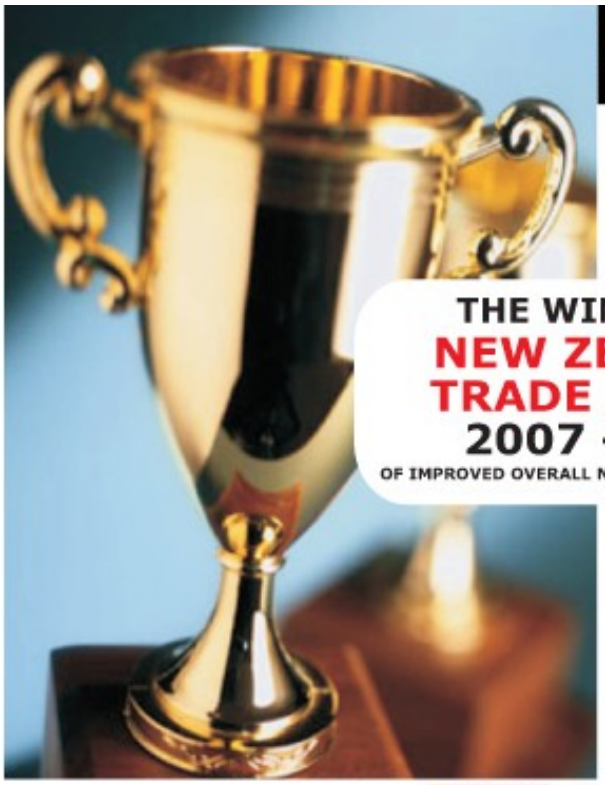

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CONTENTS:

The Editorial Board

Standing L : R - Pranav, Nitisha, Nidhi, Ashwin, Shipra, Niharika
Sitting L : R - Mrs. Yogita Arora, Prof. I.J. Kumar, Mr. Rahul Bahl

This was a big challenge of finding ourselves; not to be deceived by what seemed to be our personality on the surface, but to dig deeper and find out who we really are. College is known as one of the best places to embark on this journey, we availed of this opportunity through FERVOUR. The task was very exciting & helped in increasing our versatility in different fields. We acquired quality knowledge during our association with the fest. It was great working for the magazine as it demanded a lot of involvement. It has been a pleasure to acknowledge the helpful counsel and guidance of all the teachers, and colleagues for their constructive suggestions, unflinching support and constant encouragement to undertake this venture. We hereby take this opportunity to extend our gratitude to a lot many people, who helped us sail through, especially Pranav, who was instrumental in designing the cover page. We would also like to express our heartfelt thanks to our Principal sir, Dr. I.J. Kumar, Mr. Rahul Bahl, the Branch Counselor and Mrs. Yogita Arora, the Editorial Mentor, for their extensive support and guidance.

Chief Editor (Nidhi Gurnani)
Editors (Nitisha Jain, Ashwin, Mayank Sharma)

Special Thanks to the Judging Panel

Standing L : R – Mrs. Yogita Arora, Mrs. Renu Taneja, Mrs. Kusum, Mr. Manish Talwar
Sitting L : R – Mrs. Aarti Kane, Mr. Rahul Bahl, Dr. I.J. Kumar, Mrs. Mamta, Mrs. Deepti Soni

We would also like to extend gratitude to Mrs. Yogita Arora, Mrs. Renu Taneja, Mrs. Kusum, Mr. Manish Talwar, Mrs. Aarti Kane and Mrs. Deepti Soni, for obliging us by accepting to be a part of the Judging Panel for Plan De Negocios and National Students Symposium.

SHEILA DIKSHIT
CHIEF MINISTER

GOVT. OF NATIONAL CAPITAL TERRITORY OF DELHI
DELHI SECRETARIAT, I.P. ESTATE, NEW DELHI-110002

D.O.NO. : OSOCM1/23K
Dated : 28.01.09

MESSAGE

It gives me immense pleasure to know that the IEEE Students Branch of Bharati Vidyapeeth's College of Engineering is organizing its 3rd Annual Festival-Fervour 2009, National Students Symposium, All India Business Plan Competition and International Education Fair on 30th and 31st January, 2009. It is also encouraging to note that a special souvenir is also being brought out to mark this occasion.

Bharati Vidyapeeth's College of Engineering, New Delhi has earned a special reputation due to its pioneering initiatives in grooming young engineering graduates. I am sure that Annual Festival and all other events would go a long way in enriching experience for students and prepare themselves to face future challenges.

My best wishes for success of entire endeavour.

Sheila Dikshit

(SHEILA DIKSHIT)

Message from the Founder and Chancellor

Hon'ble Dr. Patangraoji Kadam
M.A., LLB., Ph.D.
Founder Bharati Vidyapeeth,
Chancellor,
Bharati Vidyapeeth
University, Pune
&
Minister of Co-Operation,
Rehabilitation & Relief Work
Government of Maharashtra

In the present scenario, there is continuous upsurge of knowledge everywhere. Due to the emergence of new technologies and skills, people of younger generation have a widened scope to showcase their talents in professional activities. Bharati Vidyapeeth University is committed to make quality education accessible to all its students as per their individual choices and inclination. Being one of the top five technical colleges in Delhi, Bharati Vidyapeeth's College of Engineering has achieved consistently high scores for its teaching and learning activities. Apart from maintaining excellent standards of education, we give ample opportunities to our students for their personality development. After remarkable success of Fervour 08, the IEEE student branch of the Bharati Vidyapeeth's College of Engineering is organizing its annual technical festival, FERVOUR 09.The IEEE student branch of our college has always aimed to promote awareness of the IEEE through exciting and informative events ranging from technical seminars to career events as well as socials and field trips. Such events set a great platform for students to interact and share their ideas.

I wish all the members of IEEE and the team of Fervour 09 good luck to put up yet another successful performance in the upcoming event.

Mr. Vishwajeet Rao Kadam
Secretary
Bharati Vidyapeeth Deemed University, Pune

Message from the Secretary

It gives me great pleasure to know that the IEEE student branch of Bharati Vidyapeeth's College of Engineering, Paschim Vihar, New Delhi is organizing its 3rd Annual Festival FERVOUR on January 30–31, 2009, entailing events like National Students Symposium, Plan De Negocios, International Education Fair and Delhi School Summit.

Through its global membership, IEEE is a leading authority on areas ranging from aerospace systems, computers and telecommunications to biomedical engineering, electric power and consumer electronics among others. Members rely on IEEE as a source of technical and professional information, resources and services. The greatest thing in the world is not so much where we are, but in what direction we are moving. Therefore, it gives me great happiness that BVP IEEE (Student Branch, IEEE, BVCOE, New Delhi) is also encouraging student members to foster an interest in the engineering profession. I see a very bright future ahead for the students of BVCOE. I am sure that deliberations of FERVOUR will serve as a useful guide to the budding engineers involved to orient themselves in the matter of selecting the technology as well as methodology for economical and cost effective execution of the projects in future.

On this occasion, I extend my heartiest felicitations to the management, Principal, teachers, staff and students of BVCOE for organizing this Annual Festival. I am sure that Fervour will come out with great success in its endeavor.

Wish you all the success!

Prof. (Dr.) I.J. Kumar
Principal
Bharati Vidyapeeth's College
of Engineering
New Delhi

Message from the Principal

Much of the strength of a college education lies in the exposure of students to different perspectives from a diverse peer group. BVCOE is committed to providing a platform to its students for implementing a range of potential activities. We are committed to continuously improving and reviewing our approach to widening access, developing student support services and nurturing the diverse learning environment which benefits all students. I take this opportunity to congratulate the IEEE student branch of BVCOE, New Delhi for its untiring endeavor to achieve the above.

It gives me immense pleasure to share with you that IEEE Student Branch at BVCOE is organizing its third annual festival, "Fervour'09" on January 30-31, 2009.

I wish all IEEE volunteers and well wishers success in their efforts.

