the degree and controversy level any particular theme or blogger triggers. By analyzing and mining bloggers’ comments and blogger’s interaction (links), blogging communities by topic, their evolution, individual blogging pattern and sustainability are discovered. One can use data mining techniques to trace links between bloggers.

(7) Topic Discovery or Mining

A topic is defined as a set of significant phrases that are clustered together based on similarity. Labeling by any method is a problem, as the topic shifts over time. Various authors have studied topic discovery or mining extensively. One pioneer of such studies is Topic Detection and Tracking (TDT) project. The aim of the project was to find and track topics (events) in single news streams by using clustering based techniques. In some other studies the methods used to extract topics over time from single text stream by using probabilistic generative models such as PLSA, LDA, stochastic models and their derivatives. The popular mathematical and statistical models such LSA, PLSA, and LDA that are used in text analysis, are applied in analyzing blogs. Similarly a topic mining method that uses correlation between the semantic and temporal information is proposed to discover common (bursty) discriminating topics over multiple text streams. In Author-Topic model, an extension of LDA model, incorporates authorship information. The AT model again further extended to the Author-Recipient-Topic (ART) model, specifically for email, by regarding the sender-receiver pair as an additional variable. All the above models do not consider time and community structure along with the content.

Each entry in the blog is time stamped. The discussions in the online community are temporal in nature and short-lived. The CCT (Time sensitive and community sensitive) model extracts cohesive discussions or stories (any number) from blog communities that are temporal in nature i.e. as time goes on, one any given subject or issue. A story is a set of blog entries that are about a specific issue and that reflect a discussion in the blogosphere. The model considers content of entries, time stamps, and inter-blog links i.e. community structure of blogs as input and uses clustering technique and a modified time sensitive Dirichlet process model. Removing stop words and stemming does the preprocessing of the content of each entry. A wide interval of time even with same content may give rise to different stories. The corresponding blog URL, and linked-blogs are used to retrieve entries based on query keywords.

A probabilistic graphical model called Location Aware Topic Model (LATM) is discussed in literature that models changes in topic structure with locations. The model finds the relationships between locations and words explicitly. The model takes a set of blogs with words labeled with locations, uses a variation of EM algorithm. Knowledge and location together are modeled using such probabilistic models such as latent LDA. A basic assumption of topic models is that documents in a collection can be summarized by some latent semantic topics. The Statistical Entity-Topic Model captures the relationship between topics and entities mentioned in newspapers. The Topic and Role Model discovers relationships between people and topics. Similarity correlation between topics is also studied.

Topic is the abstraction of cluster of stories discussing the same theme or event. The tracking is about finding any incoming stories with topics. A model is developed that detects and tracks “hot” topics (topic evolution) automatically over period of time by using Fuzzy Adapated Resonance Theory (ART) learning (self organizing networks) algorithm. The model also discovers interesting trends that are not explicitly mentioned in individual blogs but implied from all the relevant blogs.

Common spatiotemporal theme (multiple-topic) patterns or trends are extracted from a set of weblogs. The blogs are analyzed by time period and location and taking their snapshot. Blogger’s behavior can be predicted and evolution of blogosphere can be understood by analyzing spatiotemporal themes. Similarly cohesive theme can be discovered from blog communities over time. A time-and community sensitive model is used to cluster blog entries to stories. From the hot topics discovered, interest to various domains
and communities can be determined and analyzed.

By applying statistical text classification techniques on the content of blog entries, millions of personal stories are discovered from the blog entries. Personal story describes a specific series of causally related events in the past, spanning a period of time of minutes, hours, or days where the author or a close associate is among the participants.

(8) Bloggers’ Sentiment and Interest Analysis

Using PLSA, S-PLSA (a modified version of PLSA), and AR model bloggers’ sentiment is discovered and a new model called autoregressive sentiment aware model (ARSA) is used for prediction of sales performance. BlogHarvest, a program is developed to search and extract blogger’s interests and then recommend blogs with similar topics. Techniques such as classification, links, topic similarity clustering and tagging based on opinion mining are used.

The sentiments of blogger about the others are also determined by applying shallow NLP on the text around blog connecting links. Positive or negative weights are given to these links and then blogs are classified into predefined sets. Like-minded blogs are discovered on blog-to-blog links. This is further extended to model trust and influences based on various trust models.

Bloggers’ interests are reflected in words they write, the frequency they post and the comments endorse. Their interests are automatically detected from the blogs. The word and post in the context, average response time, posting behaviour, and how the bloggers response to interest-related posts by others are analyzed to detect bloggers’ interests. Bloggers are profiled based on their similar interests.

(9) Automatic Labeling of Blogs

In order to give a label to the contents of a blog and to distinguish one from others, bloggers use tags. A program is also designed to label a new blog post automatically. This helps in searching and organization of blogs by blog search engines. It is found in research studies that automatic tagging (labelling) without understanding the context and subjectivity the content of blogs is more accurate than manual tagging. There is a scope of study on what basis bloggers label their blog entries differently.

(10) Mining Identity, Mood, and Behaviour

By analysing the words and phrases bloggers use while writing their blogs, their mood and state-of-mind can are identified and estimated. The blog threads are analyzed for discovering the important bloggers. Applying Natural Language Processing (NLP) algorithms on numerous active blogs in blogosphere, most important keywords, and proper names are determined, trends across blogs are discovered automatically, and key persons, phrases and paragraphs are detected. Similarly long-term and short-term topics and keywords are detected. A system called “MoodViews” is developed to track the general blogosphere state of mind over time and to connect it with events that may affect bloggers’ mood based on some mood indicators. A model is developed that addresses the relationships (links) among blogging motivations and behaviours as well as the factors of blogging activities.

Bookmarks, blogrolls, comments, RSS and trackbacks create several blog networks among bloggers. Bloggers read some blogs frequently. They update their own blogs through comments, blogrolls and trackbacks. These create complex relationships among blogs. Using these attributes the relationship among blogs or bloggers are analyzed. The links are analyzed by using machine learning algorithm. The reading behaviour is analyzed. Similarly one can analyze the complex relationships to study user’s behaviour, community structure and information diffusion.

(11) Blog Specific Search and Mining

Due to the growth of business blogs, there are many new opportunities. There exists new opportunities for developing blog-specific search and mining techniques. Probabilistic models such as LSA and PLSA are used in implementing the model to create a database of business blogs and to find interesting patterns with better relevance and precision of the search.

Blog Discovery

Blogpuse.com, a toolkit developed that automatically detects and publishes trends across huge set of blogs over time. The system publishes daily list of key phrases, key people, top links and blog bits mined from weblog entries. The system also estimates the relative buzz of word of mouth (WOM) for a given topic over time. It uses techniques such as information extraction, NLP algorithms, and data mining. By using different data mining techniques such as Apriori algorithm, association, sequencing and scoring, the system finds phrases, mines various topics, finds key persons. The programs also find the links that are frequently cited, the news articles that are frequently cited, what topics they discuss and how do they label and the language and vocabulary used and evolved over time.

Various trends are discovered from blogs automatically. The information such as important keywords, proper names, key persons, phrases and paragraphs within a certain time period is extracted from blogs by using NLP algorithms. How the discussion topics are propagated through various blogs are studied by using Chi-square, mutual information, and information gain techniques. Hierarchical SVM technique is used to classify business blogs into separate blogs. This is useful in discovering knowledge and patterns in business blogs.

Future Scope of Research in Blog Mining

Informal content of blogs has many difficulties. There can be spelling mistake, use of slang, grammatical mistakes, abbreviations, sarcastic uses, use of fuzzy terms, fuzzy queries, double meaning, and meaning implied by context etc. Also the models discussed in various literatures do not consider factors such as adjacency and distance between time and locations; time and community structure along with the content, all of which are important characteristics of blogs. Modeling the content variations of themes over time and location is also a very interesting research direction.

Before launching a product the company wants to know what kind issues that might arise after launching. For this company launches the Beta version of the product. Users discuss various issues in various web forums and blogs. By employing a very large team, company wants to analyze and mine the blogs and to provide feedbacks to the respective product teams as an “early warning system”. The content of blogs are analyzed. Potential issues, root causes, symptoms, and events are analyzed. Complaints are categorized or classified and then pass on to the product sub-teams for taking appropriate measures. This process is done manually. Huge resources are invested for this purpose. This can be avoided by classifying the causes and symptoms automatically. Here there is an ample scope of research in classification in blog mining.

Companies are interested in getting positive viewpoints and feedbacks from the public on their products. Similar to “click fraud” in online advertisements, some companies engineer positive product reviews or feedback on their products through some paid bloggers or own employees dedicated for this activity. The results of analysis and mining of these engineered blogs would not reflect the true viewpoints of users and hence misleading. Detection of this type of feedbacks, companies and bloggers is an important field of research. In order to promote a product or Web site, spam
blogs are created. This creates problem in identification of a genuine blog. Splogs are undesirable blogs that are created for attracting search engines, and promoting affiliate sites. Generally spam blogs are detected by using temporal and structural regularity of content, post time and links. Research on distinguishing genuine blogs from others is also an important area of research. Mining the blogger’s characteristics, such as age, gender, emotions, etc., has drawn much attention.

Blogging as a teaching pedagogy is an important field of research. Many western schools have started using blogging and other social media as common tools in their course design. How blogging is used in e-learning models creating virtual communities, how effective the system is that led to student-led learning are some of the areas of research.

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Laugh it Off!

A Sheikh’s Son

A Sheikh’s son goes to Germany for study.

A month later, he sends a letter to his dad saying:

“Dad, Berlin is wonderful, people are nice and I really like it here, but I’m a bit ashamed to arrive to school with my gold Mercedes when all my teachers travel by train.”

Sometime later he gets a letter from his dad with a ten million dollar cheque saying:

“Son, Stop embarrassing us, go and get yourself a train too...”
Connected Planet: The Mobility Revolution through Android

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What if you want to watch a video of you-tube on your Photo Frame (popularly called Digital Picture Frame – DPF) which is being streamed through your mobile lying in your living room? I wish I could watch those videos on my High End Television or on my Digital Picture Frame (DPF) at my convenience rather than on small-sized handheld devices. At-least I felt them if a technology supports them. If you feel the same and wonder if such a use-case is truly possible to realize? My answer would be to relax and rejoice, for there is a new technology called Digital Living Network Alliance (DLNA) which makes it possible. You will be amazed to see how the system becomes incredibly simple at its core if evolving software platforms like android is used. The architecture section details more on this topic.

