K.S.R.College of Arts & Science

(Autonomous)
K.S.R.Kalvi Nagar,Tiruchuengode-637215,

Ishare

Monthly Magazine

Department Of Computer Science (UG)

Ishare

PATRON:

Lion.Dr.K.S.Rangasamy, MJF

Founder & President

ADVISORS:

Ms. Kavithaa Srinivashaan, M.A.,M.B.A.,

Executive Director

Dr. N. Kannan, Ph.D.

Principal

Dr. R. Pugazendi, Ph.D.

HOD, Department of Computer Science

EDITORS:

Ms.S.Prema.,M.C.A., M.Phil.,

Ms.R.Nirmala M.Sc.,M.Phil.,M.C.A.,

Mr.S.V.Vetrivel, III B.Sc.CS,'C',

Mr.D.Kavinkumar, III B.Sc.CS,'C',

Mr.Gnanasekeran.C, II-B.Sc.CS,'A',

Mr.A.Gokulraj II-B.C.A-'A'

Editorial

We would like to wholeheartedly thank our honorable Chairman, Secretary, Executive Director and Principal for their continuous encouragement and constant support for bringing out the magazine. We profoundly thank our Head of Department for encouraging and motivating us to lead the magazine a successful one right from the beginning. Ishare serves as a platform for updating and enhancing upcoming technologies in Information and Communication. We are grateful to all the contributors to this magazine so far. The magazine has been sent to almost 60 institutions in and around Tamilnadu. So far we have received feedbacks and appreciations from various institutions.

We would be very pleased to receive your feedbacks. Please send your feed backs to ksrcas.ishare@gmail.com

By,

Editorial Board

Contents

Five Methods to Hack O.M.R Sheet

A.GOKULRAJ
II-B.C.A-A

scan the above QR code to view my profile

1. Marking the black lines (Black on Black method)

On the left side of most scanners that, there are black lines next to question numbers. My hypothesis is that these black lines tell the machine where to scan. It works about 25%-30% of the time. Suppose coupled with actual guessing, this does add to the probability of getting a correct answer .This is the hack that will work more often than any other. Do it only on the ones you can't answer.

2. Erasing the same black lines (Erasure method)-

Now this hack is pretty self-explanatory. You erase those same black lines, only on the ones you can't answer though. Sometimes the machine skips the question and doesn't mark it at all. This leaves you with a correct answer.

-OR-

The machine will record an error and not mark the paper at all, including the score. This will then allow the teacher to grade it by hand, where he or she may notice the tampering.

3. Erasing the big black block (Big block eradication method)-

Along the left side is a big black block. It is on the upper part of the column before the question lines. Occasionally, the machine will just skip over the whole damn thing but leave you with a 100%. This is practically impossible to get to work. Reasoning for this is because there is another similar block at the bottom of the column. That variation in the printing of scanners probably produces a block on the bottom similar enough to the erased block. Thus, the machine sees the block begins scanning, sees nothing to correct and gives you a 100%. This is probably less than 1% success, but it can work.

4. Cross-hatching fill-ins (Cross method)-

This method works about 20%-25% of the time. It is pretty self-explanatory. This is the best patterns are diagonal cross-hatches, or horizontal lines. It simply confusing the machine.

5. In-between shading (Grey areas method)-

By in-between shading, I mean finding a level of grey that is not too dark or too light.
How to change your Computer's processor name

1. Open Notepad.

2. Copy and paste the exact code given below:-

Windows Registry Editor Version 5.00

[HKEY_LOCAL_MACHINE\HARDWARE\DESCRIPTION\System\CentralProcessor\0]

"ProcessorNameString"="Your Processor Name Here 50000MHz"

3. Save it as **Anyname.reg (*.reg)**

4. Create a new shortcut on your desktop. Enter regedit / S "Location of the .reg file" as the location of the item. For example, enter regedit /S "C:\Processor Name.reg" if your registry file is located in the root of C:\ drive.Processor Name

5. Copy the created Shortcut file.

6. Navigate to C:\Documents and Settings\All Users\Start Menu\Programs\Startup (in Windows XP) or to C:\Users\ User-Name\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup (in Windows 8, Windows 7 and Windows Vista. Also remember that AppData is a hidden folder.) if C: is your System drive.

7. Paste the copied file. This registry file would now execute each time when Windows starts and the Processor Name String would be modified each time. So, even upon restarting your computer, you will see that the changed processor name is permanent.

See more at www.mysticodes.blogspot.in

Mobile Recharging With Bank Transaction Using SMS

VENUGOPAL CHETTY P.V.S

I B.SC(CS)-B

Introduction:

The main aim of this project is to provide a customer Friendly service of getting the card recharged and enable the Banking transaction activity by activating transfer of account through SMS. It serves as a helping hand to the people by rendering the service availed to the customer at its level best by skipping traditional customs of on person availability in Banks & other sectors

1. Mobile Recharge

2. Transaction on mobile

Mobile Recharge:

The SMS must include the details regarding the account number, PIN number and amount for recharging, after this SMS is sent and it passes through mobile receiver where it is checked for validation. After the bank server approves the transaction of deduction in the amount in the bank amount. The request is directed to the mobile server. The mobile server acts after receiving the intimation from the bank server and successfully recharges the card there by sending the reply from bank to mobile user.

Transaction on Mobile:

Transaction on mobile is used to money between two peoples. These two peoples must be registered in a bank. And they should have mobile transaction. This transaction starts with SMS. If user 1 wants to pay Rs.3000 to User 2 .user 1 simply type SMS to particular bank with his 4 Digit PIN, Amount and Account No. The request is processed by the bank server and Amount is transferred to designation account.

In order to improve the available facility, we are developing software for both mobile recharging and bank transaction using mobile SMS as wireless communication. SMS appeared on the wireless scene in 1991in Europe, where digital wireless technology first took root. The European standard for digital wireless now known as the Global Standard for Mobile (GSM) included short message services from the outset. A distinguish characteristics of the service is that an active mobile handset is able to receive or submit a short message at any time independent of weather or not a voice data call process. SMS is characterized by out-of-band packet delivery and low bandwidth message transfer. The benefits of SMS to subscriber center around convenience, flexibility and seamless integration of message services and data access. Short message service center is responsible for the relaying and store and forwarding of short message between mobile and mobile station.

Methodology:

This project work on the basis of Wireless Application Protocol (WAP). WAP is the next generation of new communication transaction. It is an open specification that offers a standard method to access Internet based content and services from wireless ices such as mobile phones. Wireless mobile kit to send and receive the messages. Mobile receiver acts as a interface between mobile kit and other servers. Database maintenance and administration. Rendering service to the customer an tool kit empowered with Java 2 Micro Edition to represent the model of the process of inflow and outflow of messages. Link must be maintained between mobile kit and servers to hold sway the message and transferring it swiftly to the respective servers by means of filtering. This is done bye mobile receiver.