Mrs. Prerna Gaur
(Sr Lecturer, ICE Div, NSIT)
Senior member IEEE,
'Chair of Standing Committee, Students and Educational Activities'
IEEE Delhi Section,
Branch Counselor,
NSIT Students Branch

Message from the Student Technical Activity Chairperson, IEEE

In this era, where technology and education together are dissipating a new light, Bharati Vidyapeeth's College of Engineering outshines all those in and beyond its league.

To keep pace with the 21st century, we have to keep ourselves updated, especially in the technical field. Engineers must develop skills beyond traditional constraints of the classrooms.

IEEE is surely a kaleidoscope of a varied and colourful creation of our budding students who have taken this opportunity of freely expressing themselves in FERVOUR'09.

To IEEE students, I would like to say that "As gold gains vigor when heated, cotton before use needs to be beated, similarly to reach acme brains are to be thoroughly kneaded". We need to discover the realities and feed them back into the system for corrective or proactive actions to maintain the vigor and relevance of both the industry and academia.

My whole hearted wishes to the IEEE student branch of BVCOE, New Delhi for the success of their creative endeavour in Fervour'09.

Mrs. Neeta Pandey
Assistant Professor
Delhi College of Engineering
Ex- Branch Counselor,
IEEE Student Branch,
BVCOE

Message from the Ex-Branch Counselor

We are embarking on a journey of success which would be endless in its pursuit and infinite in its boundless achievements.

With the influx of information and technology, the education of today has become more challenging and demanding. We need to prepare such individuals as have a blend of all the qualities which can help them survive in this competitive world. The IEEE Student Branch of Bharati Vidyapeeth's College of Engineering, aims at developing such personalities.

We provide the students with a platform, which helps them develop not only their managerial skills, but also makes them technologically sound. Our objective is to make our budding engineers not only aware of the latest scientific developments, but also to promote networking among them.

The hard work and dedication of the branch has always paid off, and all its endeavours have been highly appreciated. My experience with the branch has been highly fruitful, in terms of a teacher as well as their mentor.

I wish all the very best to the branch for all its future projects.

Mr. Rahul Bahl
IEEE Branch Counselor
BVCOE, Delhi

Message from the Branch Counselor

It is highly propitious that the IEEE Student Branch of Bharati Vidyapeeth's College of Engineering, New Delhi is organizing its third Annual Festival, FERVOUR 09 on January 30-31, 2009 entailing events like Plan De Negocios, International Education Fair, National Students Symposium and Delhi School Summit.

BVPIEEE has been promoting the engineering process of creating, developing, integrating, sharing and applying technical knowledge for the benefit of students.

Through its membership, BVPIEEE endorses various areas ranging from technical paraphernalia to non–technical areas of development of students. Students rely on IEEE as a source of technical and professional information, resources and services.

It gives me great happiness that through its activities, BVPIEEE is also encouraging student members to foster an interest in the engineering profession. I see a very bright future for the students of BVCOE. I am sure that deliberations of FERVOUR will serve as a useful guide to the budding engineers involved, to orient themselves in the matter of selecting the technology as well as methodology for economical and cost-effective execution of the projects in future.

On this occasion, I extend my heartiest felicitations to the organizing team of Fervour 09. I am sure that the event will be a grand success.

Deepshikha Gangal
Chairperson
IEEE Student Branch
BVCOE, New Delhi

Message from the Chairperson

After months of research, brainstorming sessions and hard work put in, day & night, by the entire team at the IEEE Student Branch of BVCOE, finally the day has arrived to realise our Vision which, over the years, became our Mission - that is, the Success of Fervour! Now in its 3rd year, Fervour is an annual event, eagerly looked forward to by everyone. A Youth Festival that truly celebrates today's youth.

With tremendous growth in our IEEE Student Branch, 2008 had also been a year of fulfillment of dreams. Numerous Workshops, seminars, guest lectures, online events, e-journal & Dr. Vikram Sarabhai Rotating Shield Quiz Contest, all proved just one point - student excellence. Many impossible targets were achieved, and the acceleration of our growth has been tremendous.

My heartfelt thanks and best wishes to the entire team.

EXECUTIVE COMMITTEE

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From Across the Globe

Messages from Japan

"The Benefits of IEEE"

The activities of IEEE give one the opportunity of academic exchanges with students of various fields. For instance, in the "Workshop of Project Management" (as the Vice Chairperson has explained below), there was not only an opportunity to study about nanotechnology, but also wireless technology, SFQ integrated circuit and so on. In this manner, our IEEE activities expand our view and help us in determining our future direction.

Moreover, IEEE not only opens one's mind, but also helps one in making rich connections. In this regard, one especially has the advantage of making international contacts. IEEE holds a student congress once in every two years which supports a healthy interaction among engineers in the Asian block. During my personal experience of one such congress, I interacted with almost 200 students of each country, and got 100 or more students to memorize my name! (since, like many others, I didn't have a card). Such an opportunity of interacting with engineers from various parts of the world is not obtained during one's regular life.

Hence, I believe that one can get the much required experience through IEEE.

Hirohiko So
Nagoya University Student Branch Chair
Nagoya University information science graduate course Masters Degree

"Activities in Japan"

Hello. I'm the Co-Chair of IEEE Nagoya University Student Branch. Today, I wish to introduce the activities which take place in our Student Branch.

We had two main activities last year. One was the "Presentation Festival " , and the other was the "Workshop of Project Management".

First, let me describe the "Presentation Festival". Here, we had an event titled "Introduction of my research in 10 minutes" for proposes of academic exchange and improvement of presentation abilities. Many people who have different backgrounds gathered for this attractive festival. In terms of scientific exchange, experience of presentation to outsider and friendship, this festival was very useful.

Next, I introduce the "Workshop of Project Management". The reason why we had this was that we felt the necessity of management abilities while having the " Presentation Festival". In addition to this, we felt that it was essential to bring in success by 'managing' an engineering team. We divided charges amongst ourselves and learned effectively by teaching each other the

roles within our respective charges. I will make good use of this experience whenever we next have activities.

In this way, I could meet many people, learn and have a good experience through the activities of IEEE. For somebody like me, who will live as an Engineer, IEEE provides an ultimate platform.

Taiki Takimoto
Nagoya University Student Branch Vice Chair
Nagoya University Engineering graduate course Master Degree

Message from Australia

IEEE membership – Does it really matter to students?

Firstly I would like to start by saying hello to all my friends in India! How would someone from a regional town in the distant land Down Under have these friends over 9,000km and a 14 hour plane trip away? Some reading this article might think I have met them in Australia or that I either worked, studied or visited India on holidays. The fact is I made all of these friends on a Region 10 student congress in Chennai through my membership and volunteer efforts in IEEE.

Now I'm not saying becoming a member of IEEE will get you trips to Australia, but through my volunteering efforts in my local student branch and my good relationship with (and sponsorship from) the IEEE Northern Australia Section, I was given the opportunity of a lifetime. It is unlikely I would have ever had the chance to visit India as a student; in fact I'm positive I would never have had the chance to visit as a student! This story is not meant to demonstrate the material benefits of being part of the world's largest professional technical organization – it's to demonstrate the OPPORTUNITIES you can be exposed to.

Opportunity can come in many forms. In fact, opportunity isn't all about identifying something that can get you things for free, or receiving a reward for something you did as a volunteer or did just because you're a nice person. Opportunity can also be a path to personal reward and fulfillment. The opportunity to be involved and contribute, the opportunity to learn more about the things you are interested in, the opportunity to help others understand what you understand. These things are intangible; you can't hold them or put them in a book or on a shelf, but you can carry them in your memories and heart for a lot longer than anything else you will ever own. And unlike some material items, these opportunities aren't that hard to come by.

So how does this relate to IEEE? Well with over 1,600 student branches and 450 student branch chapters in more than 160 countries worldwide, chances are you are very close to opportunity right now. All student branches are run by people just like you: students. These students are taking the opportunity to be involved, to learn more about the things they are interested in, and to help others understand what they understand. They are active in running workshops, seminars,

events, projects and social activities to benefit you, and to make you feel part of a community. They also get the chance to develop skills in organization and logistics, leadership, finance and reporting. While some of these things don't sound that exciting (I'm not good at filling in paperwork myself), they are all skills that employers the world over are wanting in employees – the skills that are gained by taking the opportunity to be involved in something like your local IEEE student branch. Not everyone has to be a volunteer; being a student member gives you the opportunity to meet with people who are interested in the things you are interested in, and to do cool stuff like build robots, or learn how to program, or figure out how the heck you are going to work together to build something you don't know much about. These things are not only fun, but help you in your studies because you are applying your knowledge to something material and tangible. This in turn can give you something even more worthwhile – something intangible that you will get to keep forever.

So does IEEE membership matter to students? I think the answer is clearly YES.

Cheers from Australia!

Adam Ruxton
IEEE Student Branch Chair
James Cook University, Queensland Australia
adam.ruxton@ieee.org

Message from New Zealand

Experiences as an IEEE Student member

I first joined IEEE in my second year as an undergraduate student in New Zealand. Little did I know what a profound effect this decision was to have on the course of my life. At the end of that year I was elected chair of the University of Auckland Student Branch. Before long I was organising events and leading a committee of 16. Although I did not realise it at the time, these organisational and leadership skills would provide me with a huge competitive advantage in the employment market. Skills like this are highly sought after in graduates and IEEE offers a way to develop and demonstrate these. Through organising and participating in activities I was able make the beginnings of a network of professional contacts. Such networks are key to succeeding in the engineering business and the old adage "it's not what you know but who you know" rings very true. My contacts made through IEEE helped to arrange several summer internships and introduced me to my final year project supervisor. The most unforgettable experience IEEE offered me was the chance to travel half way across the world to India as a delegate to the IEEE R10 Student Congress. Here I was able to share experiences with student leaders from India, China, Pakistan, Japan and Australia to name but a few. I made many lasting friendships as well as invaluable future professional contacts. The benefits and experiences IEEE membership has

offered to me are priceless. Joining IEEE was the wisest decision I have ever made and I have not looked back since.

George Gordon is the current chair of the IEEE Student Branch at the University of Auckland, New Zealand. He has been an IEEE member and volunteer for three years now and has been involved in organizing many student events, including a practice job interviews events with over 20 technology industry companies participating. He is currently in the final semester of his Bachelor of Engineering degree and intends to take up postgraduate study.

The Year 2008 Revisited

C/C++ Workshop – June 18, 2008

The workshop aimed at helping those students of 1st and 2nd year who generally face problems with the language and are not able to understand the programming part of it. The basic concepts of C language were covered, followed by various programming techniques; then some complex concepts were introduced. In the 4-week workshop organized by the 4th year students of the college, students were given regular assignments, were provided with labs for programming practice and were encouraged to initiate some projects.

Placement Workshop – July 12, 2008 & July 19, 2008

The placement workshop organized by IEEE student branch comprised of:-

1. Panel discussion & Mock interviews on 12th July 2008
2. Mock interviews on 19th July 2008

The interviews were taken by the alumni of the college. Approximately 100 students participated in the activity. During the panel discussion, the alumni discussed the crux of the interview & tried to clear the confusion in the minds of some students. Mock interviews followed the Panel discussion. The second phase, held on 19th July 2008 went on fine by imparting confidence to the students. The alumni shared their experiences; and the Mock Interviews gave the participating students a reality check.

Independence Day Quiz – August 15, 2008

The Branch also organized an Independence Day Quiz Competition, on 15th August 2008, on its website, www.bvpieee.org. The quiz comprised of various questions on the motherland and was followed by the slogan writing competition. The event saw participation of mainly colleges in and around National Capital Region, with Ankit Mahendru of Netaji Subhash Institute Of Technology, Dwarka New Delhi Winning the event.

Online Quiz Week – August 28, 2008 to August 31, 2008

The IEEE Student Branch of Bharati Vidyapeeth's College of Engineering, New Delhi, organized Online Quiz Week, from 28th August- 32st August 2008, on its website www.bvpieee.org. The week was divided into four quizes:

DATE:	QUIZ TITLE	WINNER	COLLEGE
28/08/08-	Technical (C++/C) Quiz	Ankit Garg	BVCOE

29/08/08-	Sports Quiz	Aayush Jain	BVCOE
30/08/08-	Biz Quiz	Varun Gandhi	BVCOE
31/08/08-	Literary Quiz	Shreya	IITK

The event saw participation from across the length and breadth of the country from institutions like IITD, IITR, IITK, JAMIA MILIA ISLAMIA, NSIT, DCE, DELHI UNIVERSITY, ANNA UNIVERSITY: and many more.

ROOTS Activities – September 29, 2008

Roots activity was undertaken at the Government Boys Sr. Sec. School, SU Block Pitampura, for the students of classes 11th and 12th by the three branch members Ankit Ahuja(Head PR & HR), Aanchal Gupta (Head Technical Events) and Soumya Gupta. About 150 Students in all were counseled on the prospects of engineering and were given insight into various fields of engineering giving them ample glimpse of what is in store for them if they choose engineering as their future study area.

WIE Meet – September 29, 2008

IEEE Women in Engineering Affinity Group of Bharati Vidyapeeth's College of Engineering organized Women in Engineering Meet on September 29, 2008 with the aim of networking and learning from each other. It drew participation from almost all the WIE Affinity Groups in Delhi including Faculty of Engineering, Jamia Milia Islamia, Netaji Subhash Institute of Technology, Indira Gandhi Institute of Technology and the hosts. The meet was presided over by Dr. I. J. Kumar, Principal, BVCOE, Mrs. Neeta Pandey, then Branch counselor, IEEE SB, BVCOE and Mr. Kishore Asthana. Dr. I. J. Kumar enlightened the gathering about the work culture in the industry, general perception of women engineers and about women defying norms, from the many golden years he spent in the Defense Research and Development Organization (D.R.D.O.). Mr. Kishore Asthana delivered a highly motivating lecture on how women, especially engineers should not let anything bog them down. He is a B.E. Gold medalist and an Indian Institute of Management Ahmadabad (IIMA) pass out. He founded some N.G.O.'s and is the convener and member of the Executive Committee of Mensa, the oldest high I.Q. Society in the world. The guest lecture was succeeded by a networking activity which brought together students from different colleges in various groups to solve a problem at hand. This was followed by branch presentations wherein the branch activities of various colleges were discussed that inspired others. The second networking activity was an Ad-mad show that became an instrument for students to showcase their talent and creativity while aiding in networking. The show was presided over by Mrs. Rachna. She also handed over the certificate of honorable mention in the

2007 WIE Student Branch Affinity Group of the Year Award that the IEEE WIE Affinity Group of BVCOE received.

iDexter, Online Technical Week – October 19, 2008 to October 22, 2008

A much awaited event in the technical circuit, the online technical week, iDexter, saw some sought after technical brains fighting for the title in the technical quizzes and contests like C/C++ programming, 8051 programming and Technical Paper Presentation. The event saw participation from various colleges in and around Delhi.

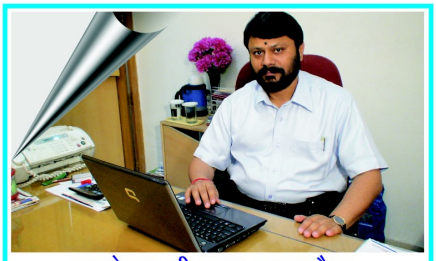
Dr. Vikram Sarabhai Inter-College Rotating Shield Quiz – October 23, 2008

The IEEE Student Branch of Bharati Vidyapeeth's College of Engineering, New Delhi organized the second Dr. Vikram Sarabhai Inter-College Rotating Shield Quiz, on 23rd October 2008, at its campus. Colleges which have active IEEE student branches were in Delhi were invited to participate. The event saw a huge participation of 60 teams in total, from colleges like NSIT, DCE, MAIT and BVCOE.

The quiz was held in two stages. The quiz masters for the day were Mr. Dinesh Kapur and Mr. M.V. Harish of BVCOE. The first stage of the quiz was the preliminary round, wherein 6 teams were selected for the finals. The defending champions, Roshan Shankar and Udit Anand from NSIT, managed to keep the shield away from others' grasp this year too. Prof. Neeta Pandey, our Branch Counselor felicitated the winners by awarding the shield and the prizes.