The Debut of Android and the Rise of Digital Home

As mobile handset makers gear up to launch a new generation of Android mobile phones, consumers are now enjoying rich internet experience on these pocket-sized devices. Nowadays, electronic gadgets gaining increasing importance in our day to day life, android has taken mobile to its true extent. Consumers enjoying flood of high definition content on Consumer Electronic Devices are now looking forward to enjoy a true mobility experience by having an inter-connected eco-system of their devices. The intensive surge in the consumers to enjoy the benefit of rich multimedia content on any device has created a dramatic shift in the technology space. This opportunity to appeal wider consumer audience has driven technology to offer these value propositions like high definition media content on other interoperable devices. A technology like Digital Living Network Alliance (DLNA) thriving for seamless mobility of media content among devices, has established a basis for home network interoperability, envisions enriching user experience. Android, already making an impressive impact amongst the early adopter consumers is ensuring mass market success precisely due to “The Cost Factor with Appealing Entertainment Experience”. Android, being one among best innovations by Google, takes a far-sighted view to enhance the lifestyle of consumers.

Within a short time of launch android already fueling bright innovations, many commentators, consumers are looking ahead to the next developments for the Android platform. Google Android and the Open Handset Alliance having pioneered an open source approach to mobile phones, a technological convergence of Android, DLNA on Consumer equipments like Digital Picture Frame (DPF) shows that better things are on the horizon. The Next Generation Architecture for DLNA on DPF based on Android is one step in that direction.

Analysts forecast reveal a growing consumer interest for this new category of interoperable truly mobile equipments. As most devices use very efficient processor architectures based on ARM which is dominant in consumer entertainment segment, Android making its debut on ARM has further accelerated the growth momentum towards “Experience Mobility Revolution”. The usage of these new electronic gadgets primarily for entertainment is the new market expectation in this global personal infotainment arena. Technological convergence of Android, DLNA on DPF will be a winning combination for OEM’s, ODM’s and operators for smooth and swift transformation from “Mobile to Experience Mobility” world.

With such a convergence, consumers will be able to enjoy lucrative features like Instant Movie Maker, ESG (Electronic Service Guide) and the like on any device. Android is also aimed to empower consumers to enjoy digital content (e.g. music) anytime, anywhere and on any device too thereby fueling a highly mobile lifestyle. The host of features, services may include staying connected via social networks, having portable digital content available anytime and all the time. This makes such devices an ideal traveling companion that let them enjoy “life-on-the-go” for all their entertainment needs.

Such a convergence also creates a paradigm shift in minds of consumers alleviating the expectations market players have to offer. We envisage an architecture describing the Next Generation Software Architecture for DLNA on DPF based on Android.
The primary components in the software architecture shown above are:

a. **DPF Applications**: DLP Services, Photo gallery, Internet radio, Web Browser, Media Player and so on.

b. **Application Framework (AF)**: The Application Framework includes UI Engine which is responsible for launching applications and defining the look and feel of the UI. The AF ensures that an application that has focus receives user input and is able to render to the display. The Application Framework reacts with input and external events, which includes User input, Connection and DPF status.

c. **Content Framework**: The Content framework provides an API that is easy to adopt, yet capable of creating advanced applications. The framework was built to provide applications providing pure network services and transparently manage the detection of new content services.

d. **DLNA Framework**: DLNA has developed guidelines for interoperability among home devices enabling a multitude of usage scenarios for sharing digital content such as A/V (Audio Visual), Photo, and Audio. The DLNA (Digital Living Network Alliance) Client Framework handles multiple services like Video and multimedia services in Smart Home networks simultaneously. The DLNA Framework also provides QoS measurement and monitoring functionality for multimedia services, which enables users to benefit from high throughput. Apart from these features, the DLNA Framework provides access to device access protocols like UPnP to facilitate the management of home devices.

**Technological Convergence: Benefits of Android, DLNA on DPF**

Android works on policy that “All applications are created equal”. This allows creating richer and more cohesive experiences for users. Android breaks down the barriers in building innovative applications. For example, a developer can combine information from the web with data on an individual’s mobile phone – such as the user’s contacts, calendar, or geographic location – to provide a more relevant user experience. It is warmly welcomed by developer community thereby strengthening its eco-system. Android utilizes a custom virtual machine called Dalvik Virtual Machine that was designed to optimize memory and hardware resources.

Android has also set the pace for **Mobile Innovation** by having applications developed using languages (like java).
which have characteristic of ‘write once’ run-anywhere on any machine. Also, the multiple cores within processors like ARM dedicated for digital consumer devices may run languages like Java up to 50% faster than competition. This has embraced more application developers to contribute to the community as well. Furthermore, the Dalvik Virtual Machine of android further optimizes the system performance to offer advanced features like RT (Real Time) video transcoding, advanced gestures and haptics to keep up on the technology trends.

Android also provides access to a wide range of useful libraries and tools that can be used to build rich applications. For example, Android enables developers to obtain the location of the device, and allows devices to communicate with one another enabling rich peer-to-peer social applications. In addition, Android includes a full set of tools that have been built from the ground up alongside the platform providing developers with high productivity and deep insight into their applications. Furthermore, it is worth to mention a very important feature of Android: the application process’s lifetime is not directly controlled by the application itself. As a matter of fact it is determined by the system by analyzing what parts of the application the system knows are running, how important they are for the user and how much total memory is still available.

Android is primarily based upon an opaque delivery model. Applications and services can expose their functionalities to the system, and at runtime, other applications can request these functionalities. This model is particularly used to provide a co-ordination mechanism that effectively takes advantage of the underlying platform and effectively utilize the design aspects of Android for easier portability and deployment of the solution. The DLNA framework which caters to the interoperability needs can be easily interfaced in android architecture. Hence, combining the expressiveness of interoperability of DLNA with the power of the ANDROID platform brings, in our opinion, a strong value in the development of innovative applications based on content management and peer-to-peer paradigm.

The fastest-growing consumer electronics device market in the world for several years has been the cell phone. Android already seeing success in mobile market, the emergence of new types of devices like PDP, PMP in the saturated CE market means OEM’s, ODM’s are now focusing on meeting user needs by offering differentiated solutions, rather than exploring new markets. These enable exciting new usage models and provide significant new growth opportunities. In line with the trend, majority of the operators, content providers have already triggered collaborative partnerships with OEM’s and ODM’s to offer services like Instant Recording on DLNA enabled audio/video terminals based on Android. Android is open source; it can be liberally extended to incorporate new cutting edge technologies like DLNA as they emerge.

Android, having a strong ecosystem-in-place, with the availability of ready-to-deploy, reusable solutions like codecs, also reduces the overall Time-to-Market while ensuring to meet global quality standards. This coupled with very high portability and a realistic integration effort, looms to attract new business opportunities to launch a variety of flavors of such devices under different price ranges to cater to the vast majority in the market place. This assures a favorable environment for ecosystem partners, silicon partners and Early Access Customers, in making incredible progress in transforming Android from Mobile to “Experience Mobility”.

**Growth Forecast: Challenges Ahead**

Android, being both technology and market driven, being capable of yielding a promising Return on Investment (ROI) is increasingly gaining momentum as a part of strategic business initiatives among the industry leaders. This evolving technology influencing the consumer demand also creates opportunity for co-creation, synergy among the market players to propel the growth moving forward. Unlike other phone platforms, Android has support for applications that do not have a user interface. This was also manifest in the developers to commit in large numbers to developing applications for the platform.

The mobile Internet revolution continuing to do extremely well despite most difficult periods in consumer spending in recentmemory, Android-based inter-operable devices is definitely a window opportunity to unleash the potential revenues of this constantly expanding dynamic sector. This new landscape unveiling in the industry, the future trend looks positive. Recently, players
in the industry, actively pursuing a market for Mobile Internet Devices Subsequently, industry leaders are increasingly gaining momentum as a part of strategic business to boost their market share as well. With an explosive growth of hand-held devices world-wide, and the vibrant markets that are catered to them, especially emerging markets like India, China, in particular.

In addition to these, improved communication environments through faster/multi networking, advanced functionality through OS evolution, and increasing numbers of applications are all factors that will drive greater market expansion. The advent of android application developer challenge will also have the added effect of making android based phones both more popular and easier to understand their usage. We believe that these factors will help create an environment of “agile computing,” accelerating the usage of many applications that differ from the “content” available through mobile phones. Just considering domestic living, education and hobbies, we see a literally unlimited number of services possible in the future tailored to everyday life. Many companies developing interest to exploit capabilities of android, technological convergence of DLNA on DPF can act as a major advantage to the long term prospects of the platform.

Technological Convergence with android, as everyone knows, is a fast growing area of communications segment but also has proved difficult for many companies to exploit in predictable and measured ways. There is a potentially huge community of interest investing in shaping perceptions of what Android can deliver. Certainly, the litmus test is still the market and it is dominated by quite a different set of form factors. That said, as ecosystems become more important, companies need to be aware of accrual of application complexities (like QoS, Security and so on) for Android which might pose a major threat emerging a result of such technological convergence. Future devices tending to be “One-Stop- Universe” by providing All-in-One functionalities also avails implicit inertia among the market players. First, being the pricing. Android being completely open source, an optimal price tag will definitely yield a lot more profits compared to other such devices. Surprisingly, the architecture of android is so easily portable, extendible, that the input costs involved in development is very low.

Second, being Time-to-Market, reusing commoditized features backed with skilled man-power requires very less time to build the product. With devoted support from open source communities is an added value which reduces the AMC (Annual Maintenance Cost) too. After the initial launch, an ample time can be saved using these advantages to re-align the business road map to suit the market demands.

Third, being Timing-to-Market, The total time required to develop being nearly same like any other device, a plan to launch by mid of 2010 or third quarter of 2010 will be ideal with external environment like economy entering into blooming stage then.

Last, but not the least, the consumer interest, raising the bar always expects high definition rich multimedia content with high inter-operability, such truly interoperable mobility equipments based on android, the consumer would not be resisted but buying it.