An process of keeping the personal details and process of transaction of account holders are maintain in a database .It also administers the process of authentication and validation of banking transaction there by updating the relevant information and by executing the task. Mobile server is the key for offering and effecting the service to the customer. It is natural for it has a database containing the detail of recharge (last date and balance amount of account). A tabled of data for individual customer is also maintained to envisage the query service.

Recharging the Mobile:

Step 1: Activation the mobile server, bank server and mobile receiver is done.

Step 2: Once these are activated, get the account number, PIN number and the amount to be recharged.

Step 3: The recharge request is sent to the mobile receiver. The request contains information such as account number, PIN number, and amount.

Step 4: The mobile receiver sends the request to bank server for verifying the account number, PIN number and the amount to be recharged.

Step 5: If the information is true then the values in the bank server and mobile sever is updated accordingly.

Step 6: Otherwise, it sends an error message to mobile kit.

Step 7: Terminate the process.

Bank Transaction:

Step 1: Activation the mobile server, bank server and mobile receiver is done.

Step 2: Once these are activated, get the source account number, destination account number, PIN number and the amount to be transferred.

Step 3: The transaction request is sent to the mobile receiver. The request contains information such as source account number, destination account number, PIN number, amount.

Step 4: The mobile receiver sends the request to bank server for verifying the account number, PIN number and the amount to be transferred.

Step 5: If the required amount to be transferred is available in the source account, the bank sever is updated with that in the destination account.

Step 6: If the required amount is not available then it sends the error message to the mobile receiver from which it is displayed in the mobile kit.

Step 7: Terminate the process.

Future Enhancements:

- To foresee the balance amount in the bank.
- It can be implemented to have credit & debit based transaction.

- Footing the bill for electricity, telephone, taxes that will be deduced at banks by means of SMS.
- Providing valuable information to the customer about the new arrival of schemes in the company and offers rendered by the company.
- Reserving tickets in modes of transport & booking made in the theatres via SMS.
- Reporting the stock values, hot news and sending remainders.

Applications:

- It can be applied for using the major cellular operations to provide user friendly services.
- It offers valuable services in the area where the operators are out of reach.
- There is no geographical bar on its usage.
- It can be accessed at "anywhere at any time" money transfer & mobile recharge.

IMPORTANCE OF CPU

M.VIVEK KUMAR
III-B.COM(CA) 'B'

This article is for those who maybe don't have experience with what's inside of their computer and want to learn a little more. Knowledge of computers will later help when you need to upgrade your own computer with a new hard drive or extra RAM.The main parts of a computer that we'll be focusing on are the **SMPS, Access Slots, Motherboard, Hard Drive, CPU, RAM, CD-Rom, and Floppy Drive.** First, let's look at two simple diagrams of the inside of a computer.

Quickly, you may recognize some parts of you computer just from these simple diagrams. The first diagram is of a tower computer, which currently is popular for the home PC. The second diagram is a desktop computer, which normally is used for space as you can easily place the monitor on top of it and have the whole computer compact in one easy spot.

POWER SUPPLY

The power supply is vital to the computer as it is the source of power. The power supply is usually a small metal box in the top corner of a case (tower). You can see the power supply in both diagrams.

ACCESS SLOTS

Access slots or expansion slots are openings in a computer where a circuit board can be inserted to add new capabilities to the computer. Examples of drives that may go here would be modems; USB drives, networking cards, video adapters, and sound cards. These expansions are easy to install along with being very useful to your computer to allow you to do new things, such as network computers together.

MOTHERBOARD

The motherboard has been an integral part of most personal computers for more than 20 years. The motherboard contains various circuit cards performing various functions all plug into many similar sockets on a common circuit board. Each circuit card performs a unique function in the computer and gets its power from the socket. The motherboard contains many circuits and slots, but let's focuses on some of the important ones. The motherboard is home to the processor (CPU) along with the access slots and RAM.If we look at the diagram above I've labeled the parts of the motherboard that I wanted to discuss. The objects labeled 1 are the access slots. 2 is the processor slot and 3 are slots to hold memory (RAM).

CPU

The CPU, or processor, is the brain of your computer no matter what type (PC, Server, and Laptop). There are many brands for processors such as Intel and Athlon all with different processors for your computer. The CPU processes everything that your computer does, therefore the better the processor, the faster the computer.

RAM

Random Access Memory (RAM) is the form of memory contained in most computers. RAM is considered "random access" because you can access any memory cell directly if you know the row and column that intersect at that cell.

When an application is running it stores its information in the RAM. When you close the application the information is deleted from the RAM. This is why you need certain amounts of RAM to run applications. The more RAM you have the faster your computer will be, and the more applications you'll be able to run without losing speed.
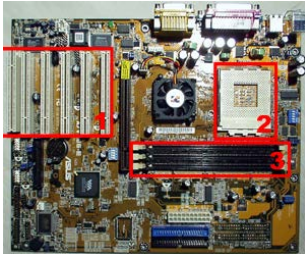
HARD DRIVE
Nearly every desktop co

mputer and server in use today contains one or more hard-disk drives. These hard disks do one thing well - they store changing digital information in a relatively permanent form. They give computers the ability to remember things when the power goes out. A hard drive stores all your files and information in a permanent form unlike storing it in RAM (which is temporary). The larger your hard disk (drive) the more information and files you're able to store. Today's average hard drive is 40 GB although slowly 80 GB hard drives are becoming used more often.

CD-ROM

The CD-ROM is quite simple, it reads CD's. CD-ROM completely stands for Compact Disk Read Only Memory. The revolution of CD's is that they hold much more data than a floppy disk, although are not as flexible when it comes to rewriting and storing personal data.

Using CD-RW you can make your own CD's and use them more like a floppy disk. These are becoming more and more popular although you still need a CD-ROM to read them.

ZERO CHIPS IN LATEST TREND

KEERTHI.B.S

ASSISTANT PROFESSOR

DEPARTMENT OF COMMERCE CA

No one wants to be called a zero in terms of intelligence, but having zero-sized intelligence in computing means packing a whole lot of brains in a tiny, tiny package. Computer companies encourage forward-thinking creativity, and some, such as Intel, even have futurists on board to predict where technology is headed. Futurist Brian David Johnson sees the future advance of computing to so small a size that the housing for the computer itself is almost zero. We have the technology to put computers almost anywhere and in almost anything. Computers used to take up entire rooms, then whole desktops, laps, and palms, to micro-chip sized casings and atom-powered transistors invisible to the naked eye. Many have predicted that the shrinking of computing size would also lead to the end of something called Moore's Law. Gordon E. Moore, a cofounder of Intel, predicted that processor speeds would double every two years, while at the same time, the technology needed to do that would shrink, driving down the cost of computing as well. As computer brains have diminished in size -- with some models powered by just five atoms and one-atom developments about 10 to 20 years down the road -- getting smaller may reach an end point as atomic transistors replace chips. Whether the low cost will trickle down despite the high cost of innovating such small transistors remains to be seen.