Erudition, Online Literary Week – October 23, 2008 to October 26, 2008

Four day long, online literary week, Erudition, comprising of twelve events saw participation of over 250 students all across the country. Having a wide variety of contests, the week saw participation of some the most creative brains at writing and the detailed students of literature fighting for the zenith. Some of the events of the week were: OPTIMISTIX, JUMBLE MUMBLE, ROUTE THE ROOTS, SCREW A SLOGAN, TEXT TWIST, SYNONYMOUS, COMIC QUOTE.



डायरेक्टर श्री उदय कुमार वैश्य

क्यों है जरूरत? IT expert की

कम्प्यूटर की बढ़ती लोकप्रियता ने एक बहुत बड़ी इंडस्ट्री को जन्म दिया है, जिसे हम **IT Industry** के नाम से जानते है। एक सर्वे के अनुसार आने वाले समय में **IT expert** की **demand** लाखों की तादाद मे होगी। वर्तमान समय में एक मात्र **IT** उद्योग ही बूम पर हैं।

क्या है हार्डवेयर कोर्स ?

हार्डवेयर से तात्पर्य है, कम्प्यूटर की बाहरी व आंतरिक बॉड़ी या पार्टस से। इस कोर्स के अन्तर्गत कम्प्यूटर बनाना, रिपेयर करना व मैंन्टिनेंस की ट्रेनिंग दी जाती है। यह ट्रेनिंग दो प्रकार का होता है कार्ड लेवॅल एवं चिप लेवॅल।

क्या है चिप लेवॅल हार्डवेयर कोर्स ?

कार्ड लेवॅल कोर्स में केवल खराब कार्डस को बदलना सिखाया जाता है जबकि चिप लेवॅल कोर्स में एक–एक पार्टस के नस–नस की जानकारी होती है। चिप लेवॅल का तात्पर्य उस चिप से है, जो सिस्टम के कार्यों मे भिन्न–भिन्न लगी होती है। इस कोर्स के अर्न्तगत् खराब पड़ी चिप को डिसोल्डर व नयी चिप को सोल्डर करना सिखाया जाता है, आमतौर पर अधिकांश संस्थानों में चिप लेवॅल के नाम पर कार्ड लेवॅल ही सिखाया जाता है जिससे कम्प्यूटर हार्डवेयर की जानकारी आधी–अधूरी रह जाती है। यह कमी छात्रों को इन्ट्रव्यू के समय पता लगती है।

क्या है तालमेल? कम्प्यूटर हार्डवेयर और नेटवर्किंग का।

इसे समझने के लिए हमे कम्प्यूटर की कार्यप्रणाली के बारे में जानना होगा। जब हम किसी सिस्टम में अपना डाटा रखते है, तो वह डाटा हार्डडिस्क की मैमोरी मे स्टोर को जाता है, पर जब हमे उसी डाटा को सैकड़ो किलोमीटर दूर रखे किसी सिस्टम के **through access** करना हो अथवा दोनो को आपस में बिना किसी वायर के जोडना हो, तो हमे नेटवर्किंग के विभिन्न कोर्सों की जानकारी होनी चाहिए। नेट का अर्थ होता है जाल अर्थात जब सैकडो कम्प्यूटर मीलों दूर रखकर भी आपस में जोडना हो, तो यह काम नेटवर्क इंजीनियर का होता है।

क्या है? SAN Networking

नाम से ही पता लगता है Storage Area Network. कम्प्यूटर का अपना डाटा कभी भी, किसी भी दूर्भाग्यपूर्ण स्थिति मे गायब हो सकता है जैसे बाढ़, तूफान, भूकंप, आग इत्यादि। SAN मशीन जो सैकडो किलोमीटर दूर या कही से भी इन सब कम्प्यूटरों पर अपना नजर रखती है एवं सारे डाटा को अपने TERA BYTE मैमोरी मे सुरक्षित रखता है, और कभी भी डाटा Lose हो भी जाए तो उसे पुनः Restore कर उसे फिर से सुचारु बना देता है। इस SAN का उपयोग लगभग हर जगह इस्तेमाल हो रहा है इसीलिए वर्तमान एवं आने वाले समय में ऐसे ही इंजीनियरो की जरूरत है एवं इसकी डिमांड जोरों पर है। हाल ही मे ए–सेट मे इस मशीन का शुभारम्भ HP के Country Manager द्वारा किया गया। यही कारण है कि हजारों छात्र रोजाना क्लास कर रहे हैं।

कहाँ पडती है जरूरत?

रेलवे, बैंकिंग, टेलीकम्यूनिकेशन, डिफैंस, छोटी–बड़ी कंपनियों इत्यादि जगहो पर बड़े स्केल पर कम्प्यूटर हार्डवेयर इंजीनियरों की जरूरत पडती है।

मात्र चन्द महीनों की मेहनत, लगन और हमारे मार्गदर्शन से आप बनते है कामयाब, तो फिर देर किस बात की, आज का सही decision कल का बेहतर भविष्य है।

After 10+2, Don't Be Confused!

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FERVOUR 2009 EVENTS

TECHNICAL EVENTS

National Students Symposium

Fervour 2009 presents before you a "One Day Students Symposium", on the theme *Emerging Technologies: Challenge For The Future,* on January 30, 2009. This national symposium provides an opportunity for budding innovators to showcase their talent. It is an ideal platform for the students to present their ideas and work in the areas of technical research.

ROBOEXOTICA

The event is divided into two parts. Based on the performance in 1st round, a fixed no. of teams will be qualified for the final round. The no. of teams short-listed for the final round would be decided depending on the total no of teams. In the first stage, teams are required to complete the given track, which will be full of obstacles. In the second stage, the arena will be open for a head on head fight.

Brainstorming – The Recall Game

Want to know how sharp and reflexive your gray cells are? Then this is the place for you. Brainstorming is a recall game in which participants will be shown visuals on the screen and their memory tested. It consists of 3 rounds – Prelims + 2 finals.

Circuitomania

The event consists of 2 rounds. In the first round, the teams will be asked to make a circuit within 15 minutes. In the second round, the teams will be asked to identify and assemble a given circuit using the given components in the allotted time of half an hour.

Line Follower

The event aims at testing the most tried branch of Robotics by an engineering student. The event consists of two rounds. The participants have to build autonomous robots, and there should be only 12 V DC supply between any two points on the robot.

Hussar Of Exigency – Project Exhibition

The event will be organized to show case the innovative & stupendous ideas of today's engineers who are coming out with varied options on how to make projects within the constraints of space, time and resources. We will take into consideration on how the participants have used least expensive resources in order to be highly productive in terms of project output and efficiency. They will be asked to give small presentation of not more than 10 minutes for making the student crowd and other visiting lecturers aware about the working of projects. Projects and models can be both hardware and software based.

MANAGERIAL EVENTS

Plan De Negocios – The Business Plan Competition

The IEEE Student Branch of BVCOE is aware of the presence of deserving ideas which need to be nurtured into successful ventures. This contest is thus a platform for such ideas and start-up ventures to be heard and felicitated for their efforts. The purpose of this event is to unleash the entrepreneurial spirit of young students.

There are two categories:

1. Under-Graduate
2. Post-Graduate

Case Study

If you have the qualities of a good manager and are aspiring to join the Harvards, I.I.Ms, Stanfords of the globe, then this is the event wherein you can showcase your managerial abilities, problem solving skills and prove yourself to be THE best among the crowd.

"A reasonable man adapts himself to the world. An unreasonable man persists in trying to adapt the world to him. It is the former who is able to taste success?"

Enjoy the thrill of testing your problem-solving abilities by finding solutions to the cases. Gauge your sense of prioritization and judgment while retaining your intellectual curiosity and enthusiasm.

Markkinointi

Markkinointi is a marketing event which tests your creative thinking and your efficacy in selling the product well. It has two rounds:

1. First is the Print-ad competition in which you need to draw an advertisement for the given product. A time limit of 10 minutes would be given to do so. Short-listed teams from the first round will qualify for the second round (which will be disclosed on the spot).

2. All decisions regarding selection will be made by the honorary judges from MBA GURU ROOTS EDUCATION.

Bulls 'n' Bears

Bulls n Bears is a stock market emulation game. Six teams start with a fixed amount of virtual money. The teams are made to put their investment skills at use, and whoever has the best portfolio at the end of the event takes away the crown. The teams will be provided with brief statistical history of the companies they can invest in. The teams will have to carefully analyze the ever-changing market, live news feeds as well as statistical history of various companies to arrive at their investing decisions.

Business of Cricket

Ever wondered what it would feel like to be a part of BCCI? Cricket is a money spinner – We all know that and what better way to gauge your management skills than managing the game. Basically the main aim of the game is to manage your money in a way to get maximum revenue by investing the assigned money in making a team, investing in a stadium which will fetch you money by winning matches and earning revenues when matches are played in your home ground respectively.

Conundrums

A conundrum is a puzzling question or a problem. It is a riddle whose answer is or involves a pun; it may also be a paradox or difficult problem.

LITERARY EVENTS

Connect the Dots - General Quiz, sponsored by IMS

This, ladies and gentleman, is a General Quiz. For those of you who have seen the Slumdog win a Million - we hope you have 'The Answers.' For those of you who have not, you are still invited. General implies - The World Today, Sports, Technology, Politics, Muzic and just about everything you know. Questions - stuff you know, stuff you might need to think about. Enjoy the quiz.

Speak Your Mind – GD and Debate, sponsored by TIME

The prelims will take place in the form of a Group Discussion, which will be held on a given relevant topic. Each group will be given some time to keep their views. They will judged by a panel of judges.

The second and final round will be a Parliamentary Debate.

Spin the Yarn

Our event is a mix of imagination and creativity. Out of the box thinking and whacky ideas are welcomed. It is designed in such a way that participants will be required to display their creativity and imagination and they will be evaluated for the same. The event is divided into two rounds. Round 1 is the preliminary round and Round 2 is the final round.

INTERNATIONAL EDUCATION FAIR

The IEEE Student Branch at BVCOE realizes the importance of Higher Education Abroad. It has, therefore, endeavored to bring to its fellow-mates, one of its kind education fair. The International Education Fair at Fervour 2009 boasts of the participation of USEFI, British Council, N + I France and Kangaroo Studies; and aims at helping the students gain information on higher education abroad.

It is a golden chance for students nourishing the dreams of pursuing a Masters degree abroad, to meet the official representatives and gather as much information as they can.

DELHI SCHOOL SUMMIT

Under the branch activity ROOTS (Reaching Out in Oblation To Schools), the BVCOE students reach out to the high school students and interact with them to help them make informed career choices. The student members from our branch visit various schools and hold hour long sessions; talking to the students about the scope and excitement of the various career options available to them, especially in engineering.

Looking at the overwhelming response garnered for ROOTS over the past two years, and during Fervour 2008, the branch has again extended a warm hand to the activity by inviting the school students to the college campus to participate, learn and have fun by seeing "Engineering In Action" once again.

The students will participate in the following:

1. Quiz – Guess The Song
2. Poster Graffiti
3. Creative Writing

GAMING/SPORTS EVENTS

Futsal

Football is arguably one of the most popular games in the world. Fervour 2009 brings to you a smaller version of the great game; but a version which is packed with a lot more thrills, entertainment and fun. So get those jerseys out,this is a call to all the Kakas, Ronaldos, Drogbas and Messiss. Fervour 2009 gives you a stage for your talent.

Ruination

The LAN Gaming event at FERVOUR, the annual technical festival organized by the IEEE student branch of BVCOE, is a major crowd puller. Gaming enthusiasts from all over the country

engage in cutthroat competition, and when the competition gets as tough as it can get, the winners take home memories that they cherish forever. The environment is such that it makes every gamer feel at home. The event is managed by an efficient team of coordinators, who themselves belong to the gaming fraternity and believe in providing a fair competition and the best possible experience. With games like Counter-Strike, Need For Speed etc. there will be no shortage of excitement!

Knockout Chess Tournament "CHESSMASTER"

Unleash the Viswanathan Anand within you at the Chessmaster, a knockout chess tournament. Despite the absence of the world champions there's still a strong line-up of chess savvy people waiting to capture the board, so sharpen your moves.

EXPLORE- The Treasure Hunt

Think FERVOUR is not fast paced enough for you? Then you are the person we are looking for. What better way could there be to spread things up and get the adrenaline running than joining EXPLORE at FERVOUR’09 ! Come one come all for an experience which is sure to leave you panting at the end. The game is simple, run around, use your mental and physical faculty a bit and hopefully win the proverbial pot of gold at the end.

OTHER EVENTS

Teaser Events

- College Quiz
- Filmy quiz

Online Events

- FREAKOMANIA-The whacky quiz
- SANGAM-The Sloganeering
- Photoshop Morphing
- Overnight C++ Programming
- Quiz On Flicks-A Filmy Quiz
- sCraMblE
- SYNONYMS
- SODUKO
- BLOGGING@Youthpad.com

Technical Events

- C++ Programming
- VHDL ProgrammingAutomation quiz, sponsored by FUTURONIX

Informal Events

- Graffiti
- Collage making
- Matki Phod
- Meet or Delete Only certificates
- PENgeance
- Dumb Charades
- Filmy Chakkar, sponsored by G3S Cinemas
- RJ Crazy - Fever 104

National Students Symposium

Emerging Technologies : Challenge For The Future

A B S T R A C T S

ON THE INFERENCE OF CONTEXT-FREE GRAMMARS BASED ON BOTTOM-UP PARSING AND SEARCH

COLLEGE NAME: IET DAVV, Indore
AUTHORS NAME: Pooja Nema, Aditya Jain and Mayank Khandelwal

In this paper, we have taken the problem of Incremental Learning of Context-free Grammars (CFGs), using Inductive (Cocke-Younger-Kasami) CYK algorithm[2]. The subject of learning context-free grammars from sample strings is fundamental and important. It has been observed that a lot of work has been done on regular grammar and other more restricted grammars as compared to Context-Free Grammar. This is so because there involves a high degree of computational complexity in machine learning of CFGs. We shall implement the model for the problem of Incremental Learning of CFGs proposed by Nakamura, Matsumoto in 2004[1]. We will provide the experimental results in order to understand the model efficiently and for possible enhancements.

RSS as a new international e-marketing opportunity

COLLEGE NAME: Technocrat Instt of Tech, Bhopal and SGSITS, Indore
AUTHORS NAME: Ms. Khushboo Agrawal(TIT) and Ms. Arpita Khanwalkar(SGSITS)

RSS (commonly known as 'Really Simple Syndication') is a web-based method for automatically delivering frequently-updated materials such as news, blog entries and podcasts to users. The users no longer need to go to individual websites to check for recent news, but instead the RSS feeds from many different websites are collected together into an aggregator - creating, in effect, a personal news portal. The user normally does not need to provide any information to the feed provider, which makes it attractive to those users who refuse to provide their email addresses to companies for the more commonly-used email newsletter.

The paper analyses the present use of RSS feeds by presenting a preliminary survey among global firms, and investigates RSS as a potential new e-marketing opportunity for firms. A survey of major corporate websites shows that there is a significant difference between ICT and non-ICT companies in their use of RSS. Where RSS is used it is predominantly for press releases, investor- and technical information. Less than 1% of feeds surveyed are used for direct marketing. We examine the different uses of RSS within different business sectors and propose methods available to businesses for the introduction of RSS as a low-cost advertising medium.

Design Of A Fuzzy Logic Controller For An Aerodynamic System

COLLEGE NAME: VJTI Mumbai
AUTHORS NAME: ch.venkatesh

Because of the complexity of electro hydraulic servo motor analysis and nonlinearities in the system dynamics, design and control of electro-hydraulic servo actuators are still difficult and immature. This electro- hydraulic servomechanism is a non linear system and the aerodynamic load subjected on the system under flying conditions makes it more complicated for control with the PID type controllers. Fuzzy logic controllers (FLC) being widely used for non-linear systems may replace this classical method. The objective of this project is to realize a fuzzy logic controller for an aerodynamic load subjected to on flight whose dynamics are given by an electro hydraulic servomechanism. This FLC may improve the transient performance and robustness of the electro-hydraulic servomechanism in response to the set point changes and disturbances. The effectiveness of this controller is verified by comparison with a proportional integral derivative (PID) through a series of simulation studies.

Determination Of Current Transformer Suitability Using Emtp Models

COLLEGE NAME: University Institute Of Engg. & Technology, Punjab University, Chandigarh
AUTHORS NAME: Avnish Narula and Gaganpreet Singh Parmar

Current transformer (CT) and relay modeling are practical tools to evaluate protection equipment performance. This paper demonstrates the use of a set of software tools – Electromagnetic Transients Program (EMTP)/ ATPDraw, The Output Processor (TOP), and Mathcad® - to model transient events in the power system, as well as relay response to those events. The paper provides step-by- step instructions for using these tools to better understand and protect power systems.

Specifically, in this paper we:

1. Model CTs using EMTP to visualize transient events.

2. Transfer EMTP output into Mathcad to examine CT accuracy, burden effects, saturation, and subsidence.

3. Model digital relays in Mathcad to show the effects of CT saturation on overcurrent, distance, and directional element operation, making relay response to transient events easier to understand.

Digital Meter and Power Line Communication Technique

COLLEGE NAME: Scient institute of technology, Ibrahimpatnam and ACE engineering college, Ghatkesar, Hyderabad
AUTHORS NAME: K.Raju(SIT) And J.Mahesh(ACE)

In this paper, errorless reading of a digital meter and power line communication technique in between energy meter at house and the control room in sub-station is developed. The paper also about micro controller to store the energy signal from energy meter and to add signal cumulatively. After certain time (say a month), the value stored in the register of micro controller drives a LCD display corresponding the consumption of electrical period in that period of time. This is signal is carried over a existing power line. At the receiving end this signal is decoded and proportionately the operator will be able to know the energy consumption.

The future scope of the paper is that if the consumer is not paying the electricity bill in time, some message signal is sent to the micro controller at the house which gives an ALARM indicating that "if electricity bill is not paid then the supply is interrupted".

SCADA in Energy Management: A Case Study

AUTHORS NAME: Jaswanti, And Deepak

SCADA stands for "Supervisory Control and Data Acquisition". It is purely software package that is positioned on top of a hardware to which it is interfaced generally via Programmable Logic Controllers. This system is responsible for gathering, processing and displaying information about the state of a monitored system. It enables operator to control field devices from their consoles. Due to complex nature of bulk power handling and control failure due to small negligence is very costly. In such situation therefore, it is desirable to have quick data acquisition and instant and accurate response to any event. The concept of SCADA is ideally suited for such situations. In a limited sense, the concept implies a remote controlling station, which monitors and controls system situated at some distance, in the field of electrical transmission and distribution networks this would mean multiple substations generating stations being controlled from the control room.

In a multi site system we have two sites : Host site and Remote or foreign site. Host site is the recipient of data transferred from remote sites. Each site communicates to its remote terminal units by way of phone lines, microwave, and power line carrier communication (PLCC) or fiber optics link. At control site SCADA usually run on two computers. One performs real time function i.e. gathering processing and displaying of real time data. This system is called Primary. A computer of very high frequency & equipped with hi-resolution visual display capability is ideally suited for this. Among various formats of this system the most useful format is line

diagram type display, which can summaries the status of whole sub station in one single display. Other graphical formats could be used for detail event list reporting analysis. The other computer acts as a backup and is referred as Secondary. If primary fails it takes over real time operations. A SCADA system widely used in industrial applications have very significant role in electrical energy sector and most of the SEBs (State Electricity Boards) adopted its applications. This paper describes the SCADA system in terms of their architecture, their interface to the communication, which enables to make appropriate load shedding to improve the economy in this sector. In a limited sense the concept implies a remote controlling station which monitors and controls system situated at some distance or may be multisystem/station being controlled from one control from only.

Enchanced External Counter Pulsation (EECP)

COLLEGE NAME: U.V.patel college of engineering, Ganpath university, Kherva, Gujrat.
AUTHORS NAME: Sonam Pawar and Mayank Patel

Everyone has arteries from the backs of their eyes to the feet. Most suffered and diseased area today is our circulatory system , But with age, poor diet or lack of exercise, arteries may become blocked with atheromatous plaque, homocytiene levels, inflammation or trauma. This causes obstruction of blood flow and leads to discomfort and possible heart attack or stroke. If an artery becomes clogged, our body's natural defense is to develop new arteries, called collaterals. EECP helps your body grow collaterals and naturally bypass the blockage. Thus, EECP is the, new generation,non-invasive procedure for cardiac care. EECP stimulates production of a hormone called vascular endothelial growth factor (VEGF). EECP also enhances secretion of a vasodilator called nitrous oxide. Because of the increased levels of VEGF and nitrous oxide, these collaterals become larger and wider. With the increased flow of oxygen-rich blood throughout the body, the heart and all other organs functionally improve. EECP or Enhanced External Counter Pulsation is a modern machine designed in USA and approved by USDFA for treatment of heart disease arteries. It increases blood flow to the diseased arteries by 200% and opens up collaterals. Thus it relieves chest pain and difficulty in breathing. The patient can walk longer, breathe easier and have a much better quality of life. The five year survival rate is the same for surgery, stents and EECP.

Z-Machine

COLLEGE NAME: U. V. Patel College of Engineering, Ganpat Vidyanagar, Kherva, Mehsana, Gujarat.
AUTHORS NAME: Teckani Lucky K and Smart Krunal K

The Z-machine is the largest x-ray generator in the world and is designed to test materials in conditions of extreme temperature and pressure. It has giant capacitor banks & enormous metal cables connected to a vacuum chamber. Electric pulse of 50TW strikes a complex target that has hundreds of tungsten wires. A complex process then produces 290TW power and converts the material into plasma. The plasma formed here is not the fuel but is used as a source for generating high energy x-rays which compresses a tiny cylinder containing deuterium-tritium mix resulting in fusion process. Temperature up to 2 million degree Celsius could be achieved in it Consequently, Z-machine has been used to study properties of materials at high temperature and pressure, to study fusion reactions, nuclear stewardship & various solar phenomenon that require temperatures around 2 million degree Celsius.

Gait Analysis In Biometrics

COLLEGE NAME: U.V. Patel College Of Engineering, Kherva, Mehsana, Gujarat
AUTHORS NAME: Ankit H. Khandelwal and Krunal D. Shah

Biometrics involves recognizing a person based on his physiological or behavioral characteristics using automated systems. Gait analysis parameters if determined accurately prove to be unique for each individual. It requires no contact is not easily concealed and is also useful for identification at a distance. In this paper we put forward an algorithm which would distinguish a person based on his gait and his body weight distribution using force platform. Force platforms are instruments that measure the ground reaction forces generated by a body standing on them. The readings are then digitized to create a map showing the body weight distribution on the sole.

Different techniques (electrogoniometers, etc.) measure the angles between joints as a part of the analysis. Though the system is limited to the sensitivity of the sensors (video camera, light markers, etc), these can be used as future identification systems for forensic sciences, security systems, etc

Automatic Target Positioning System Using Labview (For Guns)

AUTHORS NAME: K.Siddharthan and Nagasudan

Today, the mechanical arm using pneumatic actuator controlled by Programmable Logic Controllers (PLC) is used for automatic position. The pneumatic based mechanical arm provides a relatively low cost means of force, torque and motion. However, the limitation arises when the system requires an accurate position. With an increasing demand for a natural, intuitive man-machine interaction in automation, the graphical operation (COMPUTER VISION TECHNIQUE) is the other important issue that is gaining much attention nowadays. Here we have designed a PC-based virtual instrument (VI) for an automatic positioning system employing

the stepper motor controlled mechanical arm combined with a precise X/Y platform. The proposed scheme can carry out both fast and accurate positioning process using a remote monitoring. The increase in computational power and the proliferation of cheap cameras has led to a rapid growth in the use of computer vision techniques in industrial inspection applications. The proposed design have a camera and a laser pointing device while the system moves around a workplace, the device's CCD camera recognizes certain shape elements such as angles, sides, circles, etc. and transmits the image to the personnel present in the control room. The monitoring person can point the pointer on the image which is sent by the camera according to his requirement, then the PC section calculates the distances between the laser and pointer coordinates according to a pre-installed program. The measurement results are output according to the user's designated format (step angles). The laser pointer mounted on the stepper motor would move to the required place which depends on step angles. The design is not constrained only to laser pointer it allows the user to develop a high number of interconnected applications with a high level of flexibility. Different modules will be used depending on the application.