**Conclusion**

The future trend looking positive with promising revenue across sectors makes android indispensable in the Next Generation consumer electronics space. This coupled with consumer’s interest lasting for the next decade; the rich feature set like DLNA on DPF, emerging due to technological convergence is definitely a game changing success for the industry players. Future applications on android may emphasize on offering features like “Gaming on Globe” through the co-existence of WiMax. Android being extensively accepted by key players like ARM, TI, operators and Consumers worldwide, an aid to establish its presence to support enhanced features like flash games, fly codecs and so on will help companies frog leap the competition. With exclusive support from the platform environment to develop applications, android should deepen its roots on similar lines to offer feature like “any time, anywhere, any device and any amount of data”.

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**Humour**

**Working without Touching**

An old man lived alone in small village in India. He wanted to spade his potato garden, but it was very hard work. His only son, who would have helped him, was in prison. The old man sent a telegram to his son and mentioned his situation.

**Dear Son,**

I am feeling pretty bad because it looks like I won’t be able to plant my potato garden this year. I hate of doing the garden work due to my old age, moreover your mother is no more, or else we used to do it together.

I’m just getting too old to be digging up a garden plot. If you were here, all my troubles would have been over.

**Shortly,** the old man received this telegram:

“For Heaven’s sake, Dad, don’t dig up the garden!! The Guns MAY be buried there !!!!”

**With love**

**Son**

The next morning, A dozen FBI agents and local police officers showed up and dug up the entire garden without finding any guns.

Confused, the old man sent another telegram to his son telling him what is this, why you did this nasty things and police came and asked me so many questions, and they dug all the field and went but didn’t find any Guns which you mentioned,

His son’s reply was: “Go ahead and plant your potatoes, Dad. It’s the best I could do for you from here.”
About the Workshop:

Cloud Computing is the latest innovation that has brought computing power within reach of every organization. Cloud computing describes a new supplement, consumption and delivery model for IT services over the Internet and offers the computing processing power, storage, network bandwidth, software usage, software development, testing, security, identity etc., as services. This model offers unprecedented scalability wherein the user can add resources on demand and give them up when not needed, instead of the classical model of over-investing in infrastructure and managing at a huge cost; tremendous cost-effectiveness by providing a “pay per use” model and ensures professional management of the infrastructure. This three day workshop on Cloud Computing, organized by the Computer Society of India and IEEE Computer Society, provides a platform in which experts from top notch organizations that are rewriting computing history such as Yahoo, Google, HP, IBM, Amazon, HCL, TCS, Hitachi, VMware, Novell, CSS Corp, Ramco and Cognizant will share their experiences apart from introducing various aspects of cloud computing. Some of the typical sessions would include Virtualization and its effect on cloud, Yahoo’s Hadoop framework for cloud application development, Google applications on cloud; Amazon’s EC2 and S3 services; Storage as a Service; Cloud infrastructure and services offerings; Open source stack for cloud computing and identity services; Best practices, migration strategies, management & security issues for cloud applications. With a session on “Research Trends in Cloud Computing” and a panel discussion on “Are we Ready for Cloud Computing” along with a few user experience sharing sessions, this workshop would offer the participants, the best opportunity to get a first hand knowledge by hearing “from the horse’s mouth”, the specifics of the emerging area of cloud computing.

Target Audience:

The workshop is designed to appeal to a wide variety of participants and include:

CEOs, CIOs, CTOs, IT & Functional heads of corporate enterprises and SME organizations from all verticals such as manufacturing, retail, healthcare, BFSI, telecom, hospitality, education, e-Governance etc., Project Managers, Application Developers from IT/ITES organizations, IT & Business Strategy Consultants, Entrepreneurs venturing into setting up their businesses by offering cloud based applications, Academic Faculty and Researchers.

Venue: IC & SR Auditorium, IIT Madras, Chennai
Dates & Timings: 18 – 20, Aug 2010 :: 09.30 to 17.30 hrs
Takeaways: Apart from the opportunity to hear the technical presentations from the Industry leaders in Cloud Computing, each delegate will be provided with the following five items.

• Workshop Kit
• Presentations along with white papers, user case studies, success stories on a CD (subject to the IPR guidelines by the resource persons and their organizations)
• AWS coupon worth USD 25 to try out Amazon Web Services
• Certificate of Participation

Programme Fee: With the generous sponsorship from the organizations, we are able to offer subsidized fee for this THREE days event with a no. of takeaways listed above.

• Industry Delegates: Rs. 1500
• Members of CSI, IEEE: Rs. 1250
• Academic Faculty & Researchers: Rs. 1250
• Student Members of CSI & IEEE: Rs. 1000

(Note: Students should attach a copy of the membership card and a certificate from the HOD / Principal along with registration form and payment. Right of acceptance is reserved based on the flow of registrations.)

Registration: Registration will be done on First Come First Served basis. As seats are limited, early registration is recommended. DD/Cheque to be drawn in favour of “CSI Chennai Chapter” and payable at Chennai. Pl. mail your registration form with the payment on or before 5th Aug 2010 to:

Mr. S. Ramasamy
C/o Integrated Databases India Ltd.
Rosy Towers, 3rd Floor, 7, Nungambakkam High Road, Chennai – 600034

For registration related information, please contact
Mr. S. Ramasamy, Mobile: +91 98400 09417 :: Email: sypsys@vsnl.com OR
Mr. K. Adhivarahan, Mobile: +91 94442 75315 :: Email: adhivarahan@gmail.com
Website: http://www.csi-chennai.org/wcc/index.html

For further assistance, please contact
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SIG-DS
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Chairman
CSI Chennai
sakthi_vel@yahoo.com
Mr. H. R. Mohan
Chairman
CSI Div IV & IEEE CS
hrmohan.csi@gmail.com

Workshop on Cloud Computing
18-20, Aug 2010
Organised by
CSI Div. IV (Communication), Chennai Chapter and SIG-Distributed Systems and IEEE Computer Society, Madras Chapter
Supported by :
Platinum Sponsors: Yahoo, Google, HP, Amazon, IBM, HCL, TCS, Hitachi
Gold Sponsors: Novell, VMware, CSS Corp, Ramco, Cognizant
About the Conference:

Data Warehousing and Data Mining has been widely accepted as a key technology for enterprises and organizations to improve their abilities in data analysis, decision support, and the automatic extraction of knowledge from data. With the exponentially growing amount of information to be included in the decision making process, the data to be considered becomes more and more complex in both structure and semantics. New developments such as cloud computing add to the challenges with massive scaling, a new computing infrastructure, and new types of data. Consequently, the process of retrieval and knowledge discovery from this huge amount of heterogeneous complex data builds the litmus-test for the research in the area. With this view, first National Conference on Data Warehousing, Data Mining and Data modeling (DWDM 2008) was organized by CSI Dehradun Chapter and Forest Research Institute University, Dehradun during February 9-10, 2008.

DWDM 2010 seeks to introduce innovative principles, methods, algorithms and solutions to challenging problems being faced in the development of data warehousing, knowledge discovery, data mining applications, and the emerging area of “cloud intelligence”. Submissions presenting current research work on both theoretical and practical aspects of data warehousing and knowledge discovery are encouraged. Particularly, we strongly welcome submissions dealing with emerging real world applications such as real-time data warehousing, analysis of spatial and spatiotemporal data, OLAP mining, mobile OLAP, and mining science data (e.g. bioinformatics, geophysics).

Call for Papers:

Authors are invited to submit research review and application papers representing original, previously unpublished work. Papers should be submitted in PDF or Word format. The paper length of six pages is encouraged and an upper limit of 10 pages, including figures, tables and references shall be enforced. Authors of the selected papers are expected to personally attend the conference and present the paper at their own cost.

Correspondence and Important Dates:

All correspondence including paper submission should be by email and to be addressed to 2010dwdm@gmail.com. For further details, please visit www.thapar.edu.

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<td>Full paper Submission</td>
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<td>Confirmation of paper acceptance</td>
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<td>Submission of camera ready copy</td>
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For further details, please contact:

**Conveners**

Prof. S. S. Bhatia; email: hsmca@thapar.edu  
Dr. Harish Kumar; email: harish32us@yahoo.com

**Organizing Secretary**

Prof. R. K. Sharma; email: rksharma@thapar.edu

**Joint Secretaries**

Dr. M. K. Sharma; email: mksharma@thapar.edu  
Ms. Neelam Gulati; email: ngulati@thapar.edu  
Ms. Sanmeet Kaur; email: sanmeet.bhatia@thapar.edu
National Conference on E-Government & E-Society (NCEGOVS-2010) is basically aimed to provide a platform to Policy makers, Industry leaders, Government representatives, Scientists, Researchers, experts working in the social development sectors for the presentation of current technological advances, research results, G2G, G2B and G2C applications; and to deliberate, interact and recommend an applicable strategy for good governance and to accelerate delivery of e-services to common citizen at the doorstep at an affordable cost. Newly emerging ubiquitous technologies are now once again transforming the world industry and society through u-Government services, u-commerce, and u-communities. Ubiquitous driven technologies provide opportunities for us to connect people with intelligent devices at any time and anywhere.

Key emphasis of NCEGOVS-2010 will be to discuss & deliberate various e-Governance initiatives which transformed Society to e-Society; to predict the direction and depth of changes in technology revolutions for developing & strengthening citizen-centric applications through pervasive, ubiquitous & intelligent computing with more innovative and visible goals, strategies & solutions; to prepare a concrete base for revolutionary aspects of upcoming challenges concerning convergence of technology, society, culture, and governance; and finally to set a ground for new paradigm of u-driven future u-Government.

Topics of interest for submission include, but are not limited to:

**e-Government**
- Digital cities, regions & culture
- e-Education & e-learning
- e-Engineering & e-Technology
- e-Government & e-Governance
- e-Health & Telemedicine
- e-Judiciary
- G2G, G2B, and G2C initiatives
- Information Systems
- Legal, societal and cultural issues
- Mobile public services
- Multimedia and multilinguism
- One-stop government – service integration
- Public e-Services for citizens and enterprises
- Public-private partnerships

**e-Society**
- Cyber-crime, Cyber-economics and organized crime
- Digital divide & Digital Services in e-Society
- Digital surveillance, tracking, and monitoring
- e-Business & e-Commerce
- E-Participation & Local e-Government
- Education and training
- Identity management
- New Media and E-Society
- Online security
- Pervasive, ubiquitous & intelligent computing
- Privacy, trust and dependability
- Social networking, blogs
- Web-mobile ethics
- Trust and security

**Paper submission**
Original papers on above mentioned or related topics not exceeding 8 pages (A4 Size) including title of paper, author(s), abstract, objective, scope, highlights, significance and conclusion should be sent through e-mail as an attachment in (.doc) format in the e-mail address ncegovs@gmail.com. Extended Abstract must reach latest by Sept.30, 2010.