CLOUD COMPUTING EMERGING TRENDS IN 2014

ASSISTANT PROFESSOR

DEPARTMENT OF COMMERCE (CA)

The growing knowledge, understanding and comfort levels among C-level executives regarding cloud computing will lead to even more substantial adoption rate increases in 2014 than experienced in the last few years. However, the hype surrounding cloud computing can actually hurt its adoption in the coming years. People are looking at cloud only for cost reduction. While this may be the benefit most of the times, it may not be the case always. People should also look at other benefits like agility, innovation and speed. When people start understanding the holistic picture and benefits, the adoption will significantly improve. In 2014, the following will be some of the key trends/opportunities in relation to cloud computing

Hybrid clouds gain prominence

Through 2014, majority of I.T. adoption of the cloud will still continue to be to redeploy current applications on public cloud. However in later 2014, hybrid will emerge as the way moving forward for enterprise IT. Organizations get maximum control with the private cloud while they get maximum agility and scalability with the public cloud. Companies need to look at getting the best of both by extending private to public. Organizations need to think beyond today and realize the true power of cloud. Private cloud can be extended beyond the walls of the corporation to partners and customers who are in need of now where collaboration is important, while public cloud services can be allocated to communities of users within enterprises. The objective should be to give businesses a choice of where and how they want to secure the right IT assets for the task at hand - the service may come from somewhere within the enterprise, or it may come from outside the enterprise.

Mobile enablement to push the drive to the Cloud

Mobile enablement of software applications and services will drive opportunities in cloud in 2014. In the next 3 years, there will be more number of people using smart phones as compared to PC's. With services delivered through cloud acting as the backbone for most of the mobile applications, cloud will start penetrating across industries through mobile enablement of enterprise applications.

Big Data to form a massive distributed storage system

The art of big data is that it consolidates many types of data resources with different structures and data models, all in a massive, distributed storage system. Enterprises would need a very good backend infrastructure encompassing several servers to process distributed queries across multiple data sets and return result sets in record time. Building such an infrastructure on its own would be very costly and most enterprises would not afford to build one. However, with the emergence or cloud computing, things have been made easier. Cloud computing provides the underlying engine to help big data analytics, typically through the use of Hadoop. Because cloud based infrastructure can be rented as needed, big data has become more affordable for most enterprises. We will see a lot of experiments around this in 2014.

Industry Specific clouds become popular

This is another interesting trend I expected to emerge in late 2013, but has not done yet. I expect emergence of industry-specific or community clouds. For example, a cloud for Healthcare Industry that meets the Health Insurance Portability and Accountability Act (HIPAA) regulations around standards for health-related data protection and storage. Another example could be a Telco cloud complying with FCC regulations. The strict compliance and regulatory standards in certain industries will drive such clouds into reality.

Pay-as-you go business models flourish

Enterprise adoption of pay-as-you-go model will pick up in 2014. Businesses will prefer purchasing services on demand rather than buying perpetual hardware and software along with separate maintenance contracts.

Cloud as the center of our digital lives

Most of us will start (if not already) to move our personal content to cloud - storing of photos on Picasa, storing and sharing of documents on Google docs, dropbox, etc. are some examples of how we all will start adopting the cloud in an implicit manner.

Emerging markets to spend more on IT

Another driver of industry growth in 2014 will be emerging markets, where IT spending is growing at a faster rate than developed markets. We will see a lot of cloud adoption in emerging markets where enterprises look at not only reducing costs but also to improve agility, speed and innovation.

Emergence of human cloud capital

As Enterprises adopt cloud, they will need the services of specialist cloud consultants to help them achieve their business goals. A surge in demand for such specialist people is expected in 2014. However, currently, there is a human capital shortage in the cloud computing industry. This is a significant constraint in enterprise cloud adoption and innovation. Enterprises need cloud resources providing highly visible leadership and considerable IT skills. Given the tremendous business and commercial potential of cloud computing, enterprises will be more than willing to take on this challenge in 2014.

Cloud as the creator of jobs

There was a perception that cloud computing may turn to be a job-eliminator. However, as per the study conducted by IDC for Microsoft, Cloud computing is expected to create over 2 million jobs in India (and 14 million worldwide) by 2015. This includes cloud adoption as well as cloud innovation. So there is a huge potential for IT professionals in coming years. Adoption of cloud also faces internal resistance to change as it alters the makeup of IT organization. Despite challenges and concerns, CIOs are aware about opportunities and benefits of cloud computing and related business models. Cloud is the future and in spite of internal challenges, we will see more and more organizations adopting cloud.

3-Dimensional Computer Processor

G.Krishnaveni

II-B.C.A-A

Scientist at **University of Rochesterb** have developed a new generation of **Computer Processors**. These processors are based on **3-Dimensional Circuits** in contrary to 2-Dimensional Circuits of today.

This can be said as the next major advance in computer processors technology. The latest **3-D processor** is running at **1.4 gigahertz** in the labs of University.

PAST ATTEMPTS VS LATEST RESEARCH

In the past attempts of making 3-D chips, scientist were just making a stack of regular processors. But at **University of Rochesterb** it was designed and built specifically to optimize all key processing functions vertically, through multiple layers of processors, the same way ordinary chips optimize functions horizontally.

This design means that every tasks such as **Synchronicity**, **Power Distribution**, and **Long-Distance Signaling** are all fully functioning in three dimensions for the first time.

EBY FRIEDMAN: THE MAN BEHIND 3-D CHIPS

Eby Friedman and his students has designed this chip, which uses many of the tricks of regular processors, but also accounts for different impedances that might occur from chip to chip, different operating speeds, and different power requirements. According to **Eby Friedman**, Professor of Electrical and Computer Engineering at Rochester and faculty director of the pro of the processor says:- **"I call it a cube now, because it's not just a chip anymore. This is the way computing is going to have to be done in the future. When the chips are flush against each other, they can do things you could**

never do with a regular 2D chip"

TODAYS INTEGRATED CHIPS AND PROBLEMS

The problem with today's technology of integrated circuits is that, **beyond a limit it is impossible to pack more chips next to each other which limits the capabilities of future processors.** So number of integrated circuit designers anticipate someday expanding into the third dimension, stacking transistors on top of each other.

IMPORTANCE

Vertical Expansion of chips has lots of technical difficulties and the only solution to this is to **design a 3-D chip** where all the layers interact like a single system. According to **Friedman**: Getting all three levels of the 3-D chip to act in harmony is like trying to devise a traffic control system for the entire United States-and then layering two more United States above the first and somehow getting every bit of traffic from any point on any level to its destination on any other level-while simultaneously coordinating the traffic of millions of other drivers.