MRAM

COLLEGE NAME: Jamia Millia Islamia, Delhi
AUTHORS NAME: Ankit Gureja and Sandarbh Jain

The biggest advancement since the 19th century has been in the field of nano-technology. With the development of the Giant magnetic resistance, which further led the interest in the tunneling magneto resistance and hence leading to the development of one of the most exciting discoveries-MRAM (Magenetoresistance Random access memory). MRAMs potential for a dense, fast, and nonvolatile RAM will lead to the first ever UNIVERSAL MEMORY. The paper serves as a picture for MRAM device physics, magnetic tunnel junction materials and device characterization, MRAM processing, and MRAMs design and performance is compared with those of competing technologies. Once fully developed in all aspects, MRAM will surely take the world by storm.

Multiple output Switched Mode Power Supply (SMPS) with fully isolated and regulated outputs with a single DC-DC converter

COLLEGE NAME: National Power Training Institute, Badarpur

AUTHORS NAME: Misha Kumar

Many of the consumer electronic products require a Switched Mode Power Supply (SMPS) with multiple outputs. In a ‘n’ output SMPS, normally ‘n’ dc-dc converters are used for obtaining independent control of individual outputs. This makes the multiple output SMPS very expensive

and unreliable because of the increase in number of hardware components. The present work aims at designing and implementing an improved power quality multiple output SMPS using a single dc-dc converter with completely regulated and isolated outputs. To achieve these goals, two of the popular DC/DC converter topologies, flyback converter topology for single output and Cuk converter topology for multiple outputs have been designed. As Simulink/MATLAB is a versatile tool for simulation of power electronic circuits and systems, this is chosen as the platform for verifying the design of the SMPS by simulating the same in SimPowerSystems toolbox. The voltage regulation is achieved with the help of a voltage control loop with a weighted error approach. Load disturbances have been introduced and the capability for the output to remain regulated is investigated. The regulation obtained for a 50% load variation is found to be well within 5%.

A Biomedical Sensor For The Visually Impaired

COLLEGE NAME: NSIT
AUTHORS NAME: Ankit Mahendru and Ankit Agarwal

In this paper, we describe the current version of the artificial retina prosthesis and cortical implant that is being developed. The paper contains researches on Ophthalmology, Neurosurgery, Computer Networking, VLSI, and Sensors to develop the novel solutions needed to make artificial vision for the visually-impaired a reality. This paper describes the novel approach that is being adopted to provide a complete system for restoring vision to visually-impaired persons – from the signals generated by an external camera to an array of sensors that electrically stimulate the retina via a wireless interface.

INTRODUCTION

In this paper, we describe the current version of the artificial retina prosthesis and cortical implant which is being developed. In the future, artificial retina prostheses may be used to restore visual perception to persons suffering from retinitis pigmentosa, macula degeneration, or other diseases of the retina. In patients with these diseases, most of the rods and cones are destroyed, but the other cells of the retina are largely intact. It is well known that the application of electrical charges to the retina can elicit the perception of spots of light. By coupling novel sensing materials with the recent advances in VLSI technology and wireless communication, it is now feasible to develop biomedical smart sensors that can support chronic implantation of a significant number of stimulation points. Although the development and use of artificial retina prostheses is still in the early stages, the potential benefits of such technology are immense. Unlike the retina prosthesis, a cortical implant bypasses most of the visual system, including the eye and the optic nerve, and directly stimulates the visual cortex, where information from the eyes is processed. Therefore, in addition to overcoming the effects of diseased or damaged retina tissue, a cortical implant could circumvent many other problems in the visual system, including

the loss of an eye. The smart sensor package is created through the backside bonding of an array of sensing elements, each of which is a set of microbumps that operate at an extremely low voltage, to an integrated circuit for a corresponding multiplexed grid of transistors that allows individual voltage control of each microbump sensor. The next generation design supports a 16 × 16 array of sensors and is being fabricated by MOSIS* based on the circuit design created in the Smart Sensors and Integrated Devices (SSID) research. The earlier circuit design, which has been fabricated and tested, supports a 10 × 10 array of sensors. The package is encapsulated in an inert material except for the microbumps, which must be in contact with the retina.

The long-term operation of the device, as well as the difficulty of physically accessing a biomedical device implanted in the eye, prevents the use of a battery-powered smart sensor. Because of the high volume of data that must be transmitted, the power consumption of an implanted retinal chip is much greater than, for example, a pacemaker. Instead, the plan is to power the device using RF inductance. Because of the difficulties of aligning the two coils – one being within the body and the other one outside the body – for RF power transmission, a low frequency is required to tolerate misalignment of the coils. On the other hand, a relatively high frequency is required to operate in the unlicensed ISM band. For this reason, a novel approach of using two frequencies has been adopted: RF inductance using a frequency of 5 MHz and RF data transmission using a frequency in the range of either 900 MHz or 2.4 GHz.

Additional realizations of single-element-controlled oscillators using single ICCII-

COLLEGE NAME: Netaji Subhas Institute of Technology (NSIT)
AUTHORS NAME: Abhirup Lahiri and Ankush Chowdhury

This brief presents additional realizations of single-element-controlled oscillators (SECOs) using a single negative-type inverting second-generation current conveyor (ICCII-). The circuits have been derived from a single ICCII- based topology previously proposed by Toker et al. Both single-resistance-controlled oscillators (SRCOs) and SECOs have been obtained. SECOs provide the control of oscillation frequency by a single element either by a resistor or a capacitor and various oscillator circuits suitable to be used as variable frequency oscillators (VFOs) and/or very-low frequency oscillators (VLFOs) and/or voltage-controlled oscillators (VCOs) have also been created. The circuits use one ICCII- and five/six external passive components, hence reduced number of components are employed. All the oscillator circuits are capable of providing explicit-current-output (ECO) which could be used as an input/test sinusoidal signal in many current-mode circuits, particularly in current-mode filters. The non-ideal analysis of the circuit and sensitivity study has been carried out and it has been found that the circuits enjoy low active and passive sensitivities. PSPICE experimental results have been included to verify the theoretical results.

Intelligent Traffic Control System-Density Based Simulated On M X N Grid

COLLEGE NAME: NSIT
AUTHORS NAME: Brajesh Upadhyay and Anshika

Describes the design and implementation of an intelligent traffic control system which is based on density of cars .It looks for the greatest number of vehicles using image processing and frees the road which has the greatest number of vehicles. A program has been developed using a java based software (net logo) to simulate the situation of n*m grid based on this technology and on conventional fixed time controller. A comparison has been made between the density based traffic controller and the present traffic controller on a grid using this simulation and the results show that the density based traffic controller has anytime better performance in maintaining the flow of traffic and is also cost effective.

Implementing an web Server on a AVR based Microcontroller and thereby Realizing Real Time Applications

COLLEGE NAME: BVCOE, NSIT
AUTHORS NAME: Rohit Gupta(BVCOE), Nikhil Gupta(NSIT) and Varun Singh(BVCOE)

Web server operates by accepting HTTP requests from the client, and providing an HTTP response to the client which usually consists of an HTML document, but can also be a raw file, an image, or some other type of document. A subsequently improvised version of the server duly implemented on an AVR microcontroller can effectively switch on/off any real time applications such as office equipments like printer, coffee machines etc directly from a single command furnished through the mobile phone of the user over the internet. Data/ information can be obtained from a source such as sensors and displayed over a webpage which can be regularly updated. Furthermore, it can be used as to interface machines as well extending its applicability much beyond providing web pages and making its applications almost endless. Perspectives of recent interesting developments and future research directions in this regard have also been indicated.

Structural Realisation Of Plain Adder Using Quantum Computation

COLLEGE NAME:BVCOE
AUTHORS NAME: Dharashree Panda

The breakdown of classical physics was characterized by the acceptance of wave particle duality and the anomalous stability of atoms and molecules. Double slit experiment and the single particle quantum interference experiment is shown to explain the behavior of particles such as

photons and their interference spectra. The VLSI platform can integrate information until micro-level but for further miniaturization, Hiesenberg's uncertainty principle becomes more relevant. Lemmas of Hilbert space and bra-ket notation and Quantum entanglement are used to explain Dirac's razor and principles of indeterminacy and superposition of states. Single-electron tunnelling used in integrating nanometer-sized digital circuits is reviewed. Benioff's explanation for higher computational efficiency of a QTM is provided to support use of QTM for construction of gates. The importance of the 'qubit' is discussed including the construction of basic quantum gates culminating in designing a plain adder. The problems with quantum computing and latest developments are then discussed.

Extracting and cascading useful heat in steel alloy plant for energy conservation

COLLEGE NAME: BVCOE, DCE
AUTHORS NAME: Saurabh H Mehta(BVCOE), Kshitij Agarwal(DCE), Pinkesh Kumar(BVCOE)

Useful heat is recovered from electric arc furnace and also from its waste gases by installing a heat recovery system using water as the cooling liquid. The heat recovery system takes place in two stages , in the first stage heat is extracted from the electric arc furnace itself and is performed in such a way that the temperature of water does not rise above boiling temperature at atmospheric pressure. Whereas in second stage useful heat is extracted from waste fume emissions of electric arc furnace and here the pressure is kept above atmospheric pressure to extract most heat. This heated water is then fed to boiler (installed for producing vacuum for vacuum degassing process). This heat cascading reduces energy requirement for converting water to steam in the boiler, thus leading to energy conservation and also helps reducing exhaust emissions.

Microstrip Sierpinski Carpet Antenna

COLLEGE NAME: BVCOE
AUTHORS NAME: Hemant Panday, Prabhakar Rana

This paper describes the design of the fractal Sierpinski Carpet monopole antenna. The properties of antennas such as bandwidth and radiation pattern have been investigated using simulation results. Wide bandwidth with input return loss of -10 dB has been achieved from 1 GHz to 10 GHz using this fractal antenna. The radiation patterns have been investigated at 4.63 GHz, 6.61 GHz, 7.85 GHz, and 9.18 GHz. The radiation pattern is in the direction of the main lobe

Distributed Denial Of Service Attacks

COLLEGE NAME: BVCOE
AUTHORS NAME: Nitisha Jain, Ratnakar Madan, Prem Singh

Distributed Denial of Service (DDoS) Attacks have emerged as one of the most newsworthy, if not the greatest, weaknesses of the Internet. These attacks are a relatively new development and many prominent web sites have faced such attacks in the recent past. They aim to intentionally compromise the availability of a computer or network resource to its intended users. The seriousness of the DDoS problem and the increased frequency of these attacks have led to the advent of numerous DDoS defense mechanisms. While former security threats could be faced by a tight security policy and active measures like using firewalls, vendor patches etc. these DDoS attacks are new in such way that there is no completely satisfying protection yet .

This paper attempts to explain how such atttacks work, why they are hard to combat today, and what will need to happen if they are to be brought under control. It describes the immediate and long term prospects, focusing on the some of the mechanisms that have been proposed to combat DDos attacks.

Scope of Quantitative Approaches in Object Oriented Software Engineering

COLLEGE NAME: USIT
AUTHORS NAME: Vishal Aggarwal , Varun Garg.

“The Inevitable Pain of software Development has been that Why There Is No Silver Bullet “

Quantitative approaches in the realm of the object-oriented paradigm is a broad and active area that aims at the development and evaluation of numerical methods, techniques and tools to assess, forecast and improve the quality of software products and the efficiency and effectiveness of software processes.

Our paper aims at investigating analytically and empirically the relationships between OO design aspects, and the software quality characteristics of the resulting deliverables. Several methods and techniques such as UML, application frameworks, analysis/design patterns, aspect-orientation, component-based development and others that rely upon the OO paradigm, have been described in order to improve software engineering productivity and software quality. To improve our understanding of their impact on them, we would be assessing the quality of such products via adequate software product and process measures. Focus has been given on describing various Estimation models that are based on software measures, to perform risk analysis, cost and size estimation and to assess software maintainability, reusability or reliability.

Iris Recognition System – A Unique Approach

COLLEGE NAME: IGIT
AUTHORS NAME: Monisha Saggi, Anwesha Bhattacharjee, Ramya Balasubramaniam

This paper proposes a uni-modal biometric system that heuristically exploits the inimitability of the pattern found on the iris. Through the implementation of Daubechies wavelets in the analysis of the iris pattern we endeavor to develop a fault proof iris recognition system that would supersede the existing systems. The Daubechies wavelet

transforms (Db3 and Db4) have been compared in the paper at level 4 decomposition using MATLAB 7.0.1 © simulation. We compare the two transforms using the CASIA V3 Iris databases as test samples on the basis of time complexity of processing, success rate and PSNR ratio. The analysis shows that the Db4 level 4 wavelet decomposition has a better PSNR ratio, a marked difference in time for processing as compared to Db3 level 4 wavelet decomposition. The success rate is 100% for the Interval Database. The findings are listed in the paper.

Grid Computing

COLLEGE NAME: IGIT
AUTHORS NAME: Sangya, Aditi Chawla

We have provided in the article a concise statement of the “Grid problem” which we define as controlled and coordinated resource sharing and use in dynamic, scalable virtual organizations. We have also presented both requirements and framework for Grid architecture identifying the principal functions required to enable sharing within virtual organizations and defining key relationships among these functions. Finally, we have discussed how Grid technologies relate to other important technologies. Grid concept is motivated by a real and specific problem and that there is an emerging, well-defined Grid technology base that addresses significant aspects of this problem. Here we have developed a detailed architecture and roadmap for current and future Grid technologies. Furthermore, we have asserted that while Grid technologies are currently distinct from other major technology trends, such as Internet, enterprise, and peer-to-peer computing, these trends can benefit significantly from growing into the problem space addressed by Grid technologies.

E-governance in India: A strategic framework

COLLEGE NAME: Jaypee University Of Information Technology
AUTHORS NAME: Harinder Bhasin, Apurv Garg

Objective of this paper is to provide a strategic framework for implementation of E-governance projects in Indian context, to achieve result centric implementation .This paper specifically addresses those E-governance initiatives that have a direct impact on the citizens and in which the citizens derive direct benefits through direct transactions with governmental services. It discusses the components of good E-governance like stakeholder analysis, organisational structure etc. The paper proposes framework for development of e-governance projects as well as e-governance strategy. It also analysis the initiatives taken by Indian government such as SETU, GYANDOOT etc. The framework looks at stakeholders, environment, technology enablers, internal processes and delivery mechanisms along with the factors that should be taken care of for progressive scaling up of the projects and making it self-sustainable.

Biomechanical Energy Harvesting

COLLEGE NAME: Galgotias college, Greater Noida
AUTHORS NAME: Aayushi Agarwal & Mudita Khare

With the increase in demand for power resources and declining non-renewable energy resources, a need to harness untapped energy resource has arose which includes biomechanical energy. In this paper a method to harness biomechanical energy has been proposed. A knee brace is such a biomechanical energy harvester that generates electricity during human walking. The basic theory used is that when we walk, one set of muscles drives our legs forward, while another does “negative work” by pulling in the opposite direction to control the stride. The device converts this negative work into electricity. The electricity generated can be used to operate a GPS locater, a cell phone and even a prosthetic joint for amputated limbs. Future aspects include using this energy to develop self sufficient devices, to harvest energy from livestock. Test results demonstrate that such a device can generate 5W of electricity in a single stride of motion.

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