**Registration Fee** (includes free Lunch, Tea/Snacks, Conference Kit/ Souvenir/ Proceedings)

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**Organising Chair**
D. K. Dwivedi  
I/c Incharge Computer Centre, Allahabad High Court  
& Past Chairman, CSI Allahabad Chapter  
Allahabad (U.P.): 211001  
Mob: .91-9415215755 Email: dwivedi.devesh@gmail.com

**Programme Chair**
Shailaja Gupta  
Chief Manager, New Projects, ITI Limited Naini, Allahabad  
& Past Chairperson, CSI Allahabad Chapter  
Allahabad (U.P.): 211010  
Mob: .91-9935686244 Email: shailaja.gupta@gmail.com

**Important Dates:**
- Submission of Extended Abstract: Aug. 31, 2010
- Intimation of Acceptance: Sept. 15, 2010
- Submission of Final papers: Nov. 15, 2010

For further details, Registration, Sponsorship, Advertisements, Vendor Presentations, please visit Chapter Web-site at http://csi-allahabad.org
CALL FOR PAPERS

SECOND INTERNATIONAL CONFERENCE ON
Emerging Applications of Information Technology
(EAIT 2011)
Organized by Computer Society of India Kolkata Chapter
February 18-20, 2011, Kolkata, India

FIRST CALL FOR PARTICIPATION

Objective
The Computer Society of India (CSI) has been instrumental in guiding the Indian IT industry since its formative years. The mission of CSI is to facilitate research, knowledge sharing, learning and career enhancement for all categories of IT professionals, while simultaneously inspiring and nurturing new entrants into the industry and helping them to integrate into the IT community.

The First International Conference on Emerging Applications of Information Technology (EAIT 2006) organized and hosted by the CSI Kolkata Chapter was a bravura success. Keeping the traditionCSI Kolkata Chapter is organizing the Second International Conference on Emerging Applications of Information Technology (EAIT 2011). The event will comprise of Pre-Conference Tutorials, plenary sessions, invited lectures by eminent speakers of international repute, session papers and panel discussions.

To recognize the tremendous growth in the field of core and application areas of information technology and in order to provide a forum to exchange ideas on the emerging areas of Information Technology and to bring together technologists, application developers and researchers from the industry, academic institutions and R&D Laboratories, CSI Kolkata Chapter will be organizing a two-day multidisciplinary International Conference during February 19-20, 2011 at Kolkata.

The papers must be submitted ONLINE using double column IEEE format to receive 10% concession on registration fees.

Topics
Original contributions are solicited for presentation at the Second International Conference on Emerging Applications of Information Technology 2011. The topics of interest include (but are not limited to) the following:

- Analytics
- Artificial Intelligence
- Autonomic Computing
- Banking, Insurance, Financial Applications
- Biomedical Applications
- Business Intelligence
- Cloud Computing
- Computer Vision
- Data Mining
- Distributed Computing
- e-Governance
- e-Learning
- Embedded Systems
- Enterprise Applications
- Extreme/Agile Programming
- Grid Computing
- High Performance Computing
- Image Processing
- Mobile Computing
- Mobile Applications on Smart Phones
- Networking Technologies
- Object Technology/Modeling
- Pattern Recognition
- PERT/CR/SCM
- RFID and Applications
- Rural Applications
- Security and Privacy
- Soft Computing
- Software Design Patterns
- Software Engineering
- Software Testing and Quality
- Symbolic Computation
- Telemedicine
- VLSI

Paper Submission and Review Process
The papers must be submitted ONLINE using double column IEEE format through Microsoft’s CMT site. Each paper will go through double-blind peer review by at least two program committee members. Camera-ready/final paper submission will be directly to Publisher.

Publication
The conference proceedings will be published by IEEE Xplore and digitally available through IEEE Xplore subject to fulfilling necessary conference registration formalities. Only IEEE Xplore-compliant PDF files will be accepted for final paper submissions.

Registration Fees

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<td>Rs. 7200 / USD 300</td>
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<tr>
<td>Tutorial + Conference</td>
<td>Rs. 6800 / USD 290</td>
<td>Rs. 8200 / USD 350</td>
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Further Contact
CSI Kolkata Chapter
5 Lala Lajpat Rai Sarani (Elgin Road), 4th Floor, Kolkata 700020, India
Tele Fax: +91-33-2280-2035
Conference E-Mail: csieait2011@gmail.com

PLEASE CHECK CONFERENCE WEBSITE FOR MORE DETAILS
Conference Website: https://sites.google.com/site/csieait2011
Paper Submission Website: https://cmt2.research.microsoft.com/csieait2011
CONSEG - 2011:  
International Conference on Software Engineering  
February 17–19, 2011 at Bangalore, India  
Organized by : CSI Division II (Software) and Bangalore Chapter  
Theme: Software Quality - The Road Ahead

Software quality measures how well software is designed to conform to the customer requirements in terms of timeliness, price, features, reliability and support to achieve customer satisfaction. The software deliverables must meet all customer requirements within the committed time. When the expression “quality” is used, we usually think in terms of an excellent product or service that fulfills or exceeds our expectations and these expectations are based on the intended use and the selling price. Due to the enhanced use of software in all areas, the importance of developing high quality software within the committed time is increasing every day, but Software Engineers are still to find answers to lot of questions.

International Organization for Standardization (ISO) defines functionality, reliability, usability, efficiency, maintainability, and portability to be the criteria to be satisfied for software quality. Achieving Software Quality is not an accident but the result of intelligent effort and encompasses all aspects of software development in terms of Quality Assurance, and Quality Control. The CONSEG-2011 on theme “Software Quality - The Road Ahead” will discuss all the aspects of software engineering which impacts quality of processes and products. The conference will have both invited and contributed papers.

Call for Papers: Papers are invited from software developers, researchers and academicians across the globe. The original and unpublished papers on the following indicative topics (but not restricted to) may be submitted:

- Process Maturity Models
- Software Architecture
- Software Verification and Validation
- Software Size and Effort Estimation
- Testing Effort Estimation
- Usability Testing
- Software Reuse
- People and Organization Issues
- CASE Tools
- Requirements Engineering
- Programming Paradigms and Methodologies
- Software Metrics
- Software Reliability
- Mathematical Foundation
- Life Cycle Management Design Patterns Software Inspection
- Managing Outsourced development
- Quality Management Tools

Papers submitted will be reviewed and evaluated based on originality, technical quality and relevance to the conference. The paper length of six pages is encouraged and a upper limit of 10 pages, including figures, tables and references shall be enforced. The format of the papers should confirm to the IEEE guidelines available at http://www.ieee.org/portal/cms_docs/pubs/confpubcenter/pdfs/samplems.pdf

Important Dates

- Submission of technical papers: September 25, 2010
- Notification of Acceptance: November 10, 2010
- Camera Ready Paper Due: December 31, 2010

Please send your papers to: conseg2011@gmail.com

General Chair  
Prof. H P Khincha, Ex Vice Chancellor, Visvesvaraya Technological University
Prof. C R Muthukrishnan, Advisor, Tata Consultancy Services

Organising Chair  
Anirban Basu  
(Chairman, CSI Bangalore Chapter and CEO, PQR Software), abasu@pqrsoftware.com

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(Vice Chairman, Bangalore Chapter, Principal Business Analyst, Merit Systems)  
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Program Co-Chair  
Gargi Keeni, Vice President, Tata Consultancy Services

Chairman, CSI Division II (Software)  
Dr. T V Gopal, Department of CSE, Anna University, e-mail: gopal@annauniv.edu
CSI MoU with C-DAC & PMI

MoU with C-DAC
The C-DAC and CSI jointly embarked on a new path of collaboration and cooperation in the ICT education and research by signing a memorandum of understanding on 26th June 2010 during the presence of the national executive committee of CSI.

MoU was signed by Director General of C-DAC Mr. Rajan Joseph and CSI Executive Secretary Mr. Suchit Gogwekar in presence of President, Prof. Thrimurthy.

Through this agreement, the C-DAC’s education and research programmes will be offered at various CSI Chapters and Branches with joint certification. The CSI members, especially the faculty members, researchers and students will be benefitted through their involvement in C-DAC’s research and development activities. The senior members of CSI will have opportunities to offer their expertise and services to the national and international programmes of research and consultancy. The learning resources from C-DAC will be made available to CSI members and society at large using the CSI outreach through its chapters and branches across India. For more details about C-DAC, please visit www.cdac.in

MoU with PMI
Taking it forward from the last year’s achievements in international collaborations with the IEEE and the British Computer Society, the Computer Society of India has achieved yet another extraordinary milestone on 26th June 2010 by entering into an agreement with Project Management Institute (the world’s largest project management professional organization).

MoU was signed by PMI Managing Director, Mr. Raj Kalady and Mr. Suchit Gogwekar, Executive Secretary, CSI.

The CSI’s association with PMI will pave the way for Indian engineers and managers to enrich themselves with the international project management best practices and learning experiences of international project management through joint research studies. An action plan is being prepared for hosting joint CSI-PMI programmes and events across India, especially the CSI academic institutions and student branches. A seminar series on theme “Project Management – Education and Research Opportunities” at leading universities/institutes will be immediate priority. Subsequently, PMP and other high-end professional programmes will be offered through CSI Chapters. For more details about PMI, please visit www.pmi.org.

These MoUs offer revenue generating options to our Chapters and HQ by arranging beneficial technical programs for our members.

Both events was attended by all ExecCom members and invitees from Trivandrum Chapter.

For arriving at these two understandings, pioneering efforts were made by our past Hon. Secretary Mr. Satish Babu and Current Chairman of Trivandrum Chapter Mr. Brajesh with the help of Vice President, Mr. M D Agrawal.
1. **Technology Appreciation Seminars:**
   
   In pursuant to the mission and objectives of the Computer Society of India, it is proposed to host a series of Technology Appreciation Seminars for building/strengthening Knowledge-communities (TASK) for the year 2010-2011. The seminar topics and delivery will be finalized through consultation among the subject matter experts and keeping in view the current needs of the Business, Industry, Government, Academia, Research and Consultancy. Due preference will be given to the proposals following collaborative and cooperative approach, especially the models suggested hereunder:

   (i) The host chapters collaborating with the respective RVPs, Divisional Chairpersons and CSI SIG Coordinators as well as seeking cooperation of nearby chapters and member institutions.

   (ii) The host chapters facilitating/fostering new collaborative/partnership models to organize value added programmes with active support and participation from CSI’s partner professional societies, national/international science & technology organizations, established industry associations, premier institutes and R&D organizations.

   Based on the proposals received and in consultation with the subject matter experts, a final list of the seminars for 2010-11 will be released after due approval of the Execom. The organizers of best seminars will be considered for special recognition including awards and rewards by the Execom. The best seminars content, reference material and key resource persons of these seminars will be shared with the host CSI chapters and CSI student branches for conducting similar seminars, workshop and other educational programmes at their locations across India.

   For further details, please visit:  [http://www.csi-india.org/web/csi/proposals2](http://www.csi-india.org/web/csi/proposals2)

2. **Student Conventions:**

   The proposals from universalties/institutes are hereby invited for hosting and organizing National/Regional/State-level Student Conventions with the following aim/objectives and expected outcomes:

   **Aim and Objectives**
   
   - To facilitate interaction and collaboration of students with eminent academicians, researchers and practitioners
   - To enrich participants through technical paper presentations, tutorials, workshops and exhibitions
   - To show case state/territory-specific education/research competence and identify growth areas
   - To promote innovation through presentation excellence awards for path-breaking projects
   - To prepare ‘GenNext IT Professionals’ through workshops, career guidance and entrepreneurship support

   **Expected Outcome**
   
   - Benchmarks, capability assessment, gap analysis, and recommendations to realize the specific visions
   - Publication of research studies (ICT penetration, technological innovation, diffusion & adaptation), domain specific state-of-the-art technical reports and case studies of education/research initiatives
   - Frameworks, Guidelines and Best Practices for research collaboration among government, industry and academia
   - Identification of potential ideas and innovations of faculty, researchers and students for business incubation

   For further details, please visit: [http://www.csi-india.org/web/csi/proposals1](http://www.csi-india.org/web/csi/proposals1)

3. **Special Interest Groups and International Collaboration:**

   In order to consolidate the achievements and take forward the technology development agenda of CSI, the members are requested to volunteer their services in the following ways:

   1. Form new Special Interest Groups (SIGs) in emerging technological domains with a focus on solving the issues and concerns about globalization and inclusive growth.
   2. Contribute in the CSI Special Interest Groups as member, event organizer, technical reviewer, knowledge capturing and making available to all members and industry etc.
   3. Contribute in the activities of IFIP Technical Committees and highlight the India-specific technological needs through participation and contribution in the IFIP programmes and activities in India and abroad.
   4. Contribute in collaborative programmes of CSI and partner societies e.g. IEEE, BCS etc. Also, participate and contribute in the continuing education programmes offered jointly by CSI and partner societies.

   For further details, please visit: [http://www.csi-india.org/web/csi/volunteers](http://www.csi-india.org/web/csi/volunteers)

4. **Centres for Research:**

   In pursuant with our education and research objectives and an aim of adding a distinct value preposition to our member education and research community, the Computer Society of India had invited proposals from potential host organizations to
establish. Centres for Research, Entrepreneurship-development And Trans-disciplinary Education (CREATE) at CSI Member Institutions and Student Branches across India. To begin with establishment of only four such centres are being explored (one each in northern, eastern, western and southern regions). The selected host institutes will be provided with the necessary assistance in terms of sharing basic background reference material, learning resources, facilitating interaction with domain experts (i.e. potential mentors and resource persons) and potential industry partners, hand-holding during execution of one or two activities etc. Each centre is expected to ultimately become a springboard for creating value propositions to the stakeholders (i.e. new programmes, products, services and ventures etc.).

5. **Visit of IFIP President-elect:**
Following the successful hosting of IFIP Networking by the Computer Society of India during 11-15 May 2010 at IIT-Madras, the IFIP President-elect Mr. Leon Strous visited India. He had a meeting with the CSI President and office bearers at CSI Mumbai on 28th May 2010. The IFIP Vice President (Marketing) and Past President CSI Mr. Lalit Sawhney facilitated the visit and discussions leading towards a few important action points for strengthening IFIP-CSI collaboration and joint international programmes.

6. **MoU with C-DAC:**
The C-DAC and CSI jointly embarked on a new path of collaboration and cooperation in the ICT education and research by signing a memorandum of understanding on 26th June 2010 during the meeting presence of the national executive committee of CSI. Through this agreement, the C-DAC’s education and research programmes will be offered at various CSI Chapters and Branches with joint certification. The CSI members, especially the faculty members, researchers and students will be benefitted through their involvement in C-DAC’s research and development activities. The senior members of CSI will have opportunities to offer their expertise and services to the national and international programmes of research and consultancy. The learning resources from C-DAC will be made available to CSI members and society at large using the CSI outreach through its chapters and branches across India. For more details about C-DAC, please visit www.cdac.in

7. **MoU with PMI:**
Taking it forward from the last year’s achievements in international collaborations with the IEEE and the British Computer Society, the Computer Society of India has achieved yet another extraordinary milestone on 26th June 2010 by entering into an agreement Project Management Institute (the world’s largest project management professional organization). The CSI’s association with PMI will pave the way for Indian engineers and managers to enrich themselves with the international project management best practices and learning experiences of international project management through joint research studies. An action plan is being prepared for hosting joint CSI-PMI programmes and events across India, especially the CSI academic institutions and student branches. A seminar series on theme “Project Management - Education and Research Opportunities” at leading universities/institutes will be immediate priority. Subsequently, PMP and other high-end professional programmes will be offered through CSI Chapters. For more details about PMI, please visit www.pmi.org

8. **CSI President on the BoG of Engineering Council of India:**
It is a matter of pride for CSI and its members that our President Prof. P. Thrimurthy has elected on the Board of Governors of the Engineering Council of India (ECI) for the term 2010-12. The Engineering Council of India, an apex body of engineering associations in India, works towards the advancement of engineering profession in various disciplines. The Board of Governors and the executive committee meetings held on 30th June 2010 in New Delhi were attended by the Hon. Secretary of CSI. A joint action plan and programmes (including a national conference on engineering education and seminar series on engineering project management) are being rolled out by the ECI and its member associations for the year 2010-11. The interested members of CSI may please come forward to contribute and participate in the above.
For details about ECI, please visit www.ecindia.org

9. **Joint IEEE-CSI Programmes:**
The CSI Chapters, Student Branches and member institutions may please approach the nearest IEEE sections/chapters for enhancing the involvement of either side in the membership and professional development programmes. A joint meeting of the Presidents of CSI and IEEE India Council and other national officials from either side is being planned. The members are requested to send their suggestions and views on how to take this collaboration to next level. Prof. Sorel Reisman, IEEE Computer Society Vice President has kindly consented to address the CSI 2010 delegates and participants.

Prof. H R Vishwakarma
Hon. Secretary, Computer Society of India
E-mail: secretary@csi-india.org
For close to two decades the COMAD - International Conference on Management of Data, modeled along the lines of ACM SIGMOD, has been the premier international database conference hosted in India. The first COMAD was held in 1989, and it has been held on a nearly annual basis since then (except for a few breaks such as in the years when VLDB and ICDE were held in India). COMAD has always had a significant international participation, with about 30% of the papers being from outside India, including Europe, USA and East/South-East Asia.

COMAD 2010’s scope includes all areas in the data management space including Database management systems, Web and Information Retrieval and Data Mining. We invite submission of original research contributions as well as proposals for demonstrations, tutorials, industrial presentations, and panels.

Areas of interest include but are not limited to:

**Data Management Systems:**
- Benchmarking and performance evaluation
- Data exchange and integration
- Database monitoring and tuning
- Data privacy and security
- Data quality, cleaning and lineage
- Data warehousing
- Managing uncertain, imprecise and inconsistent information
- Multilingual data management
- Novel Data Types
- Parallel and distributed databases
- Peer-to-peer data management
- Personalized information systems
- Storage and transaction management

**Web and Information Retrieval:**
- Categorization, Clustering, and Filtering
- Document Representation and Content Analysis
- Information Extraction and Summarization
- IR Theory, Platform, Evaluation
- Question Answering and Cross-Language IR
- Web and IR
- Social Network Analysis

**Data Mining:**
- Novel data mining algorithms and foundations
- Innovative applications of data mining
- Data mining and KDD systems and frameworks
- Mining data streams and sensor data
- Mining multi-media, graph, spatio-temporal and semi-structured data
- Security, privacy, and adversarial data mining
- High performance and parallel/distributed data mining
- Mining tera-/peta-scale data
- Visual data mining and data visualization

To ensure wide visibility for the material published at the conference, we plan to make arrangements with ACM SIGMOD for including the proceedings of the conference in the SIGMOD on-line archives. Two awards, for Best Paper and Best Student Paper, will be presented at the conference.

**Important Dates**

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**General Chair**
S Sudarshan, IIT Bombay, India

**Program Chairs**
P Sreenivasa Kumar, IIT Madras, India
Srinivasan Parthasarathy, Ohio State University, USA

**Industry and Applications Chair**
S Seshadri, BiTell, Bangalore, India

**Tutorials and Panels Chairs**
Amol Deshpande, Univ Maryland, USA
Mukesh Mohania, IBM IRL, New Delhi, India

**Publication Chair**
Shantanu Godbole, IBM IRL Bangalore, India

**Publicity Chairs**
Meera M Dhabu, VNIIT Nagpur and Srinath Srinivasa, IIT Bangalore.

**Organizing Committee Chairs**
P S Deshpande and A S Mokhade, VNIIT Nagpur
E-mail: psdeshpande@cse.vnit.ac.in

**Chairman, CSI Division II (Software)**
Dr. T V Gopal, Anna University, Chennai, India
E-mail: gopal@annauniv.edu
1842: Ada Lovelace (1815–1852), analyst of Charles Babbage’s analytical engine and described as the “first computer programmer”

1893: Henrietta Swan Leavitt joins the Harvard computers, a group of women engaged in the production of astronomical data at Harvard; she is instrumental in discovery of the cepheid variable stars, which were evidence for the expansion of the universe.


1943: WREN Colossus operators, during WW2 at Bletchley Park.

1946: Betty Jennings, Betty Snyder, Fran Bilas, Kay McNulty, Marilyn Wescoff, and Ruth Lichterman, original programmers of the ENIAC.

1949: Grace Hopper (1906–1992), first programmer for the Mark I Calculator, known as the “Mother of COBOL”.

1962: Jean E. Sammet (1928-), mathematician and computer scientist; developed FORMAC programming language. Was the first to write extensively about history and categorisation of programming languages (1969).

1965: Mary Allen Wilkes computer programmer; First person to use a computer in a private home and the first developer of an operating system (LAP) for the first minicomputer (LINC).


1979: Carol Shaw (?), game designer and programmer for Atari Corp. and Activision.

1984: Adele Goldberg (1945-), one of the designers and developers of Smalltalk language.

1985: Susan Kare (1954-), created the icons and many of the interface elements for the original Apple Macintosh in the 1980s, was an original employee of NeXT, working as the Creative Director.

1993: Barbara Liskov together with Jeannette Wing develops the Liskov substitution principle.

1993: Shafi Goldwasser (1958-), theoretical computer scientist, two-time recipient of the Gödel Prize for research on complexity theory, cryptography and computational number theory, and the invention of zero-knowledge proofs.

1994: Sally Floyd (1953-), most renowned for her work on Transmission Control Protocol.

1995: Mary Lou Jepsen (1965-), Founder and chief technology officer of One Laptop Per Child (OLPC).

1996: Frances E. Allen (1932-), first female recipient of the ACM’s Turing Award.

1997: Anita Borg (1949–2003), the founding director of the Institute for Women and Technology (IWT).

2004: Jeri Ellsworth (1974-), self-taught computer chip designer and creator of the C64 Direct-to-TV.


2006: Hannah Smith (~1927-), first Honeywell CIO.

2007: Eva Tardos (1957-), recipient of the Fulkerson Prize for her research on design and analysis of algorithms.

2008: Eva Tardos (1957-), recipient of the Fulkerson Prize for her research on design and analysis of algorithms.

2009: Frances E. Allen (1932-), first female recipient of the ACM’s Turing Award.

2010: Jeannette Wing (1955-), first female recipient of the Gödel Prize for research on security and software engineering.

Professor De Palma from Gonzaga University believes that more girls can be attracted into the study of computer science by making it more like mathematics. He suggests five ways to improve the attraction of computer science to girls:

1. Teach any girl with an aptitude for symbol manipulation how to program.
2. When teaching girls how to program, keep things as close to pure logic as possible. Minimize reliance on other clumsy software packages, fancy graphical interfaces, and powerful IDEs.
3. Teach computing without microcomputers. Microcomputers tend to attract tinkering boys more than girls.
4. Keep the length of programming assignments as short as possible, at least in the early stages. One aspect of the mathematics discipline is that assignment problems are hard enough to make a person think for a while, but are not hard enough to get them frustrated and lose interest in the problem.
5. Treat a programming language as the notational system and avoid adopting new languages.

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AHMEDABAD

The Chapter in association with Department of Computer Applications - Mr. H K Arts College and Tally Solutions Pvt. Ltd organized a workshop on Tally ERP-9 Remote Access at Ahmedabad on 5th May 2010.

The workshop was inaugurated by Mr. Subhash Brambhatt, Principal, Mr. H K Arts College, Ahmedabad Mr. Pradip Jain, Chairman, CSI AC welcomed the participants. Mr. Bharat Patel, Immediate Past chairman briefed about the CSI Events to encourage students to bring their best. Mr. Ram Rajput and Mr. Rajendrabhai Shah from Tally Solutions Pvt. Ltd. Explained the usage of Tally ERP in the recent IT and Business world. They also explained why Tally is not just an accounting software but it is a business solution.

More than 75 students and faculties attended the program.

AHMEDABAD: (Top) Dignitaries on the dais, (Bottom) Mr. Pradip N Jain, Chairman, CSI AC, presenting the memento to Mr. Ram Rajput.

The World Telecommunication and Information Society Day - 2010 was jointly celebrated by Ahmedabad Chapter, The Institution of Engineers (India) Gujarat State Centre, The Institution of Electronics and Telecommunication Engineers Ahmedabad Center, and Data Security Council of India Ahmedabad Chapter on 17th May 2010 by conducting public seminar on the theme “Better city, better life with ICTs”.

On this occasion video message from Dr Hamadoun I. Touré, Secretary-General, International Telecommunication Union on the said theme was played for the audience.

The Chief Guest of the function Mr. Ravi Saxena, IAS, Principal Secretary, Department of Science and Technology, Government of Gujarat presented his views in his keynot address on the theme “Better city, better life with ICTs” and delivered an informative talk on how ICT and IT enabled services for betterment of the society at large.

The Invited Speaker Mr. Harishchandra Rana, Security Consultant and Member, DSCI Ahmedabad Chapter delivered his talk on “Internet Security: Common man to Business needs”. He also briefed the audience how DSCI help the society to aware about the eSecurity glitches.

More than 200 participants from different organizing institutes attended this celebration of World Telecommunication Day.
AHMEDABAD: (L to R) Prof. R. P. Soni, Mr. Pradip N. Jain, Prof. H. K. Desai, Dr. S. M. Shah and Mr. Bipin V. Mehta with the winners of the State Level MCA Best Project Competition-2010

The State Level MCA Best Project Competition-2010 was organized by the Chapter in association with AESICS-CSI Student Branch on 10th May, 2010.

The distinguished judges for the competition were Prof. R. P. Soni, Campus Director, GLS Institute of Computer Technology, Dr. S. M. Shah, Director, S V Institute of Computer Studies, Kadi and Prof. H. K. Desai, Head of the Department, MCA, Indus Institute of Technology and Engineering. The inaugural function of the competition was presided by Mr. Bipin V. Mehta, Fellow, CSI and Director, AES Institute of Computer Studies. In the augural function, Mr. Pradip N. Jain, Chairman, CSI Ahmedabad Chapter addressed the students and encouraged the students for presenting their projects confidently to the judges.

The projects were evaluated by panel of judges on the basis of project theme, system analysis, design, development, testing, project documentation as well as presentation of the project. In the valedictory function, the best project-first prize was awarded to project titled “Transpo – A Mass Transit Information System Portal” by Mr. Paresh Mayani. Best project-second prize was awarded jointly to project titled “Product Information and Order Tracking System” by Ms. Vigna Shah, project titled “Job Portal” by Mr. Bhavesh Verma and Ms. Priyanka Patel. All the participants in the competition were given participation certificates. Total 18 students (10 projects) from various colleges affiliated to Gujarat University, Ganpat University and North Gujarat University participated in the competition. Vote of thanks was proposed by Mr. Bipin V. Mehta, Director, AES Institute of Computer Studies.

AHMEDABAD: Mr. Bharat Patel presenting bouquet to Dr. Bhusan Trivedi

The Chapter in association with Institute of Engineers India, Gujarat State Center has organized a public seminar on “Google Search–How to enhance your search Experience” on 8th May, 2010.

The broad aim of the seminar was to bring together students of various courses of computer Science to get motivated by sharing the knowledge from the research experts and their association with the CSI can help students to develop action plans for successful implementation of workable ideas in their career.

The function was inaugurated by Chief Guest of the function Dr. S.M Shah, Regional Student Coordinator, Region III, CSI. Mr. Pradip N Jain, Chairman, CSI Ahmedabad Chapter welcomed the participants. Dr. Bhusan Trivedi, Director, GLS Institute of Computer Technology, Ahmedabad and speaker of the function lively demonstrated how effectively Google can be used to search the efficient information from the web world.

More than 250 participants from different fields attended the seminar.

AHMEDABAD: Dignitaries on the dais

The Chapter in association with GLS CSI Student Branch has organized a state level best project competition for Under Graduate Students of Computer Science colleges on 6th May, 2010. The motto behind the event was to motivate undergraduate students to demonstrate their skills they have developed during the industrial training they have undergone as a part of their final year curriculum.

The function was inaugurated by Mr. R. P. Soni, Campus Director (Computer Education) of GLS.

Dr. S M Shah, Regional Student Coordinator, Region-III, CSI and Director, S V Institute of Computer Studies, Kadi, Mr. Samir patel, Associate Professor, Nirma Universtiy, Mr. Nikhil Patel, MD, Complitech and Ms. Sonal Jain, Asst. Professor from GLSICT were invited as judges.

Total 11 teams from different colleges across the state participated in the competition. The presentation was followed by question answer round from Judges. At the end of the competition, Dr. S M Shah presented his view on the entire competition and commented on the projects contested for the competition. According to his views, all the judges were very satisfied with the quality of the projects made at undergraduate level. The winners of the competition were Pooja and Neha from GLSICA. While Reshma and Divya from DDIT were awarded the 2nd prize, and Krunal and Niraj from NGCCA were awarded the 3rd prize. The prizes were sponsored by Pan Infotech, Ahmedabad.
BHOPAL : Dr. V D Garde & Col. N P Dixit with Life Time Achievements. Awards were present to both at their homes by chapter Secretary Vivek Dhawan

Chapter felicitated two veterans Dr. V D Garde & Col. N P Dixit with Life Time Achievements. Awards were present to both at their homes by chapter Secretary Vivek Dhawan. Both were unable to attend the AGM which was chaired by CSI National President on the 5th June at Bhopal. Both were Past Chapter Chairman Dr. Garde, ex. GM BHEL Bhopal was also the Founder member of CSI Bhopal chapter.