Now if we replace the two United States layers to something more complicated like China and India where the driving laws and roads are quite different, and the complexity and challenge of designing a single control system to work in any chip begins to become apparent.

The **3-D Chip** is essentially an entire circuit board folded up into a tiny package. With this technology the chips inside something like an iPod could be compacted to a tenth their current size with ten times the speed.

NEXI - Robot with facial expressions

A latest invention by **MIT Media Lab** is a new robot that is able to show various facial expressions such as 'slanting its eyebrows in anger', or 'raise them in surprise', and show a wide assortment of facial expressions while communicating with people.

This latest achievement in the field of Robotics is named **NEXI** as it is framed as the next generation robots which is aimed for a range of applications for personal robots and human-robot teamwork.

DESIGNING

The head and face of NEXI were designed by **Xitome Design** which is a innovative designing and development company that specializes in robotic design and development. The expressive robotics started with a neck mechanism sporting 4 degrees of freedom (DoF) at the base, plus pan-tilt-yaw of the head itself. The mechanism has been constructed to time the movements so they mimic human speed. The face of **NEXI** has been specially designed to use gaze, eyebrows, eyelids and an articulate mandible which helps in expressing a wide range of different emotions.

The chassis of **NEXI** is also advanced. It has been developed by the **Laboratory for Perceptual Robotics UMASS (University of Massachusetts), Amherst**. This chassis is based on the **uBot5 mobile manipulator**. The mobile base can balance dynamically on two wheels. The arms of **NEXI** can pick up a weight of up to 10 pounds and the plastic covering of the chassis can detect any kind of human touch.

CYNTHIA BREAZEAL: HEAD OF THE PROJECT

This project was headed by Media Lab's Cynthia Breazeal, a well known robotics expert famous for earlier expressive robots such as **Kismet**. She is an Associate Professor of Media Arts and Sciences at the MIT. She named her new product as an MDS (mobile, dextrous, social) robot.
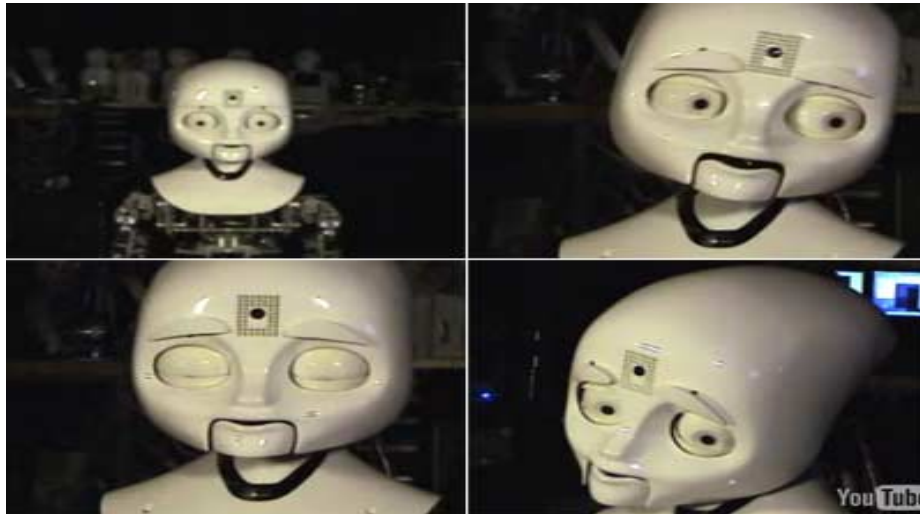
FEATURES OF NEXI

Except a wide range of facial expressions, Nexi has many other features. It has self-balancing wheels like the Segway transporter, to ultimately ride on. Currently it uses an additional set of supportive wheels to operate as a statically stable platform in its early stage of development. It has hands which can be used to manipulate objects, eyes (video cameras), ears (an array of microphones), and a 3-D infrared camera and laser rangefinder which support real-time tracking of objects, people and voices as well as indoor navigation

SAMSUNG LTE Mobile HotSpot Pro (T-Mobile)

R.BHUVANESWARAN

FINAL B.C.A-D

- **Pro** --- Solid connection. Fast speeds. Long battery life.
- **Con** --- No controls for front LCD screen. Inaccurate data counter. Doesn't support maximum 20+20 speeds.

- **Bottom Line** -- Samsung's new cellular modem for T-Mobile is the best one to buy now, but modems on other carriers beat it on features.

The Samsung LTE Mobile Hotspot Pro ($168) is better than T-Mobile's last hotspot, the Sonic 2.0 LTE. But while it offers fast speeds and long battery life, making it a decent Editors' Choice for mobile hotspots on T-Mobile, it's harder to use and configure than the leaders in the field on other carriers. Even so, if you're on T-Mobile and need a cellular modem, this is the one to get.

Physical Design

The Samsung Pro (also known as the SM-V100T) is bigger, but flatter than most other hotspots on the market. At 3.53 by 3.53 by .52 inches (HWD)—yes, it's a square—and 5.15 ounces, it's too big for most pockets. Much of the area is taken up by a bright, sizable LCD screen with a fatal flaw—absolutely no way to control it. I mean, come on, really.

The hotspot has power and WPS setup buttons on the top. Tucked into the lower right hand corner, oddly enough, is a full USB-to-micro-USB cable, which you can use to connect the hotspot to your PC as a modem or storage device. Remove the USB cable and you'll see a little slot for a microSD card.

The LCD screen shows how many devices are connected, whether you have any text messages and, supposedly, how much data you've used. In practice, though, it's not very useful. The data counter read zero during my entire test period, even though the hotspot's Web interface showed my 800MB of test data usage. And while the hotspot's signal strength and battery indicators were fine, other LCD-bearing hotspots offer more on-device flexibility—in the most extreme case of the Netgear Zing $299.99 at Best Buy and AT&T Unite, letting you change the network SSID and password right on the front of the device.

Configuration and Setup

In this case, the hotspot's settings are controlled through its Web-based interface, which you can access from any browser. Unfortunately, the Web interface is very slow—it takes several seconds for each page to render, very weird considering there's no Internet connection involved.

In the Web interface, you'll find the usual network and security settings. They're oddly restricted: You can use WPA2 security but no other form, and the 2.4 or 5GHz bands but not both. Port blocking, MAC filtering, and port forwarding are also available. You can also check and send text messages.

The hotspot has several odd features that seem only partially thought through. For instance, using the built-in USB cable, you can use the hotspot as a power pack to recharge other mobile devices. That's cool, but it drains the battery life you'll need to stay on the Internet.

The hotspot also appears to be running Android; hook up to it via MTP, and you'll see 2.6GB of internal storage free and the stock Android range of folders. But there's no way to take advantage of that power or storage other than with a lackluster DLNA server—not even a general file server.

The hotspot was easy to connect to via Wi-Fi. Hooking it up as a USB modem, on the other hand, was a real trial. You have to hook the hotspot up via a USB cable, install drivers, disconnect and reconnect the hotspot, and then go into the Web interface and switch it from MTP to USB modem mode. Once you do this, it works fine as an RNDIS modem with even faster speeds than its Wi-Fi mode, but it'll take a while.

Network and Performance

T-Mobile's network is glorious, if you can get it. The company's LTE network now covers more than 200 million people in 233 metro areas, and in my experience, it's often faster and less congested than either AT&T or Verizon in New York City. (We'll put that assertion to the test in our Fastest Mobile Networks testing in May 2014.) Two hundred million is only 2/3 of the U.S. population, though, and T-Mobile focuses mainly on larger cities, so you should make sure the carrier has coverage where you live and work.

I frequently got speeds of 15-20Mbps in Manhattan, which is very good for a loaded LTE network. Unfortunately, as T-Mobile moves to an even faster "20+20" network next year, this hotspot doesn't support that network's maximum speeds. (In technical terms, it's Category 3 rather than Category 4.) It'll still be fast, but a faster device is possible on the new network.

This hotspot will keep you online for a long time. The Samsung Pro didn't show any of the stability or connection drop issues I saw with the Sonic 2.0 LTE hotspot, and it streamed audio continuously for 10 hours, 54 minutes over LTE—an excellent result. It was rock solid at fulfilling basic connectivity needs.

Remember, you can't use this or any mobile hotspot as a primary Internet connection, because of data caps. T-Mobile's prices are very competitive with other 4G hotspot solutions: 2.5GB for $30/month plus $10 for each 2GB beyond that, with international roaming included. Since this is T-Mobile, there are no contracts, and if you go over your data allotment, you just get throttled down to 128kbps rather than overcharged.

But the average American uses 21GB of in-home Internet per month, according to AT&T, and that would cost $120/month—much more than cable or DSL providers charge. T-Mobile offers great value in the wireless world, but no wireless carrier can compete with landline Internet rates.

The hotspot showed relatively little drop-off in speeds at up to 100 feet away from the hotspot, in the line of sight.

Final View

We don't give a lot of 3.5-star products Editors' Choice awards, but I'm going to have to make an exception here. T-Mobile's LTE network is excellent where it's available, and this is the best hotspot for it. But much better hotspots are available on other carriers—hotspots with better configurability, more compact form factors, and more flexible on-device interfaces. That won't help T-Mobile subscribers, so we recommend this hotspot as our Editors' Choice on T-Mobile for now.

Automatic Renewal Program: Your subscription will continue without interruption for as long as you wish, unless you instruct us otherwise. Your subscription will automatically renew at the end of the term unless you authorize cancellation. Each year, you'll receive a notice and you authorize that your credit/debit card will be charged the annual subscription rate(s). You may cancel at any time during your subscription and receive a full refund on all unsent issues.

Motherboard- Internal components
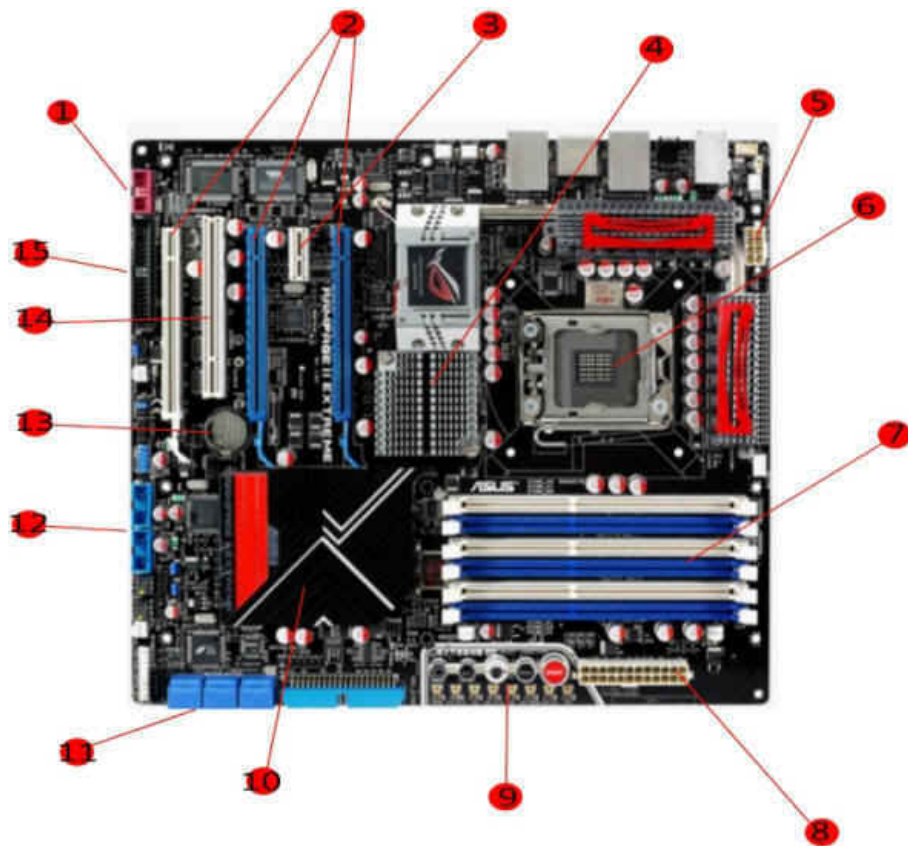
R.Paramasivam
Programmer in UGLAB(CS)

Understanding your motherboard is about pointing out what the bits of your motherboard actually do, if you are not used to building or upgrading your own machine you will want to know the ins and outs of the motherboard. The motherboard is a very important piece of equipment in your PC as it is connected to everything. Anything of major importance is plugged straight into the board. Some things on a motherboard are meant to be changed and altered to suit your own

specifications; other things are strictly to be left alone unless fully qualified. We will try to give you a brief bit of history if there is any on each of these parts and some specifications.

We will start with the internal connecters and ports and then move on to the External ones. Internal connectors are for system builders and upgrading components. These connectors are for adding memory to the system, connecting Hard drives and optical drives as well as graphics cards and other expansion cards.

1 - Firewire header

Firewire is also known as IEEE 1394. It is basically a high performance serial bus for digital and audio equipment to exchange data. The technology preceded USB but yet is faster than any current USB port. Often used for transferring digital video to the PC straight from a digital camera. The FireWire header onboard means you can install a FireWire port on your machine. Again these cables are often supplied as an optional extra which you will need to check with the retailer to see if they are supplied with your board.

2 - PCI Express 16x slots

Now the most common slot for Graphics cards, the PCI Express 16x slots provides 16 separate lanes or data transfer. PCI express 1.0 slots offer a data transfer rate of

250MB/s the second generation of PCI express (PCI Express 2.0) offers twice the data rate at 500MB/s. Currently in development is PCI Express 3.0 which offers 1GB/s of data transfer. PCI Express 16x slots are also the basis for both SLI and Crossfire multi graphics card setups. With the increasing demands graphics cards are putting on systems, no less than a 16 lane slot will be good enough for any modern graphics card.

3 - PCI Express 1x Slot

Like the PCI Express 16x above the 1x slot uses exactly the same system but only has a single lane of serial data transfer. These slots are used for expansion cards that do no require the same amount of data transfer that a graphics card requires. You will usually find components such as tv tuners, network cards and sound cards make use of the PCI Express 1x slot. You will also notice the difference in size between the 1x and the 16x slots. The PCI Express 1x slot is noticeably smaller and easy to spot.

4 - Chipset - North Bridge (with heatsink)

The Motherboards chipset can be described as what sets it apart from other boards in its category. Different chipsets contain different features and components. A chipset is a number of integrated circuits built onto the board to provide specific functions e.g. one part of the chipset may be an onboard component such as a modem or sound chip. Other parts may be used to control the CPU functions. Most chipsets are designed to work with only one "class" of CPU although now many older chipsets support more than one type of CPU such as socket 7 which supports the Pentium, Cyrix 686, Cyrix MII, AMD K6 and K6-2. There are certain restrictions though to what type of processor a chipset can handle because of the logic that the CPU uses to access the memory and its cache etc. Since these chips are working harder with each generation, motherboard manufacturers have started to put heatsinks and active coolers (fans) on the main parts of the chipset to disperse some of the heat. For more information on chipsets see our**What does a chipset do** article.

5 and 8 - ATX Power connector

The standard ATX power connector, the cable for this will be coming from the PSU, a clip is normally provided to make sure you get them in the correct order. As a tip, don't try to push too hard if its stuck, check to see that it is in the correct way, I have seen plenty of power connectors where the pins have pushed out some of the connectors, these can be difficult to get back into place, so its best to be careful.

6 - CPU (Central Processing Unit) socket

All the CPU "sockets look very similar, however they are different in the way they have different amount of pins and in different layouts. There are currently two major CPU socket types PGA and LGA. PGA or Pin Grad Array uses a system of pins on the CPU and holes on the socket to line up and hold a CPU in place. The introduction of the ZIF (Zero Insertion Force) socket for PGA types allowed the CPU's to be lined up without any pressure on the CPU until a level is pulled down. LGA or Land Grid Array uses a system of gold plated copper pads that make contact with the motherboard. It is very important to read your motherboard manual to discover what types of CPU's you motherboard supports as most motherboards are aimed at a specific type of CPU.

7 - DIMM (Double Inline Memory Module) slots

DIMM's are by far and away the most used memory types in today's computers. They vary in speeds and standards however and they need to match up to what your motherboard has been designed to take. The four standards of DIMM's being used at the moment are SDR (Single Data Rate), DDR (Double Data Rate), DDR2 and DDR3. The speeds of memory can vary between 66Mhz to 1600Mhz.

9 - Motherboard controls

Not available on all motherboards, but some allow direct control of the motherboard via simple buttons. Power switch, error checking, CMOS clearing, passwords and more features can be accessed directly on the motherboard on some models.

10 - Chipset - South Bridge

When we talk about chipsets you mainly only ever hear about the North bridge. Even those into PC technology have a hard time naming the south bridges without looking them up. Names like Nforce 2 and KT600 are North bridges. The South Bridge does an important job as well. It handles things like the PCI bus, onboard Network and sound chips as well as the IDE and S-ATA buses.

11 - Serial ATA Connector

Serial ATA or more commonly seen as S-ATA is a new way of connecting your Hard Drives to your PC. S-ATA drives have the capability of being faster than the IDE counterparts and also have smaller thinner cables which help with the airflow of the system. S-ATA hard disks are fast becoming the norm for hard drive technology. Current motherboards feature both IDE and S-ATA connectors to facilitate all types of storage hardware.

12 - USB 2.0 header

As well as having USB ports on the rear of the motherboard, motherboard manufacturers often add a couple of USB headers so you can connect optional cables for extra USB ports. These cables are often supplied and you only need to add them on if you need the extra connectivity. USB 2.0 replaced USB 1.1 as a much faster solution. It is backwards compatible meaning all USB 1.1 devices will work in these new USB 2.0 ports.

13 - Motherboard Battery

The battery gives the board a small amount of power in order to store some vital data on your machine when the power is off. Data stored is that like the time and date so you don't have to reset them every time you boot the machine up. Motherboard batteries are usually long lasting Lithium batteries. Removing this can reset all the data on your machine including the BIOS settings, however not replacing this correctly can lead to irreparable damage to the motherboard. Only remove the battery if it is dead or if you can't have access any other way to resetting the data on your machine by use of the clear CMOS jumper or something similar.

14 - PCI (Peripheral Component Interconnect) slot

The PCI bus (not PCI express) is now an older technology and although the PCI slots are still available, they have decreased in number and are being replaced by the PCI Express 1x slots. Its unlikely that you will get a motherboard without a PCI slot at the moment due to the fact that a lot of components still use the standard PCI slot. It would be awkward to upgrade to a system without PCI slots as it may mean upgrading more components than you would like to.

15 - Floppy Drive Connector

More simple than the IDE connector you only have to remember to get the red line to pin 1 of the connector and the red line to pin 1 on the floppy drive, This port is only to be used with floppy drives. You may not have a floppy controller on your motherboard as its slowly being phased out as more people are using writable CD's and DVDs to transfer data, to store data and to use as boot up discs.

16 - IDE connector Not on Diagram

The connector to which you will insert an IDE cable (supplied with motherboard) IDE cables connect devices such as hard disks, CD Drives and DVD Drives. The current 4 standards of IDE devices are ATA 33/66/100 and 133. the numbers specify the

amount of data in Mb/s in a max burst situation. In reality there is not much chance of getting a sustain data rate of this magnitude. Both the connectors and devices are backwards compatible with each other, however they will only run at the slowest rated speed between them. All IDE cables will come with a red line down one side, this red line is to show which way it should be plugged in. The red line should always connect to pin one of the IDE port. Checking your motherboard documentation should show you which end is pin one. In some cases it will be written on the board itself.

In the case of ATA 66/100/133 there is a certain order that you plug devices in, the cable is colour coded to help you get them in the correct order.

- ***The Blue connector should be connected to the system board***

- ***The Black connector should be connected to the master device***

- ***The Grey Connector should be connected to the slave device***

17 -BIOS (Basic Input Output System) Chip - Not on Diagram

The BIOS holds the most important data for your machine, if configured incorrectly it could cause your computer not to boot correctly or not at all. The BIOS also informs the PC what the motherboard supports in terms off CPU etc. This is why when a new CPU is introduced that physically fits into a slot or socket you may need a BIOS update to support it. The main reason for this is that different CPU's use different logics and methods and so the BIOS has to understand certain instructions from the CPU to recognize it.

The motherboard also has external connectors for devices such as keyboards mice and printers. We will take a quick look at these connectors and show which is which. Although it is difficult to plug pieces in the incorrect slot due to there shape and size differences, it helps to have the knowledge of what you are doing rather than just finding the one that fits. Modern PC's don't require many of these ports these days as most external connections go through the generic USB ports. However you may find that some of these ports exist on your motherboard so for reference purposes we will still let you know what there purpose is.
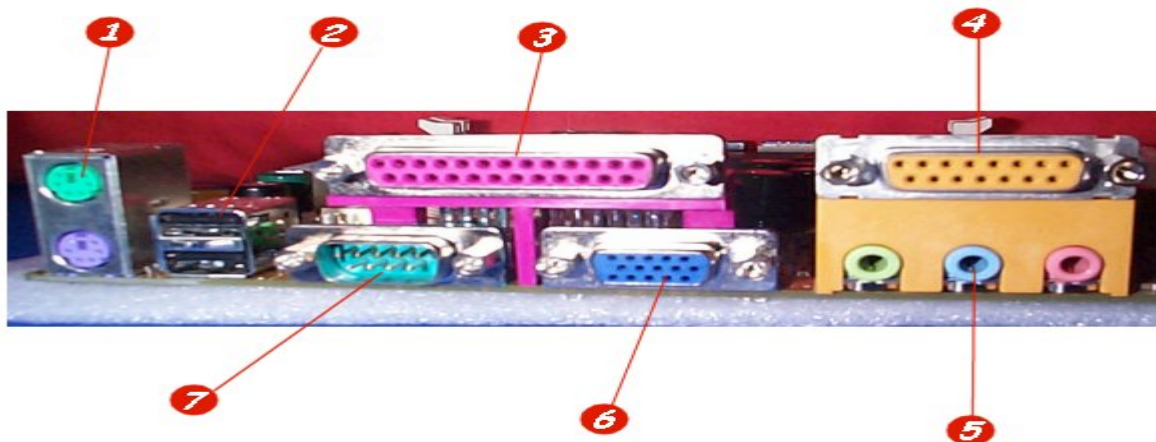
1 - PS/2 Connectors

ATX boards have 2 PS/2 connectors, one for the mouse and one for the keyboard. They are the same size the same shape but a different colour. This is because the Mouse and keyboard connectors are not interchangeable. Plugging the keyboard in to the mouse connector and vice versa will make them both useless. The usual way for these to be plugged in is the mouse into the Green connector and the keyboard into the purple connector.

2 - USB (Universal Serial Bus) Ports

USB is getting more and more popular for external components. So much so that you can even buy external USB hard disks now. The big hype about USB as that you can change the devices on the USB without switching the power off the computer. If you have a mouse and a Scanner plugged into USB for example, and you wanted to play your new game on your USB controller, you could unplug your Scanner and plug in your game controller. The system would then recognise the change and let you use the controller straight away. You will normally get 2 USB ports with an option to add an extra 2 via a cable.

3 - Parallel Port

The parallel port is mainly used for scanners and printers, and is associated with LPT1. Parallel ports send data in parallel i.e. more than one bit at a time. If the channel is 8bits wide then a parallel port would send 8 bits at a time. Parallel ports are fast becoming extinct as the USB port takes over the purpose of this port.

4 - Game Port

The Game port is really just a serial port normally found on a sound card. as the picture above has onboard sound in order to show you everything an ATX motherboard can have on it, the game port is above the sound connectors. Gamepads and joysticks plug into the game port. The game port is a female connector and larger than that of the standard COM port.

5 - Sound card Connectors

The Sound card that is built into the board has three connectors, these are Speaker out, this is your main output for your computer speakers, depending on your sound chip you may or may not need powered speakers. Check with the motherboard manual for this. Then you will have the Line in, Line in is for external sources of audio that you want to hear through your computer or possibly record, i.e. from your Hi-Fi. The last of the 3 is the Mic in port. This is for the Microphone. The Microphone can again be used to add sound to recording or just to play through your speakers as a karaoke system.

6 - Display Connector

This motherboard also has onboard graphics, if this is the case with your motherboard then you will have this connector on your motherboard. The Display connector (VGA Connector) is also female (meaning the pins will be on the end of the monitor cable.) If you have a VGA graphics card then this connector will be on the back of your graphics card.

7 - COM (communications) Port

The COM port is used for peripherals such as mice and modems, becoming less popular now though as USB and PS/2 have taken over. Motherboards seem to only have the 1 or no COM ports now in favor of more USB ports.

<u>TYPES OF ERRORS</u>

Merunraj

II-B.Sc.CS-B

INTERNET ERROR CODES

Error 400 - Bad request.

Error 401 - unauthorized request.

Error 403 - forbidden.

Error 404 - Not found.

Error 500 -Internal error.

Error 501 - Not Implemented

Error 502 - Bad Gateway

Error 503 -Service unavailable.

Error 504 - Gateway Time-Out

Error 505 - HTTP Version not supported/ DNS Lookup Fail/unknown host

Error 500-599 - Server Errors

Who's Who in the World 2014

S.Prema,

Assistant Professor

Department of Computer Applications,

For over 110 years, Marquis Who's Who® has been the gold standard for biographical information, trusted by academic and public libraries. This tradition of excellence continues with the release of the **2014 31st edition of Who's Who in the World** which provides concise, accurate biographies of renowned individuals from around the world, representing virtually every major field of human endeavor. Within this publication, you will find Nobel Prize winners, innovators/inventors, authors, athletes, academic professionals, judges, fashion professionals, and entertainers. You will also find royalty, captains of industry, political and religious leaders and many others whose noteworthy and profound contributions are showcased in this volume. This indispensable research tool includes professional and personal data unavailable in any other source, offering researchers a unique insight into the lives of the world's most notable personalities. There is simply no other source like it.

Since 1899, **Marquis Who's Who** has remained the standard for reliable and comprehensive biographical data. Each year, we strive to continue the tradition established by our founder, Albert Nelson Marquis, over 110 years ago with the first publication of **Who's Who in America**.

Online Database -Marquis Biographies Online offers you the best of what's available in print, now with so much more! This powerful online database of over 1.5 million biographies provides up-to-the-minute information of leaders and achievers from around the world in the areas of business, law, science, medicine, the arts, government, entertainment and more – in one convenient source!

Mailing List

To whom we send

- **Dr. B.Murali, HOD of CS, PSG college of Arts and Science, Coimbatore- 14.**
- **Dr.T.Devi, HOD of CS, Bharathiyar University, Coimbatore.**
- **Mr.P.Narendran,HOD of CS, Gobi Arts &Science College, Gobichettipalayam-53.**
- **Dr.S.Pannirselvam,HOD of CS, Erode Arts College (Autonomous), Erode - 09.**
- **Mr.SureshBabu, HOD of CS, Thiruvalluvar Government Arts College, Rasipuram.**
- **Dr.K.Thangavelu,HOD of CS,Periyar University,Salem-11.**
- **Prof S. Joseph Garbrial, HOD of CS ,MazharulUloom College, Vellore - 02**
- **Mr.K.Arulmani, HOD of CS and Engineering/IT,SASTRA University, Kumbakonam – 01**
- **Dr. S.K.Jayanthi,HOD of CS,Vellalar College for Women,Erode-9**
- **Dr.S.Krishnamoorthy,Dean,Anna University, Trichy-24.**
- **Dr. Jaganathan,Direcr, Dept of MCA,PSNA Engineering college, Dindugal-22.**
- **Ms.HannahInbarani,Asst Prof, Dept of CS, Periyar University, Salem-11.**
- **HOD of CS,Manonmaniam Sundaranar university, Tirunelveli.**
- **Mr.D.Venkatesan, Asst Prof, Deptof CS, School of Computing, SASTRA University, Tanjore-01.**
- **Dr.C.Muthu, Reader, Dept of Information Science and Statistics, St. Joseph College, Tiruchirapalli– 02.**
- **Dr. D.I. George, Direcr / MCA, Jamal Mohamed College, Tiruchirapalli – 20.**
- **Mr. B.Rajesh Kannan, Prof, Dept of Electrical Engineering, Annamalai University, Chidambaram- 02.**
- **N.Jayaveeran, Associate Prof& HOD of CS, Khadir Mohideen College, Adirampattinam-01.**
- **Mr. H.Faheem Ahmed,Asst Prof & HOD of CS, Islamiah College,Vaniyambadi – 02**

- **Dr. K. Angamuthu,The Registrar i/c, Periyar University,Salem-11.**
- **Mr.Vaithiyanathan,Project ManagerHCL Technologies ,Chennai.**
- **Mr. Rajesh Damodharan, Advisory Project Manager , IBM IndiaPrivateLimited,Bangalore.**
- **Dr. T. Santhanam,Reader& HOD of CA,DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE,Chennai –06.**
- **Dr.Sheela Ramachandran, Vice Chancellor, Avinashilingam University, Coimbatore.**
- **Dr. R. Rajesh, Asst Prof,Dept of CS & Engineering, Bharathiyar University, Coimbatore - 46**
- **Dr.R.S.Rajesh , Reader , Computer Science and Engineering, Manonmaniam Sundaranar University, Tirunelveli-12.**
- **Dr.L.Arockiam, Reader, Dept of CS, St. Joseph College, Tiruchirapalli-620002**
- **Mr. V. Saravanan, Asst.Professor, PG and Research Dept of CA, Hindustan College of   Arts and Science, Coimbatore – 28.**
- **Mr. R.Ravichandran, Direcr & Secretary, Dept of CS, KGISL Institute of Technology, Coimbatore-35.**
- **Dr. N.Sairam, Prof, Dept of CS, Sastra University, Tanjore – 01.**
- **Mr. T.Senthikumar , Asst Prof, Amrita Institute of Technology,Coimbatore - 12**
- **Mr.S.T Rajan, Sr. Lectr, Dept of CS, St. Josephs College, Trichy-02.**
- **Dr. R.Amal Raj,Prof, Dept Of CS,Sri Vasavi College, Erode – 16**
- **Mr. B.Rajesh Kannan, Prof, Dept of ElecEngineering, Annamalai University ,Chidambaram- 02.**

Identify the company logos?
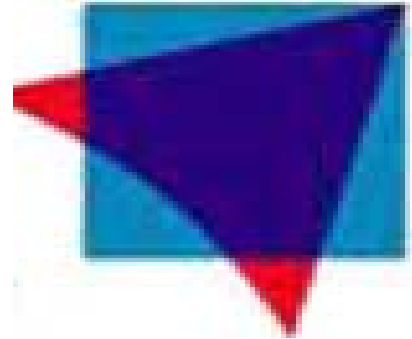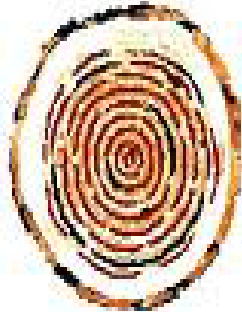
Wait for the answers in the next issue…….

Google's First Server
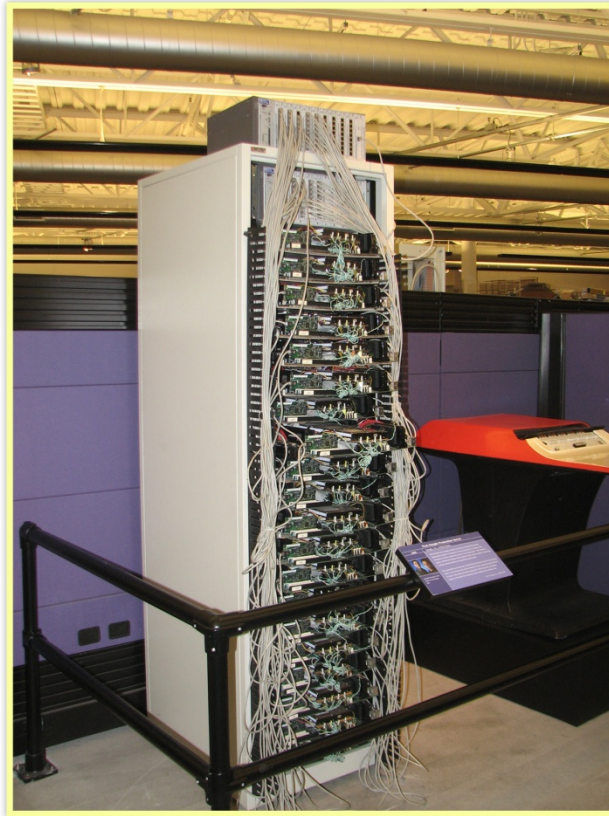
circa 1998 that was used by Google when it was located at Stanford University included Sun Microsystems Ultra II with dual 200 MHz processors, and 256 MB of RAM. This was the main machine for the original Backrub system.2 × 300 MHz dual Pentium II servers donated by Intel, they included 512 MB of RAM and 10 × 9 GB hard drives between the two. It was on these that the main search ran.F50 IBM RS/6000 donate by IBM, included 4 processors, 512 MB of memory and 8 × 9 GB hard disk drives.Two additional boxes included 3 × 9 GB hard drives and 6 x 4 GB hard disk drives respectively (the original storage for Backub). These were attached to the Sun Ultra II.IBM disk expansion box with another 8 × 9 GB hard disk drives donated by IBM. Homemade disk box which contained 10 × 9 GB SCSI hard disk drives.