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Ishare

Monthly Magazine

Ishare

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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

CONTENT

How Attackers Actually "Hack Accounts" Online and How to Protect Yourself

S.Prema

Assistant Professor

Department of Computer Applications, KSRCAS

People talk about their online accounts being "hacked," but how exactly does this hacking happen? The reality is that accounts are hacked in fairly simple ways — attackers don't use black magic.

Knowledge is power. Understanding how accounts are actually compromised can help you secure your accounts and prevent your passwords from being "hacked" in the first place.

Reusing Passwords, Especially Leaked Ones

Many people — maybe even most people — reuse passwords for different accounts. Some people may even use the same password for every account they use. This is extremely insecure. Many websites — even big, well-known ones like LinkedIn and eHarmony — have had their password databases leaked over the past few years. Databases of leaked passwords along with usernames and email addresses are readily accessible online. Attackers can try these email address, username, and passwords combinations on other websites and gain access to many accounts. Reusing a password for your email account puts you even more at risk, as your email account could be used to reset all your other passwords if an attacker gained access to it. However good you are at securing your passwords, you can't control how well the services you use secure your passwords. If you reuse passwords and one company slips up, all your accounts will be at risk. You should use different passwords everywhere — a password manager can help with this.

Keyloggers

Keyloggers are malicious pieces of software that can run in the background, logging every key stroke you make. They're often used to capture sensitive data like credit card numbers, online banking passwords, and other account credentials. They then send this data to an attacker over the Internet.

Such malware can arrive via exploits — for example, if you're using an outdated version of Java, as most computers on the Internet are, you can be compromised through a Java applet on a web page. However, they can also arrive disguised in other software. For example, you may download a third-party tool for an online game. The tool may be malicious, capturing your game password and sending it to the attacker over the Internet.

Use a decent antivirus program, keep your software updated, and avoid downloading untrustworthy software.

Social Engineering

Attackers also commonly use social engineering tricks to access your accounts. Phishing is a commonly known form of social engineering — essentially, the attacker impersonates someone and asks for your password. Some users hand their passwords over readily. Here are some examples of social engineering:

- You receive an email that claims to be from your bank, directing you to a fake bank website and asking you to fill in your password.
- You receive a message on Facebook or any other social website from a user that claims to be an official Facebook account, asking you to send your password to authenticate yourself.
- You visit a website that promises to give you something valuable, such as free games on Steam or free gold in World of Warcraft. To get this fake reward, the website requires your username and password for the service.

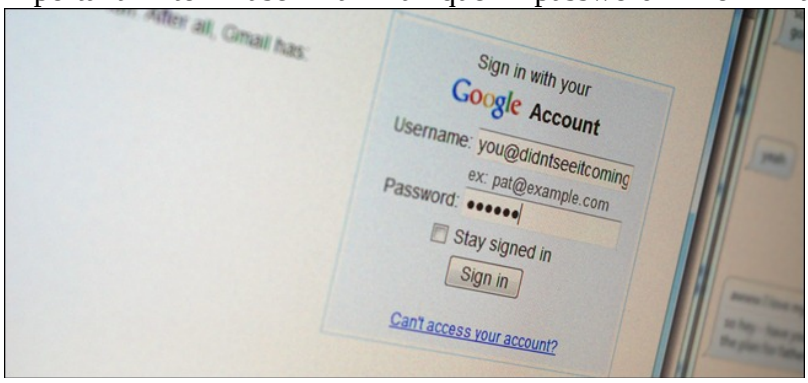
Be careful about who you give your password to — don't click links in emails and go to your bank's website, don't give away your password to anyone who contacts you and requests it, and don't give your account credentials to untrustworthy websites, especially ones that appear too good to be true.

Answering Security Questions

Passwords can often be reset by answering security questions. Security questions are generally incredibly weak — often things like "Where were you born?", "What high school did you go to?", and "What was your mother's maiden name?" It's often very easy to find this information on publicly-accessible social networking sites, and most normal people would tell you what high school they went to if they were asked. With this easy-to-get information, attackers can often reset passwords and gain access to accounts. Ideally, you should use security questions with answers that aren't easily discovered or guessed. Websites should also prevent people from gaining access to an account just because they know the answers to a few security questions, and some do — but some still don't.

Email Account and Password Resets

If an attacker uses any of the above methods to gain access to your email accounts, you're in bigger trouble. Your email account generally functions as your main account online. All other accounts you use are linked to it, and anyone with access to the email account could use it to reset your passwords on any number of sites you registered at with the email address. For this reason, you should secure your email account as much as possible. It's especially important to use a unique password for it and guard it carefully.



What Password "Hacking" Isn't

Most people likely imagine attackers trying every single possible password to log into their online account. This isn't happening. If you tried to log into someone's online account and continued guessing passwords, you would be slowed down and prevented from trying more than a handful of passwords.

If an attacker was capable of getting into an online account just by guessing passwords, it's likely that the password was something obvious that could be guessed on the first few tries, such as "password" or the name of the person's pet.

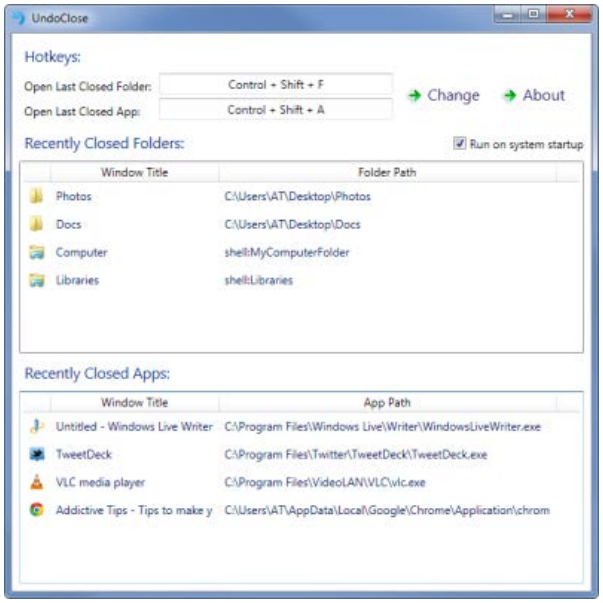
Attackers could only use such brute-force methods if they had local access to your data — for example, let's say you were storing an encrypted file in your Drop box account and attackers gained access to it and downloaded the encrypted file. They could then try to brute-force the encryption, essentially trying every single password combination until one works.

People who say their accounts have been "hacked" are likely guilty of re-using passwords, installing a key logger, or giving their credentials to an attacker after social engineering tricks. They may also have been compromised as a result of easily guessed security questions. If you take proper security precautions, it won't be easy to "hack" your accounts. Using two-factor authentication can help, too — an attacker will need more than just your password to get in.

Reopen Recently Closed Folders and Applications with Undo Close

C.GnanaSekaran
II-B.Sc (CS)-"A"

What I like the most about today's web browsers Chrome and Firefox is their ability to reopen the recently closed tabs instantly. It happens sometimes that we either accidentally close a window/the tab or wish to open them again to complete our work, but instead of opening the page again, we can open the last closed tabs (in order of closure) easily in these browsers.



Similarly wouldn't it be great if there is some application that can open the recently closed Folders and Applications instantly without the need to manually go back and double click to open them? I am sure it must have happened to you some or the other time when you wish to open the application or the folder you were last working upon.

If this is the same case with you then you can save your effort and time by using this tool called Undo Close. As the name of the tool suggests, this tool can open the last closed folder or application instantly. For example, if you have closed a folder named ABC, Windows Media Player and Firefox (in the same order), then when you run this tool, it will open Firefox, WMP and ABC for you (in the last closed order).

Undo Close does not require any installation; you just have to double click it for it to run properly. It will sit down in your system tray and start monitoring the apps and folders. To open the folders and apps, you don't have to run it again and again, just use the shortcuts Ctrl + Shift + F (for Folders) and Ctrl + Shift + A (for applications) and it will open them automatically. These shortcuts can also be changed.
The tool is very easy and light to use. Currently you can use it only on Windows 7 however on both 32 and 64 bit versions.

ZigBee Protocol

V.Menaka

Asst. Professor, Dept of CS

INTRODUCTION:

The ZigBee protocol has been created and ratified by member companies of the ZigBee Alliance. Over 300 leading semiconductor manufacturers, technology firms, OEMs and service companies comprise the ZigBee Alliance membership. The ZigBee protocol was designed to provide an easy-to-use wireless data solution characterized by secure, reliable wireless network architectures.

ZigBee:

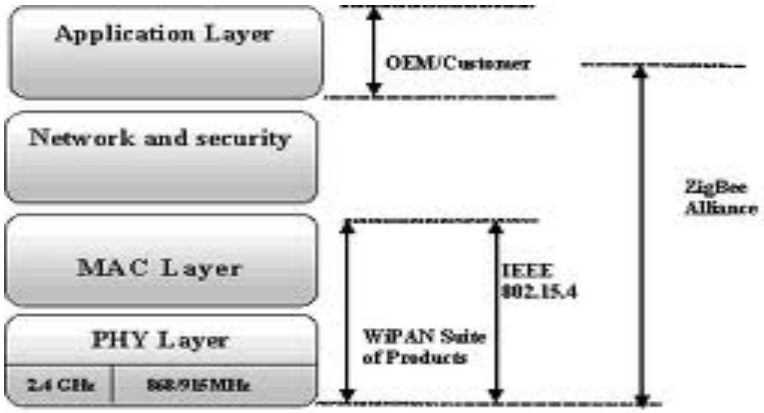
ZigBee is a wireless technology developed as an open global standard to address the unique needs of low-cost, low-power wireless M2M networks. The ZigBee standard operates on the IEEE 802.15.4 physical radio specification and operates in unlicensed bands including 2.4 GHz, 900 MHz and 868 MHz.

The 802.15.4 specification upon which the ZigBee stack operates gained ratification by the Institute of Electrical and Electronics Engineers (IEEE) in 2003. The specification is a packet-based radio protocol intended for low-cost, battery-operated devices. The protocol allows devices to communicate in a variety of network topologies and can have battery life lasting several years.

WHAT IS Zigbee TECHNOLOGY:

It is based on "MICA2DOT433MHz" which is a low-power frequency, works like a Bluetooth and uses the features of wireless networking.

Using the networking system **Zigbee Technology** can connect machines and control through one connection whiles consuming less power. So Zigbee is the cost-effective wireless technology for controlling and monitoring.



ZigBee Protocol Stack

FEATURES:

- Zigbee technology allows wireless networking to connect several units to control through one button like in business industry. This wireless networking avoids the threat of short circuiting. Centralization control system reduces the man power.
- As a wireless communication system Zigbee technology helps to monitor the activities and manipulates in a better way.
- Zigbee technology used in the remote control devices helps to control the function at specific range. As Zigbee technology based devices are designed on low-power frequency therefore are reliable. Low-power consumption feature of Zigbee technology helps to run a device for a long duration or sometimes this duration is of years.
- Bluetooth application gives a unique feature of transferring information or data from one place to another in a far better way than Bluetooth itself.

ZigBee Advantage

The ZigBee protocol is designed to communicate data through hostile RF environments that are common in commercial and industrial applications.

ZigBee protocol features include:

- Support for multiple network topologies such as point-to-point, point-to-multipoint and mesh networks
- Low duty cycle – provides long battery life
- Low latency
- Direct Sequence Spread Spectrum (DSSS)
- Up to 65,000 nodes per network
- 128-bit AES encryption for secure data connections

TECHNOLOGY NEWS

R. Nirmala,

Asst. Professor, Dept of CS

1. IBM'S NEW CHIP TECHNOLOGY FOR HIGHER DATA FLOW

The technology will allow the increasing amounts of data to flow through network.

IBM has introduced a fifth generation of semiconductor technology, 9HP silicon-germanium (SiGe) chip-making process for high performance communications. **Silicon-Germanium**, is a general term for the SiGe, which consists of any molar ratio of silicon and germanium. It is commonly used as a semiconductor material in integrated circuits (ICs) for hetero junction bipolar transistors or as a strain-inducing layer for CMOS transistors. IBM introduced the technology into mainstream manufacturing in 1989. This relatively new technology offers opportunities in mixed-signal circuit and analog circuit IC design and manufacture.

The technology is claimed to allow the increasing amounts of data to flow through network in applications like the Wi-Fi, LTE cellular, wireless backhaul and optical communications.

According to David Harames, "Silicon-germanium technology allows the wireless operators to keep up with the growth in data traffic generated from mobile handsets."

Before SiGe, the high-performance chips used in base stations and optical links were built using expensive, esoteric processes.

SiGe provides the necessary performance as well as integration and cost savings via its CMOS base.

The 9HP SiGe technology will offer support to the engineers who design chips for LTE cellular base stations, millimeter-wave wireless communication links, and optical communications and will improve technology for applications test equipment, automotive radar and security imaging.

IBM's 9HP SiGe technology features support for the 90nm CMOS that will allow the highest level of integration in SiGe BiCMOS technology, which offers enhanced performance, lower power and higher levels of integration compared to the current 180nm or 130nm SiGe technologies.

Additionally, the technology is compatible with IBM's 90nm low power CMOS technology platform that allows foundry clients to port a range of intellectual property circuit blocks and standard cell library elements

2. TINY MEDICAL ELECTRONICS DISSOLVE HARMLESSLY INSIDE OUR BODY

A team of researchers has created a form of electronics that can be implanted in a patient's body then forgotten about — because the implants will dissolve within a week or two. Such safe and hassle-free electronic monitoring could revolutionize medical care.

Implanting devices in the body is nothing new, but usually the risk is only worth it for life-threatening problems: a pacemaker, for instance, or an insulin pump. But there are lots of situations where constantly monitoring some vital statistic would be useful. A thermometer or blood sugar monitor could help make sure a post-operative patient is safe during the critical first week — but the stress and cost of the implantation and removal operations can't be justified.

But what if the implant was inexpensive and made of nontoxic materials that would break apart and be resorted into the body after a set period of time?

The tiny devices, which they call "transient electronics," are made from silicon and silk. Silicon is, of course, a normal material for electronics, but it is also a common organic element found in our own bodies, and small amounts of silicon are easily dissolved in water or bodily fluids. Modern manufacturing techniques allowed the team to make silicon circuits only tens of nanometers thick, meaning they are well within healthy quantities to be ingested.

Circuits are usually mounted on plastic or some other non-soluble material. But on transient electronics, the circuit board is made of silk protein extracted from silkworm cocoons, a material that is strong but also very biodegradable. Omenetto and his team managed to adjust its properties so they can control how long it takes for the silk to degrade — meaning they can create devices that melt down after a day, a week, or

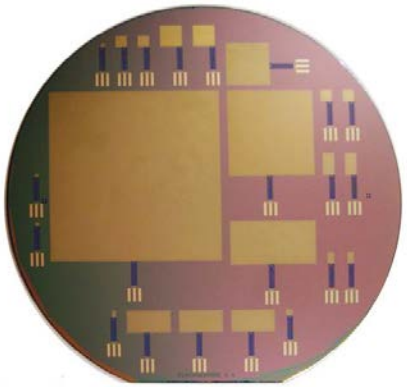
more.

They use wireless power — harvesting energy from radio transmissions to operate the circuits. Rogers said that they can do non-rechargeable batteries, too, but that work isn't published yet.

So far, they've put together a temperature monitor and a tiny camera, both of which could be used for a number of purposes in the medical establishment. The next step, aside from applying for the usual testing and approvals, is to make the devices responsive to things like light or pressure, so that they could be activated or perhaps even destroyed at the command of a doctor or patient.

Beyond the body, such biodegradable devices could also safely be introduced to natural environments without the need to recover them, and without the risk of polluting or poisoning local wildlife. The research was made possible by a number of grants from DARPA, the NSF, the NIH, and others.

3. FUTURE BRAIN IMPLANTS COULD RUN ON BRAIN FUEL



Research at MIT has produced a fuel cell that could power small neural implants with the same source of energy as the brain itself: glucose. Engineers created a fuel cell that breaks down the ubiquitous sugar molecule much the same way as the body does, and it could enable a new generation of self-sustaining medical devices.

Glucose is one of the main fuels used by the body and especially the brain, so the idea of using it to power implants isn't new; in fact, it goes back as far as the 1970s. But poor energy production or questions of safety have prevented such devices from being put into use. The new system does not rely on enzymes or micro organisms, as earlier ones did, but on a stable solid-state catalyst that produces modest power and (due to its platinum construction) is unlikely to cause an immune response within the body.

The project, led by MIT associate professor Rahul Sarpeshkar, was created with brain implants in mind, with the fuel cell tapping the glucose-rich cerebrospinal fluid that surrounds the

brain and fills its cavities. And it's designed to allow electronics to be connected easily, as the fuel cell is itself embedded on a silicon chip that could easily be modified for different applications.

The power it generates isn't much: up to 180 microwatts per square centimeter at maximum, but only a modest 3.4 microwatts can be counted on for a steady current. That's not nearly enough to power something like a laptop, but the team says that for a tiny implant that only needs to activate a few key cells, it should be sufficient.

Benjamin Rapoport, who also worked on the project, warns that such devices are still a ways off: "It will be a few more years into the future before we see people with spinal-cord injuries receive such implantable systems in the context of standard medical care." But as a proof of concept, it's a major step forward.

4. IMPLANT ALLOWS REMOTE CONTROL OF HAND, NO SPINAL CORD NECESSARY

Researchers at Northwestern University have created a system by which a paralyzed hand can be controlled through an implant in the brain by "eavesdropping" on the brain's commands and relaying them to corresponding implant in the arm.

The study, led by Lee E. Miller at NWU's Feinberg School of Medicine, demonstrated that a monkey, its hand temporarily disabled by an anesthetic, could perform simple movements far better with the implants, together called a "neuroprosthesis," in place.

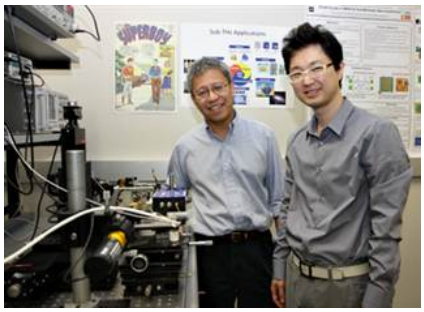
"We are eavesdropping on the natural electrical signals from the brain that tell the arm and hand how to move, and sending those signals directly to the muscles," said Miller.

Normally, a "move" signal would originate in the brain, travel down the spinal cord, and exit a spinal nerve into a limb, where it connects with muscle systems. But the neuroprosthesis intercepts that signal using an electrode array in the brain, and sends it directly to the implant in the arm. The process takes less than 40 milliseconds.

It's a powerful advantage for people who would like to use a prosthetic limb but can't due to spinal damage. In their case, the signal to move a limb never reaches its destination, and that limb is disabled even if it is itself in perfect health.

Only further experimentation will tell whether it is possible to adapt the technology for human use, but it is at the very least a groundbreaking and highly promising piece of research.

5. CELLPHONE THAT SEES THROUGH WALLS CLOSER TO REALITY



Complementary Metal-Oxide Semiconductor (CMOS) technology is the basis of most gadgets we use today, such as smart phones, laptops and HDTVs, the team notes.

The combination of CMOS and terahertz means that we could put this chip and receiver on the back of a cell phone, turning it into a device carried in our pocket that can see through objects.

The team envisions such a device as a handy tool for finding studs in a wall, detecting counterfeit money and scanning for cancer tumors.

6. MEDICAL SENSOR THAT SWALLOW GAINS FDA APPROVAL

Proteus Digital Health's ingestible sensor technology has gained FDA approval. The sensor communicates with a patch worn on the skin that relays information to your doctor via mobile phone on when and what type of medication was taken.

An ingestible silicon sensor gained the federal government's approval. The sand grain-size device is embedded in our pill. Once swallowed, stomach fluids power it long enough to send a unique signal through body tissue to a patch worn on the skin.

The signal contains information on the type of pill swallowed and time of ingestion.

The patch relays this information via the mobile phone in our pocket to our medical provider along with physiological data such as heart rate, body temperature, and activity patterns.

Once consumed, the sensor passes through our body like high-fiber food. The Ingesting Event Marker gained European regulatory approval in 2011. The approval from the FDA on Tuesday represents a major milestone in digital medicine.

Directly digitizing pills, for the first time, in conjunction with our wireless infrastructure, may prove to be the new standard for influencing medication adherence and significantly aid chronic disease management.

4G TECHNOLOGY

N.Shanmugapriya.,M.Sc.,M.Phil.,
Assistant Professor, Dept of Computer Science

What is 4G Technology?

- ✓ **4G** is short for **Fourth (4th) Generation Technology**
- ✓ Faster and more reliable
- ✓ 100 Mb/s
- ✓ Lower cost than previous generations
- ✓ Multi-standard wireless system
- ✓ Bluetooth, Wired, Wireless
- ✓ Ad Hoc Networking
- ✓ IPv6 Core
- ✓ OFDM used instead of CDMA
- ✓ Potentially IEEE standard 802.11n
- ✓ Most information is proprietary
- ✓ **4G Technology** is basically the extension in the 3G Technology with more bandwidth and services offers in the 3G.

4G Definition:

- ✓ 4G Wireless Systems or Fourth generation wireless system is a packet switched wireless system with wide area coverage and high throughput.

- ✓ It is designed to be cost effective and to provide high spectral efficiency .
- ✓ The 4g wireless uses Orthogonal Frequency Division Multiplexing (OFDM), Ultra Wide Radio Band (UWB), and Millimeter wireless.
- ✓ Data rate of 20mbps is employed. Mobile speed will be up to 200km/hr.
- ✓ The high performance is achieved by the use of long term channel prediction, in both time and frequency, scheduling among users and smart antennas combined with adaptive modulation and power control.
- ✓ Frequency band is 2-8 GHz. it gives the ability for worldwide roaming to access cell

The need for 4G Technology:

- For wider bandwidth for Seamless access to the multimedia, teleconferencing & full motion video
- For uninterrupted global roaming and easy access to all the services with integrated standard networks
- For high end mobile ultra-broadband internet accessibility with low cost per bit.

Advantages of 4G Wireless Systems:

- ✓ Support for interactive multimedia, voice, streaming video, Internet, and other broadband services
- ✓ IP based mobile system
- ✓ High speed, high capacity, and low cost per bit
- ✓ Global access, service portability, and scalable mobile services
- ✓ Seamless switching, and a variety of Quality of Service driven services
- ✓ Better scheduling and call admission control techniques
- ✓ Ad hoc and multi hop networks (the strict delay requirements of voice make multi hop network service a difficult problem)

- ✓ Better spectral efficiency
- ✓ Seamless network of multiple protocols and air interfaces (since 4G will be all □]IP, look for 4G systems to be compatible with all common network technologies, including802.11, WCDMA, Blue tooth, and Hyper LAN).
- ✓ An infrastructure to handle pre existing 3G systems along with other wireless technologies, some of which are currently under development.

Applications of 4G Technology:

- ✓ 4G Car
- ✓ 4G and public safety
- ✓ Sensors in public vehicle
- ✓ Cameras in traffic light
- ✓ First responder route selection
- ✓ Traffic control during disasters

The Next Generation of Mobile Computing

Mary Dallfin Bruxella.J
Assistant Professor, Dept of Computer Science

This article describes what's new in mobile computing and how organizations can leverage mobile computing in the implementation of their business processes. We explore the advances in mobile computing, the impacts on IT architecture, and challenges organizations need to consider when creating an optimized mobile solution.

To properly discuss mobile computing, it is important to first establish a comprehensive definition. Mobile computing can be defined as “the use of hand-held computer devices capable of wireless broadband network access utilizing battery power and capable of operating in a disconnected fashion when network connectivity is not available."

While the definition could be broadened to include other device types such as mobile phones, PDAs and tablet technology, and other usage scenarios, we find the above definition to encapsulate the more historically commercial areas of mobile computing.

How Mature is Mobile Computing?

Mobile computing is not a new field. Portable computer terminals have been used in various business domains for over two decades in both connected and disconnected fashion.

In the connected world, remote access terminals have been used in applications such as remote police car terminals, taxi dispatching terminals and package delivery. For example, UPS introduced its delivery information acquisition device in the early '90s. These terminals have provided communication facilities and access to domain-specific databases from remote locations through the use of wireless bandwidth links.

In the disconnected world, remote terminals have been used in inventory and stocking applications to gather data. The remotely gathered data is then transferred to central databases through fixed communication links. Inventory control tracking systems are typical examples of this usage paradigm.

What's New in Mobile Computing?

While the concept of mobile computing is well established, industry has recently evolved to the point where the involved technologies have become sufficiently economical and powerful that mobile computing is now ubiquitous. This is evidenced by the consumerization of mobile computing through form factors such as tablets, smart phones and net books.

A number of synergistic technology improvements have driven the rapid advances in mobile computing:

• Central Processing Unit (CPU) advances are providing powerful computational abilities with lower power consumption.
• Memory technology is making it practical to build devices with large memory capacities in reasonable power consumption characteristics.
• Screen technology advances are supplying higher resolution and vivid colour screens.
• Touch-screen interface technology is removing the need for separate keyboards.
• Battery technology is supplying useful power reserves while requiring smaller amounts of Space.
• Wireless network bandwidth is becoming ubiquitous, providing greater data transfer speeds at Reasonable costs. While advances in hardware have provided more capable devices at lower costs, the trends towards web-based computing have provided standardized tools and techniques for programming the new generation of mobile devices:
• Open communication protocols such as TCP/IP and HTTP.
• Decoupling the user device from server resources in a standardized fashion.
• Methods for presenting multimedia data types (audio and video) in addition to the more traditional forms-based data types.

"The combination of advances in hardware technology aligning with the current trends in web-based computing has led to a reduction in costs, thus increasing the availability of mobile computing paradigms."

Easy Battery Saver – Save Your Battery Effectively

R.Anand
III B.Sc(CS)'C'

If you are using Android and facing trouble due to some battery killing applications and other built-in profile settings, you can give it a try what may be helpful for you

and obviously for your device. Generally, most of the Android gadgets do not carry the battery for long days as some built-in features must be running to run your phone smoothly. For example **Android System**, **Google Services**, **Android Keyboard** and more. It depends on the version of Android. Without activating these essential tools, you Android gadget cannot run smoothly. On other hand, these features take a huge part of your small battery. And in this way, you are losing your battery effectively.

How to deal with this?

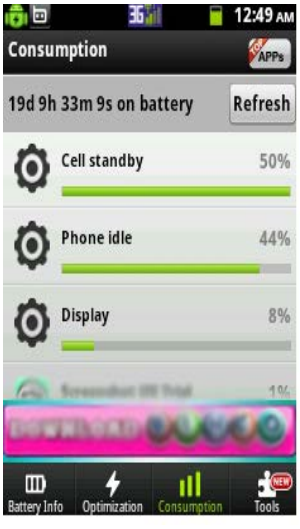
There are a few applications those are easily downloaded from Google Play Store. And today I am going to tell you something about one of those thousands applications. Meet Easy Battery Saver; it's really a nice and also useful tool for every kind of Android gadgets.

Little info about Easy Battery Saver:-

The below screen will be appeared after running it on your device.

From here, you will get everything about your current battery. For instance, how long it will give you service if you will run internet or play music or video and so on.

In **Optimization** tab, you will get five different profiles or modes i.e. **Normal Mode**, **General Power Saving Mode**, **Intelligent Power Saving Mode**, **Super Power Saving Mode** and **Advance Power Saving Mode**.



Normal Mode:- The battery optimization is disabled for this mode. Actually this works as it says. There is nothing inside this mode.

General Power Saving Mode:- Basic network connection and other normal settings can be set up when you are using this profile.

Intelligent Power Saving Mode:- Some quite advance settings can be set up. For example, you can control over **Wi-Fi**, **Mobile Data**, **Bluetooth** and more.

Super Power Saving Mode:- In this mode, you can only save online conversations and texts. Other settings will be appeared if your gadget has a light sensor.

Advance Power Saving Mode:- You can build your own profile that includes Lock & Unlock, Low Battery, Traffic, Wi-Fi, mobile data, Bluetooth, Auto Sync, Brightness, Timeout, Battery Saving brightness, Sleep Schedule and Night Schedule.

Android phone code

P.Thamarai selvan
II- Bsc (Cs)-"A"

***#06#** – Display's IMEI number.

***2767*3855#** – This code will Format your device to factory state (will delete everything on phone).

#*#4636#*# – Display's Phone information, usage statistics and battery.

#*#273282*255*663282*#*# – This code will Immediately backup of all media files.

#*#197328640#*# – This code will Enable test mode for service.

#*#1111#*# – Will display FTA software version.

#*#1234#*# – Will show PDA and firmware version.

#*#232339#*# – Wireless LAN tests.

#*#0842#*# – This code is used for Backlight/vibration test.

***#12580*369#** – Display's Software and hardware info.

#*#2664#*# – This code is used for Testing the touchscreen.

***#9900#** – System dump mode.

***#9090#** – Diagnostic configuration.

#*#34971539#*# – Will display Detailed camera information.

***#872564#** – USB logging control.

***#301279#** – HSDPA/HSUPA Control Menu.

***#7465625#** – This code will display phone's lock status.

***#0*#** – Enter the service menu on newer phones like Galaxy S III.

#*#7780#*# – Reset the /data partition to factory state.

Basic Codes:

#*#7780#*# - This code is used for factory restore setting. This will remove Google account setting and System and application data and settings.

***2767*3855#** - This code is used for factory format, and will remove all files and settings including the internal memory storage. It will also re install the firmware.

#*#4636#*# - This code show information about your phone and battery.

#*#273283*255*663282*#*# - This code opens a File copy screen where you can backup your media files e.g. Images, Sound, Video and Voice memo.

#*#197328640#*# - This code can be used to enter into Service mode. You can run various tests and change settings in the service mode.

#*#7594#*# - This code enable your "End call / Power" button into direct power off button without asking for selecting any option(silent mode, aero plane and power-off).

#*#8255#*# - This code can be used to launch G Talk Service Monitor.

#*#34971539#*# - This code is used to get camera information. Please avoid update camera firmware option.

W-LAN, GPS and Bluetooth Test Codes:

#*#232339#*# OR ***#*#526#*#*** OR ***#*#528#*#*** - W-LAN test (Use “Menu” button to start various tests).

#*#232338#*# - Shows Wi-Fi MAC address.

#*#1472365#*# - GPS test.

#*#1575#*# - Another GPS test.

#*#232331#*# - Bluetooth test.

***#*#232337#*#** - Shows Bluetooth device address.

Codes to launch various Factory Tests:

#*#0842#*# - Device test (Vibration test and Backlight test).

#*#0588#*# - Proximity sensor test.

#*#0*#*# - LCD test.

#*#2664#*# - Touch screen test.

#*#2663#*# - Touch screen version.

#*#0283#*# - Packet Loopback.

#*#0673#*# OR ***#*#0289#*#*** - Melody test.

#*#3264#*# - RAM version.

Code for firmware version information:

#*#1111#*# - FTA SW Version.

#*#2222#*# - FTA HW Version.

#*#44336#*# - PDA, Phone, CSC, Build Time, Changelist number.

#*#4986*2650468#*# - PDA, