VIGNANA BHARATHI Institute of Technology

◆IEEE

Stutalk

VOICE OF VBITIANS...

VIBHA SPECIAL

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Stutalk wishes a big hello to all the guys and girls of VBIT,

There is a lot of hustle bustle going on in the campus as it is the end of yet another semester. In order to evaporate all our stress and tensions in mid air, here comes VIBHA 2k11, the college annual day.

"All work and no play makes Jack a dull boy!" How true! VIBHA is an effort to prevent all the Jacks and Jills of VBIT from turning dull.

All the students seem pretty much excited and geared up for this day. What is it that is drawing everybody's attention towards this particular day?

Vibha is a cultural fest organized by the students of VBIT , in order to put out their potential talents apart from academics . It mainly consists of all the events that are generally a part of every individual's life, like singing, dancing, dramatics and short films. The freshers take part in the ramp walk in which the young pretty girls and handsome guys put out their

style tint and rock the ramp with their off stills and the best of the best are coroneted as Mr. & Miss VBIT of the year. Every year this event is kick started with a welcome note to the first years of this college. Later, various performances are given by all the pupils, which are received by the jury by displaying great amount of encouragement and support. As a token of appreciation, the participants are showered with surprising gifts. This day is well planned by the student organizers who put in their time and effort in making this day memorable to us. Now, we hope you got the answer to our question posed above!

There is lot of gossip regarding this year's annual day turning out to be much more exciting and fun filled. This time it is going to be a two day inter college event which is something different from the previous years.

So dear Vbitians, get all set for the day which is all yours by making your presence felt and have fun to the core by leaving wonderful memories behind.
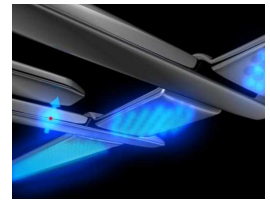
IN This Issue:

"Who never climbs never falls. Climb not too high lest the fall be the greater."

Techtalk

Single Electron Reader Opens Path for Quantum

A team led by engineers and physicists at the University of New South Wales (UNSW) in Sydney, Australia, have developed one of the key building blocks needed to make a quantum computer using silicon: a "single electron reader."

Quantum computers promise exponential increases in processing speed over today's computers through their use of the "spin," or magnetic orientation, of individual electrons to represent data in their calculations.

In order to employ electron spin, the quantum computer needs both a way of changing the spin state (write) and of measuring that change (read) to form a qubit --

the equivalent of the bits in a conventional computer.

The device detects the spin state of a single electron in a single phosphorus atom implanted in a block of silicon. The spin state of the electron controls the flow of electrons in a nearby circuit said Dr Morello, the lead author of the paper, Single-shot readout of an electron spin in silicon.

Until this experiment, no-one had actually measured the spin of a single electron in silicon in a single-shot experiment.

By using silicon -- the foundation material of conventional computers -- rather than light or the esoteric materials and approaches are being pursued by other researchers, the device opens the way to constructing a simpler quantum

computer, scalable and amenable to mass-production.

The team has built on a body of research that has put Australia at forefront of the race to construct a working quantum computer. In 1998 Bruce Kane, outlined in Nature the concept for a silicon-based quantum computer, in which the qubits are defined by single phosphorus atoms in an otherwise ultra-pure silicon chip. The new device brings his vision closer.

We can expect quantum computers will be able to perform certain tasks much faster than normal computers, such as searching databases, modelling complex molecules or developing new drugs. They could also crack most modern forms of encryption.

New Software Design Technique Allows Programs to Run Faster

Researchers have developed a new approach to software development that will allow common computer programs to run up to 20 percent faster and possibly incorporate new security measures.

The researchers have found a way to run different parts of some programs -- including, for the first time, such widely used programs as word processors and Web browsers -- at the same time, which makes the programs operate more efficiently.

But for a program to utilize the cores, it has to be broken down into separate "threads" -- so that each core can execute a different part of the program simultaneously. The process of breaking down a program into threads is called parallelization, and allows computers to run programs very quickly.

However, some programs are difficult to parallelize, including word processors and Web browsers.

These programs operate much like a flow chart -- with certain program elements dependent on the outcome of others. These programs can only utilize one core at a time, minimizing the benefit of multi-core chips.

But researchers have developed a technique that allows hard-to-parallelize applications to run in parallel, by using nontraditional approaches to break programs into threads.