CSI Special Interest Group on eGovernance (SIGeGOV) in collaboration with Department of Information Technology, Government of Madhya Pradesh and MAP_IT government of Madhya Pradesh conducted a very successful event for sharing eGovernance experiences with each other on 5 and 6 June 2010 at Bhopal, Madhya Pradesh. The inaugural session was presided over by Hon’ble Smt. Renu Nandan, Secretary IT, GoMP Mr. Kailash Vijayavargiya where Prof. P Thrimurthy, President, CSI; Dr. Ashok Agarwal, Chairman, CSI SIGeGOV took part in the deliberation including inaugurating an exhibition of eGovernance Solutions from both Government and Private organizations. The Summit was attended by a large number of participants from different States, including some of the IT Secretaries with the theme ‘Transforming Government and Enabling Citizen’. Mr. S S Mantha, Chairman, AICTE, as well as Hon’ble Justice Mr. Rajesh Tandon, Chairperson of CAT also shared their views on ICT in eGovernance. Mr. Anurag Jain, Secretary IT, GoMP shared the status of eGovernance at Madhya Pradesh and Mr. Anurag Srivastava, Managing Director MAP-IT gave the vote of thanks.

Keeping with the tradition of earlier Knowledge Sharing Summits, the four areas relating to education, agriculture, justice and health were taken up for sharing the experiences with all the States. In ICT in education session, Dr. Neeta Shah, from Gujarat; Mr. P R Naidu, Commissioner, School Education, GoMP, Mr. Jacob Victor, Jt. Director, IT&C, GoAP and Mr. Arun Madhukumar from CISCO enlightened the participants with the efforts being undertaken for using ICT for providing better education to the student community. The session on Education was chaired by Mr. M D Agarwal, Vice President, CSI.

The plenary session on Agriculture was chaired by Mr. Anurag Srivastava, Principal Secretary, GoMP and moderated by Maj. Gen. (Retd) Dr. R K Bagga, Dr. C. K Pitambaram from Kerala State made an excellent presentation on eKrishi. Mr. L Ramanath, Vice President, India and Middle East, Wipro consulting presented the efforts being made towards integrated service delivery for agriculture in Madhya Pradesh. Mr. V Pandit, Dy Secretary, Agriculture, GoMP shared his views on the relevance of ICT in eGovernance applications from different states, which can make an impact in Madhya Pradesh. He wanted the success of e-Krishi be implemented in MP also.

The panelists included Mr. Anurag Jain, Secretary, IT GoMP, Mr. Gururaja Rao, CML, Gujarat Informatics, Mr. Rajiv Vaishnav, VP Nasscom, Mr. Osama Manzar, Director, Digital Empowerment Foundation and Mr. Vikes Agarwal, Director, Advisory Services, KPMG.

The panel on Mobilizing IT Investment was moderated by Dr Ashok Agarwal, with Mr. Savitri Prasad, Secretary IT New Delhi, and Mr. Anurag Srivastava Managing Director MAP-IT, GoMP. The panelists shared their experiences with all the participants and a very effective interactive session led to identification of critical success factors for making investments happen.

On 6 June 2010, the plenary session highlighted the role of eGovernance in Judiciary and Police which was chaired by Hon’ble Justice Mr. Rajesh Tandon, Chairman, CAT and was moderated by Mr. Lalit Sawhney, Past President, CSI. Ms Savita Rao, Addl. Secretary, Law and Judiciary, New Delhi; Mr. D K Dwivedi, Incharge, Computer Centre, Allahabad High Court; Mr Sandeep Sehgal from RED HAT, Mr. Lalit Sawhney, Dy Secretary, Agriculture, GoMP and Mr. Osama Manzar, Director, Digital Empowerment Foundation and Mr. Vikas Agarwal, Director, Advisory Services, KPMG.

The panel on Mobilizing IT Investment was moderated by Dr Ashok Agarwal, with Mr. Savitri Prasad, Secretary IT New Delhi, and Mr. Anurag Srivastava Managing Director MAP-IT, GoMP. The panelists shared their experiences with all the participants and a very effective interactive session led to identification of critical success factors for making investments happen.

In the final session dealing with eGovernance in Healthcare, Special Secretary-Health Dr. Jayadev Sarangi chaired the session, where details of Aarogyasri Healthcare for poor, experience from Andhra Pradesh was shared by its CEO Mr. A Babu, IAS. Mr. Pankaj Gupta from TCS and Dr. Sarangi also gave detailed presentations of the efforts being made to provide better healthcare to the citizens. Dr Ashok Agarwal moderated the session.

The Knowledge Sharing Summit concluded with a special IT Awards ceremony conducted by Government of Madhya Pradesh, where all the award winning projects leaders were honored by Mr. Avani Vaish, Chief Secretary GoMP and Hon’ble Justice Rajesh Tandon. Computer Society of India provided the support through Dr. Ashok Agarwal, Chairman, SIGeGOV in finalizing the awards for Government of Madhya Pradesh.

President, CSI Prof Thirimurthy proposed a special thanks to Dr Ashok Agarwal, the outgoing Chairman of CSI SIGeGOV for excellent contributions made during the last few years for spreading the eGovernance through out the country.
COCHIN

Mr. Manu Zacharia delivering a talk on “Information Security, Ethical Hacking & Penetration Testing”.

The chapter conducted a technical talk on “Information Security, Ethical Hacking & Penetration Testing” by Mr. Manu Zacharia, Director - Information Security, Millennium IT Consultants, Kochi on 10th June 2010.

The talk was attended and well appreciated by about 40 participants from IT companies in and around Kochi. The talk provided an overview of information security, vulnerabilities, threats, hacking, cracking, ethical hacking and penetration testing. Also, the speaker emphasized on the importance of protecting our data and assets.

COIMBATORE

Dr. J V Ramasamy, Prof. R Nadarajan, Dr. Narayanaswamy, Dr. R Rudramoorthy, Dr. S Subramanian, Mr. S Mahendrakumar

The chapter conducted its annual event, the Free Orientation programme on “How to face Engineering Counseling” on Sunday, 6 June, 2010 at the Assembly Hall of PSG College of Technology, Coimbatore. More than 1400 students along with their parents attended this orientation programme which was of great benefit to parents and students alike.

This orientation programme for aspiring engineering students was being held by the CSI Coimbatore chapter for the 7th successive year. The objective of this programme was to provide a platform for parents and students to listen to and interact with senior academicians.

The distinguished academic experts who addressed the gathering were:

- Dr. P Narayanaswamy, HOD-IT, Anna University, Chennai
- Dr. R Rudramoorthy, Principal, PSG College of Technology, Coimbatore

- Dr. S Subramanian, Principal, Sri Krishna College of Engineering and Technology, Coimbatore and Chairman, Division 3 (Applications), CSI
- Prof. R Nadarajan, Dean-Placement, PSG College of Technology, Coimbatore
- Dr. J V Ramasamy, HOD-Civil Engineering, PSG College of Technology, Coimbatore

True to the CSI vision of utilizing “IT for Masses”, the CSI Coimbatore chapter also telecast the event to rural locations like Palani leveraging on video conferencing technology so as to enable more students to benefit from this programme. Dr. Mahalingam College of Engineering and Technology, Pollachi and Jansons Institute of Technology, Coimbatore co-sponsored the event with HCL acting as the Technology Partner.

KOLKATA

An interactive workshop on MATLAB was organized by the chapter on May 8, 2010 at the chapter premises. The event was moderated by the Regional Vice President Prof. Dipti Prasad Mukherjee of the Indian Statistical Institute. Approximately 25 participants from the industry and academia attended the program. Prof. Mukherjee stressed the need for networking of professionals who are exploring uses of MATLAB in solving different scientific computing problems. Mr. Biswajit Biswas and Mr. Amlan Chakraborty of the School of IT of the University of Calcutta presented different aspects of the use of the image processing toolbox of MATLAB. This workshop acted as a prelude to the two forthcoming events – the first one will be on the Use of MATLAB for a wider audience in collaboration with a leading college of Kolkata and the other on the specific use of MATLAB in the emerging domain of Machine Learning.

PUNE

University of Pune, Sponsored in association with CSI organised National Convention “Emerging Trends in Information Technology 2010” on 29th and 30th April 2010 at Indira Institute of Management (MCA), Pune.

Convention was inaugurated on 29th April in hands of Guest of Honor Mr. Kishor Bhalerao, Sr. Vice President-HR Persistent, Mr. Shekhar Sahasrabudhe, Regional Vice President of Region VI, CSI, and Chief Guest Kishor Wikhe, Sr. VP Symphony Services, Dr. Mohan Waman, OSD, BCUD, UOP and Dr. Deepak Shikarpur, Chairman CSI, Div. IV, Dr. Rupa Hiremath, Director MCA.

The Objective was to provide platform for researchers to share their expertise, ideas & research made in various areas of IT. To enrich bond between Industry & academia.

Dr. Deepak Shikarpur, Chairman CSI, Division IV, & Dr. Rupa Hiremath, Director, MCA IIMP contributed & guided for ETIT 2010 to for its success and Mr. Kishor Bhalerao have thrown light on young
IT Industry and elaborated by four aspects of Industry & academia.

Mr. Sahasrbudhe discussed problems-solutions between education Industry must prevail.

Mr. Wikhe enlighten on two decades of evolution of IT Industry. He spoke about outsourcing product development, leveraging technological innovation.

In the afternoon session Mr. Atul Kahate, Mr. Nitin Joshi, spoke on Emerging trends in Web Technology & Green Computing respectively. Many academicians participated in the paper presentation. It had been a great success with joint hands of University of Pune, Computer society of India & Indira Institute of Management (MCA), Pune.

TIRUCHIRAPPALLI

Technical Lecture conducted by the Chapter & the Institution of Engineers (India), Tiruchirapalli Local Centre (IEI-TLC) on Mobile-Adhoc Networks, also termed as mesh-network. Ms. S Subitha highlighted Vehicle MANET, Internet MANET etc. specifically used for military Applications, rescue, home networking.

In MANET there are two major protocols handling so many internal activities for the best communication, specifically TCP Congestion Control. One of the main benefits of multi-path routing in MANET environments is that it provokes traffic dispersion, which provides load-balancing, reduces the energy consumed by nodes, and difficult traffic analysis.

About 50 Members Participated & got Benefitted from the lecture.

TIRUCHIRAPPALLI : The Speaker Mr. S Inder Singh Mahajan, is delivering the lecture on “Cloud Computing”.

Mr. S Inder Singh Mahajan, is delivering the lecture on “Cloud Computing”. Cloud computing is Internet-based computing, whereby shared resources, software and information are provided to computers and other devices on-demand, like the electricity grid.

It is a paradigm shift following the shift from mainframe to client–server that preceded it in the early 1980s. Details are abstracted from the users who no longer have need of expertise in, or control over the technology infrastructure “in the cloud” that supports them.

Cloud computing describes a new supplement, consumption and delivery model for IT services based on the Internet, and it typically involves the provision of dynamically scalable and often virtualized resources as a service over the Internet. It is a byproduct and consequence of the ease-of-access to remote computing sites provided by the Internet.

Most cloud computing infrastructure consists of reliable services delivered through data centers and built on servers. Clouds often appear as single points of access for all consumers’ computing needs. Commercial offerings are generally expected to meet quality of service (QoS) requirements of customers and typically offer SLAs.

About 40 Members Participated & got Benefitted from the lecture.

Mr. V Raju delivering the lecture on “Better City, Better Life with ICTs”. This year, the theme chosen by ITU to mark WTIS Day is “Better City, Better Life with ICTs”. More than 55% of the world’s population lives in cities and urban areas. The figure for India is, of course, much lower. The Focus is on providing affordable and equitable access to all urban dwellers so that they can derive the benefits of ICTs and have a better quality of life.

E-governance initiatives of the government ensure transparent and speedy delivery of public services through ICT applications. The proposal to use biometric data for public distribution of essential commodities is a case in point. Trichy Municipal Corporation providing tax payment services on net is another example. Use of surveillance cameras for traffic management by Trichy traffic police is an example of use of ICTs to improve safety and security in cities. Telemedicine projects enable delivery of medical service to people located far away. Virtual classrooms are being tried by universities to deliver high quality education from a distance. National mission for education through information and communication technologies (NMEICT) is a project funded by ministry of HRD, government of India and under implementation by BSNL across India. It envisages linking of all universities and colleges in India to enable sharing of knowledge among researchers and students at subsidized charges.

TIRUCHIRAPPALLI : The Speaker Mr. V. Raju delivering lecture on “Better City, Better Life with ICTs” on the eve of “World Telecommunication Day”

Mr. K Sankaran, Hon. Secretary IEI–TLC welcomed the gathering & introduced three speaker to the audience. Mr R Kumar, Chairman, IEI-TLC & GM /BPP /BHEL/Tiruchirapalli & Dr. M A Malik Mohamed, Chapter Chairman presented the momento on behalf of the IEI-TLC & CSI Trichy chapter respectively.

Mr. R Selvaraj, Immd. Past Secretary, CSI Tiruchirapalli Chapter Proposed the vote of thanks.
TRIVANDRUM

On 19th May, 2010 World Telecommunication and Information Society Day 2010 was celebrated. Mr. Satish Babu, President, InApp Technologies, Technopark and Former National Secretary, Computer Society of India delivered lecture on the theme “Better City, Better Life with ICTs”.

On 26th May, 2010 Technical talk on “Reusable Launch Vehicles” by Dr. K Sivan, Project Director, RLV-TD, VSSC, Thiruvananthapuram.

TRIVANDRUM : Mr.Satish Babu delivering the lecture.

On 2nd June, 2010 World Environment Day 2010 was celebrated. Dr. A.G.Pandurangan, Head, Plant Systematic & Evolutionary Science Division, TGBRI, Trivandrum delivered the lecture on the theme “Many Species. One Planet. One Future”.

On 16th June, 2010 One Day Seminar on The Proposal to Reduce Width of NHs 47 and 17 in Kerala was organized in association with other professional societies in Trivandrum. Mr. K P Rajendran, Honourable Minister for Revenue, Government of Kerala was the Chief Guest.

UDAIPUR

UDAIPUR : (L to R) Dr. Dharm Singh, Dr. Neetesh Purohit, Prof. RC Purohit, Er. Nilay Mathur, Mr. Azimuddin Khan, Prof. Naveen Choudhary

The chapter organized a one day workshop on IT Origin and Evolution” in association with the Department of CSE, College of Technology & Engineering (CTAE), MPUAT Udaipur on 19th June 2010. The workshop was attended by 50 students and 30 faculty members from various engineering college in Udaipur.

Prof. Naveen Choudhary, organizing chair welcomed the participants. Dr. SS Rathore Chairman Institution of Engineers (India) Udaipur Centre welcomed the Prof. RC Purohit Dean CTAE, Udaipur, by presenting the bouquet. Dr. Dharm Singh, Secretary, CSI Udaipur introduced Prof. RC Purohit, Dean College of Technology and Engineering, Udaipur, Prof. Nitesh Purohit, IIIT Allahabad, Er. Nilay Mathur, Director NIIT Udaipur and Akash Deep Mahajan, TDE, NIIT Ltd Delhi. Mr. Azimuddin Khan, Vice Chairman, CSI Udaipur highlighted the CSI strengths and its activities.

In the technical talk on “scientific origins of the internet”, Dr. Dharm Singh said that though the Internet today is vehicle for commerce, entertainment, news, and personal communication, its origins lie in scientific endeavour, and it has been fundamentally shaped by scientific practices and values. The Internet was originally created to support scientists to exchange their research findings, and its technical design reflected the needs and abilities of this group.

Er. Nilay Mathur, Centre Director, NIIT Udaipur, Computer education centre presented his views on “IT – Road to Financial Freedom” and elaborated that although India gained political freedom 63 years ago, the economic freedom was achieved only in 90’s due to major contribution of IT industries. IT industry, which is knowledge base industry, painted a new scenario of economy.

Dr. Neetesh Purohit from IIIT Allahabad presents the keynote address on the theme. He spoke about Shannon’s idea of information quantification used in communication engineering and other newly developed research streams and explained them. The utility of the information theory principals in molecular biology field specifically the shift in methodology from descriptive models to qualitative model was illustrated and importance of mathematical formulation of various engineering problems and their impact on day to day life was very impressively communicated to the participants.

VISAKHPATNAM

VISAKHPATNAM : Mr. A P Choudhary felicitated Mr. D Kameswara Rao on the occasion of his superannuation. Mr. Paramata Satyanarayana and Mr. KVSS Rajeswara Rao were also present.

The chapter conducted a Technical talk on “Innovative Technologies for an enterprise – a Novell perspective”. In this technical talk the following topics were covered High Availability and Disaster Recovery --> in a Box, Running Domain Authentication Services for Windows on Linux Server, Reducing Storage Requirement, Protecting Web Applications and adding two factor authentication , Single Sign on with Client Integrity Check, Beyond Email and Chat : New option for communicating with others in Real Time

The talk was delivered jointly by Mr. Boby Jacob, Principal Solution Architect, Novell India, Mr. Henry Isaac , Regional Manager (South India), Novell India and Mr. Raju Sarma – Sr. Executive, Marketing - SONATA IT Ltd.

The programme was well appreciated by over 100 IT professional from various organizations of Visakhapatnam.

On this day, the chapter has also felicitated, Mr. D Kameswara Rao, General Manager (IT), Rastriya Ispat Nigam Limited who has retired from the services of RINL, in gratitude of his services as Chairman, CSI.
Visakhapatnam Chapter.

Mr. Mr. D Kameswara Rao, General Manager (IT), was the dynamic chairman for the year 2006-2007. In his tenure he has set standards and set a path for the CSI, Visakhapatnam Chapter to tread forward. In his tenure a unique and novel one day program on Occupational Health and Safety Aspects for computer users was organized. Apart from that, he has played a major role in conducting International conference on “e-security”. This program was a runaway hit and received accolades from all and sundry.

Mr. A P Choudhary, Director (Projects) RINL and Vice-Chairman CSI Visakhapatnam has graced the occasion as guest of honor and felicitated Mr. D K Rao.

Mr. KVSS Rajewara Rao, DGM (IT), RINL was present.

Mr. C K Padhi, AGM (IT) RINL and Treasurer CSI has proposed vote of thanks.

**STUDENT Branches**

**GGITM**

The Branch organized a guest lecture on “Infrastructure as a Service” which was delivered by Mr. S S Prasad from Adobe India Ltd. In this talk he explained how the companies are using cloud computing to lease out their infrastructure to the customers who require it for a short period of time. He gave many real world examples where the companies are building their own clouds to provide services to their customers. He also threw light on the security concerns while using cloud computing. Since the customers may place their data on the clouds, the security and privacy of the customer’s data has to be taken care of well. The SLA (Service Level Agreement) was also explained by him. Finally he briefed as to how Adobe is providing services to their Photoshop client using cloud. The lecture was well attended by the student members and the faculty members of CSE and IT Departments.

**VIDYAAcademy of Science & Technology, TriSSure**

The Branch was started in August 2008. The branch conducted a two day national conference on March 18, 19 - 2010. The Department of Computer Science & Engineering and the Department of Computer Applications of our college in association with ISTE & CSI VAST student branch organized the conference.

The theme of the conference was “Human computer Interaction and Image processing” and it is code named ‘NCHIP ’10’. The subthemes of the conference included Neural Networks, Robotics, Natural Language processing, Agent Based Computing, Computer Vision, Medical Image Processing, Visual perception etc. More than a hundred papers were received for presentation in the conference. Based on recommendations, about fifty papers were selected for presentation in the conference. These presentations are scheduled in four sessions.

The conference was inaugurated by Mr. Sidhartha Bhattacharya, CEO, Infopark, Kochi. Dr. M N Agnisarman Namboodiri, Head, Dept. of CSE welcomed the gathering and the college principal Dr. S P Subramanian presided over the function. The conference Convener Prof. Sunita C, gave an overview of the conference. The executive Director, Mr. K R Brahmadathan and Professor Emeritus Dr. P. Pratapachandran Nair felicitated the occasion. The academic director Dr. D Balakrishnan released the conference proceedings and Dr. V N Krishnachandran, Head, Dept. of Computer Applications gave the vote of thanks.

Three invited talks in the conference. Dr. K P Soman, Head, CEN, Amrita School of Engineering, Coimbatore delivered a lecture on Computational Data Mining. Dr. Subbiah Bharathi, Dean, DMI college of Enng, Chennai talked about Brain Imaging and Dr. Gylson Thomas, Prof. MES College of Enng, Kuttippuram, Kerala explained the techniques of Medical Imaging.

Dr. V N Krishnachandran distributed the certificates and the participants share their experiences.

“People travel to wonder at the height of the mountains, at the huge waves of the seas, at the long course of the rivers, at the vast compass of the ocean, at the circular motion of the stars, and yet they pass by themselves without wondering.”

–St. Augustine