The program will perform a computation, then perform a memory-management function It repeats these steps over and over again, in a cycle. And, for difficult-to-parallelize programs, both of these steps have traditionally been performed in a single core.

Under this approach, the computation thread and memory-management thread are executing simultaneously, allowing the computer program to operate more

efficiently.

By running the memory-management functions on a separate thread, these hard-to-parallelize programs can operate approximately 20 percent faster. This also opens the door to development of new memory-management functions that could identify anomalies in program behavior, or perform additional security checks. Previously, these functions would have been unduly time-consuming, slowing down the speed of the overall program.

Using the new technique, when a memory-management function needs to be performed, the computational thread notifies the memory-management thread -- effectively telling it to allocate data storage and to notify the computational thread of where the storage space is located. By the same token, when the computational thread no longer needs certain data, it informs the memory-management thread that the relevant storage space can be freed.

Sniffing out Terrorists—HAMLeT

A new intelligent system has been developed to help identify terrorists carrying explosives. Sensitive electronic noses capture the smell of the explosives; the system processes the acquired data, correlates it with individuals' movements … and ultimately tracks down the suspects.

As well as being observed by security cameras, they're also being "sniffed out" by chemical noses hidden in the corridor wall. The smell sensors sound the alarm when the terrorists walk past, alerting an airport security guard who notes the problem on his monitoring equipment. At this point in time, he can't tell precisely who is carrying hazardous chemicals -- but he knows the sensor network will continue to "sniff out" and track down the suspects.

The researchers have named it HAMLeT, which stands for Hazardous Material Localization and Person Tracking.

HAMLeT will alert security personnel to suspicious individuals. The system involves a network of highly-sensitive smell sensors which follow an explosive's trail. There are oscillating crystals on the sensor chips, and whenever the electronic noses capture chemical molecules, their oscillation frequency changes. The precise nature of the change is different for different substances. A further compo-

nent in the system -- the sensor's data fusion function -- traces the explosive's path and ferrets out the carrier. A second sensor network is needed to track the route the individual takes; for this, the researchers have used laser scanners.

HAMLeT's real achievement is its ability to collate all the data and convert it into a clear and accurate overall picture. The sensor data fusion process employs complex algorithms which allow HAMLeT to build up a precise image of pedestrian flows and connect a particular smell with a specific individual.

In a trial involving the German Armed Forces, researchers at the FKIE

Better Than the Human Eye: Helping Endoscopic imaging and robotics

A tiny camera with adjustable zoom could aid endoscopic imaging, robotics, night vision

The "eyeball camera" has a 3.5x optical zoom, takes sharp images, is inexpensive to make and is only the size of a nickel. This type of a should be useful in many applications, including night-vision surveillance, robotic vision, endoscopic imaging and consumer electronics.

The inspiration was by the human eye, but the researchers wanted to go beyond the human eye. Their goal was to develop something simple that can zoom and capture good images, and we've achieved that.

The tiny camera combines the best of both the human eye and an expensive single-lens reflex (SLR) camera with a zoom lens. It has the simple lens of the human eye, allowing the device to be small, and the zoom capability of the SLR camera without the bulk and weight of a complex lens. The key is that both the simple lens and

photodetectors are on flexible substrates, and a hydraulic system can change the shape of the substrates appropriately, enabling a variable zoom.

Earlier eyeball camera designs are incompatible with variable zoom because these cameras have rigid detectors. The detector must change shape as the in-focus image changes shape with magnification. Huang and Rogers and their team use an array of interconnected and flexible silicon photo detectors on a thin, elastic membrane, which can easily change shape. This flexibility opens up the field of possible uses for such a system. The array builds on their work in stretchable electronics.

The camera system also has an integrated lens constructed by putting a thin, elastic membrane on a water

chamber, with a clear glass window underneath.

Initially both detector and lens are flat. Beneath both the membranes of the detector and the simple lens are chambers filled with water. By extracting water from the detector's chamber, the detector surface becomes a concave hemisphere. Injecting water back returns the detector to a flat surface. Injecting water into the chamber of the lens makes the thin membrane become a convex hemisphere.

To achieve an in-focus and magnified image, the researchers actuate the hydraulics to change the curvatures of the lens and detector in a coordinated manner. The shape of the detector must match the varying curvature of the image surface to accommodate continuously adjustable zoom, and this is easily done with this new hemispherical eye camera.

*C*ongratulations

EXECUTIVE MEMBER COMMITTEE OF IEEE VBIT-SB FOR YEAR 2011-12

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Vignana Bharathi Institute of Technology along with imparting value based technical education has carved a niche in the IEEE chapter by winning the "Outstanding Student Branch Award" among all the other student branches who were nominated in 2010.

"Rome was not built in a day"

To taste this achievement, our students had put in hours of effort and hardwork. To prove that our success wasn't a mere piece of luck, VBIT has its activity going the whole year round. With its lofty motive of kindling the scientific temper among the students, VBIT launches a series of tech - fests sometimes exclusively for the first year engineering students to tap their potential. The college has a unique distinction of conducting such events under the IEEE banner.

'AVISHKAR' is one such event hosted for students which showcases their interests in a series of technical topics. The name 'AVISHKAR', declares its meaning loud and clear as inventions and its tag line being "Engineering Inventions" focuses on students with the engineering background. VBIT is the only college in the Asia – Pacific region under IEEE to host this one of a kind event exclusively for the first year students. This tech – fest gives way to interesting and innovating ideas that are budding in future techie.

The goal is to provide a platform to exhibit paper presentation which showcases their awareness among various emerging and advancements in technologies along with presentation and communication skills. 'Avishkar' is conducted in two phases, 1st phase being the Intra college event, where the participants from VBIT. This year 2010, the intra event was conducted over a period of two days, i.e. January 25th and 26th which received an overwhelming and enthusiastic response from the students. Of the 120 entries received, 55 presentations were shortlisted. The papers presented by the participants were scrutinized under a highly experienced panel of judges and the top five made it to the inter college level, i.e. the 2nd phase.

The inter college event took place on 20th March 2010. We received entries from various engineering colleges across the state. We were honored to have Mr. M. G. P. L. Narayana, the Chairman IEEE Hyderabad section and Mr. Ravikanth Reddy, the special correspondent of The Hindu as our chief guest and guests of honor respectively.

The top four positions was bagged by

1. Prashant and Ravikiran, "Touch Screen Technology " – VBIT
2. Md. Taj and Mekey Salaria, "Key Loggers" – St. Mary and ATRI
3. Prateek Abhyankar, "Electrostatic Discharge" – VBIT
4. D. Shravani, "Nano Technology" – CMR
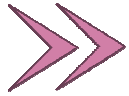
THINGS EVERYONE SHOULD KNOW

FACT

The word "queue" is the only word in the English language that is still pronounced the same way when the last four letters are removed.

"Almost" is the longest word in the English language with all the letters in alphabetical order.

"Rhythm" is the longest English word without a vowel.

In 1386, a pig in France was executed by public hanging for the murder of a child

A cockroach can live several weeks with its head cut off!

Human thigh bones are stronger than concrete.

You can't kill yourself by holding your breath

It's against the law to have a pet dog in Iceland!

Right handed people live, on average, nine years longer than left-handed people

Your ribs move about 5 million times a year, everytime you breathe!

The elephant is the only mammal that can't jump!

One quarter of the bones in your body, are in your feet!

Like fingerprints, everyone's tongue print is different!

The first known transfusion of blood was performed as early as 1667, when Jean-Baptiste, transfused two pints of blood from a sheep to a young man

Fingernails grow nearly 4 times faster than toenails!

Most dust particles in your house are made from dead skin!

The present population of 5 billion plus people of the world is predicted to become 15 billion by 2080.

Women blink nearly twice as much as men.
Adolf Hitler was a vegetarian, and had only ONE testicle.

BY

K.SHIVA RAM REDDY

IInd CSE

KNOWLEDGE OF IGNORANCE WITHIN IS THE GREATEST FORM OF WISDOM

"As for me, all I know is that I know nothing!"

One of the famous stories about the philosopher Socrates is when one of his close friends traveled to the Oracle at Delphi and inquired whom was the wisest person in Athens. The Oracle replied that Socrates was the wisest person in Athens. Socrates refused to believe this, because the result of all his philosophical inquiry had pointed out his own ignorance. Socrates proceeded to speak with the best & brightest people in Athens to prove his ignorance, but made a startling discovery on accident. Although the people he met with were all very intelligent, none of them were fully aware of that which they did not yet know as demonstrated by a willingness to speak decisively about topics which they possessed no real knowledge of. Thus, Socrates was in fact the

wisest person in Athens... not because of his great intelligence, but because he was actually aware of his ignorance.

In a similar fashion, there are many intelligent people who go through life in total ignorance of that which they do not know. This tends to create an artificial sense of confidence from the feeling of "knowing everything." (Typically, teen aged individuals suffer from this malady with the greatest frequency) The unfortunate irony of this situation is that it closes people off to the vast sea of knowledge that is available.

The twist of irony comes when a person who had previously been vastly confident in their knowledge "gets it" and becomes aware of how small their knowledge and wisdom really are in relation to everything else that is out there. Thus, it is very true that many of the wisest people are not necessarily the ones that proclaim their wisdom the most loudly. The wisest among us are often those that are actually aware

of their relative ignorance and are constantly seeking to learn everything they can from every situation in life. The critical question for each of us to ask ourselves is whether we are actively seeking to learn from everybody or whether we stand confidently closed to anything that stands contrary to what we "know?"

In the end, each person is responsible for building their own library of knowledge and insights. It is critically important to ensure that our library does not become closed to new knowledge by our own arrogance.

My personal opinion is all of us are in one way or the other closed up to the vast sea of knowledge. I hope that at least after reading the above article you accept the fact to yourself though you may deny it outwardly. Self acceptance is the best form of acceptance.

By

D.Sharada

III rd IT

Tougher than the Toughest!

TOUGHEST GRE WORDS-

1.Roseate

2.Saturnine

3.Tessellated

4.Uncouth

5.Gingerly

TsEhGUOt. This is the world's toughest Password ever created. By Mr. Vivek Joshi Indore (M.P.)INDIA

Top List of the hardest languages to learn:

1.Basque

2.Hungarian

3.Chinese

4.Polish

5.Japanese

6.Russian

7.German

8.Korean

9.English

10.Swahil

When asked this riddle, 80% of kindergarten kids got the answer, compared to 17% of Stanford University seniors...

The riddle:

What is greater than God,

More evil than the devil,

The poor have it,

The rich need it,

And if you eat it, you'll die?

Think on this.

TOUGHEST puzzle-

IT'S A 7 LETTER WORD.

IF WE REMOVE 1 LETTER FROM IT, IT REMAINS SAME.

IF WE REMOVE 2 LETTERS FROM IT, IT REMAINS SAME.

IF WE REMOVE 3 LETTERS FROM IT, IT REMAINS SAME.

IF WE REMOVE ALL THE LETTERS FROM IT, STILL IT REMAINS SAME.

WHATZ IT ?

World's toughest puzzle: The Petaminx, tougher than Rubik's Cube!

TOP TEN TOUGHEST WORDS THAT LEAVE TRANSLATORS TONGUE-TIED

1.ILUNGA

2.SHLIMAZL

3.RADIOUKACZ

4.NAA

5.ALTAHMAM

6.GEZELLIG

7.SAUDADE

8.SELATHIRUPAVAR

9.POCHEMUCHKA

10.KLLOSHAR

By

Y.S.L.Tejwanth

IIIrd CSE

Puzzle$

1. Consider a number 235, where last digit is the sum of first two digits i.e. 2 + 3 = 5. How many such 3-digit numbers are there?

2. If you take a marker & start from a corner on a cube, what is the maximum number of edges you can trace across if you never trace across the same edgetwice, never remove the marker from the cube, & never trace anywhere on the cube, except for the corners & edges?

3. Three friends divided some bullets equally. After all of them shot 4 bullets the total number of bullets remaining is equal to the bullets each had after division.Find the original number divided

4. Find sum of digits of D. Let A= 19991999 B = sum of digits of A C = sum of digits

SudokU

"Some people might make three or four lucky guesses and so be able to solve it in 15 minutes or half an hour and will wonder why it is said to be so difficult," he said. "But it will normally take days to solve by logic."
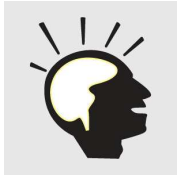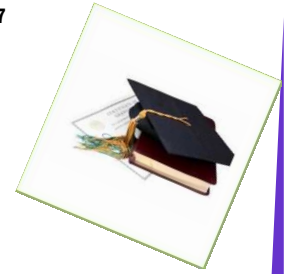
			5	3				
8							2	
	7			1		5		
4					5	3		
	1			7				6
		3	2				8	
	6		5					9
		4					3	
					9	7		

Campus Updates..

- On 11th February 2011, VBIT's elite dance group won the second prize at BITS National Cultural Fest at Hyderabad. Cheers to them J
- On 18th February an informative workshop on the benefits and usage of Adobe Flex, was conducted at VBIT campus that raised a huge response
- On account of C.V.Raman's anniversary, all the first year students of BTech gave presentations and seminars on scientific information
- On account of women's day, celebrations were held on 8th March, wherein various women speakers and eminent personalities were invited and seminars were held.
- On 14th March, 2011 a guest lecture on Informatics software was conducted for the M.C.A students by Mr. M.Venkatesam.
- On 17th march, a guest lecture by Prof R.Govinda Rajulu of IIIT Hyderabad was conducted by the ISKRA team of VBIT on the topic ESCA-Scale Computing
- On 18th march, a one-day workshop on Computer Networks was conducted by Prof. RadhaKrishnan of N.G.R.I.
- On 20th march, the inter-college event of Avishkar-2011 was conducted wherein esteemed guests like Dr.M.G.P.L.Narayana, the chairman of IEEE Hyderabad section and the Vice President of TCS at Hyderabad and also Ravikanth Reddy, a special correspondent of The Hindu newspaper were invited.
- On 21st march, a workshop regarding Entrepreneurship development programme for M.B.A and M.C.A students was conducted by NSIC and KPO team.
- Also a guest lecture on Communication skills by Dr.Poonam, professor at A.T.R.I was conducted for the VBIT students.
- An industrial tour for the IInd BTech students of Mechanical was conducted wherein they visited the ITC at Bhadrachalam.

ISRO at VBIT

It is indeed a pride for us to say that VBIT has been selected as one among the 28 centers of ISRO in India.

With regard to the vast infrastructural facilities , ISO has decided to launch few research projects as VBIT by making it as their centre.

The project includes a campaign to investigate atmospheric structure and dynamics including exchange processes over Indian tropical region, using high altitude balloon data and radar and lidar observations.

The other project includes a study of the long term trends of atmospheric oscillations and their relationships with solar variability.

Placements at campus

During the month of February, few huge placement drives were conducted wherein,

- 18 students of VBIT were selected for HCL technologies at Chennai.

- Around 32 students were placed in the company CSS corp from VBIT.

Sports Updates

Congratulaotions!

- On 5th march, the VBIT cricket team won the championship under D-Zone level, making a hatrick with this victory, at Nalla Malla Reddy Engineering College

CRICKET TEAM:

1. N.GOUTHAM RAJKUMAR REDDY   (IV CSE)
2. MOHAN KRISHNA   (IV IT   )
3. KARTHIK SIDDAVARAM   (IV CSE)
4. G. NAVYA TEJA   (IV ECE)
5. E. VINAY KUMAR   (IV IT)
6. SANDEEP JAWAHAR   (IV IT)
7. M. AVINASH   (III ECE)
8. JAIRAM   (III IT)
9. L. TIRUPATHI   (III EEE)
10. C.SURESH   (III EEE)
11. G.PRAVEEN   (III EEE)
12. CHETAN   (II CSE)
13. ARSHAD AAYUB   (II EEE)
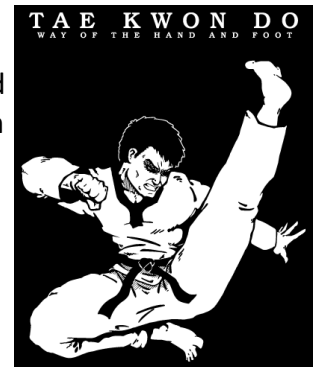14. A. SAI CHARAN   (I IT)
15. SRAVAN NAIDU   (I CSE)

- Under the JNTU level, the VBIT kabaddi team stood as the runners up at the recent tournament conducted at JBIET. The best player of this game was selected as T.VIjay, IInd M.B.A of team VBIT.
- Its indeed a pride that our beloved Physical Director sir has visited Delhi as part of being a coach and manager of the JNTU rugby team!

Inter University

TAEKWONDO Conducted from 16th Jan to 24th Jan 2011 in Panjabi University. Won Second runner up prize K.Madhu(**VBIT**) and JNTU Team.

Student Co-ordinators:

K. Shesha Sai kumar (III IT)	P. Suresh	(III IT)	
D.Sharada	(III IT)	Shruthi Baid	(III IT)
TLNS Sravanthi	(III CSE)	Ramakrishna	

All the very best for your exams!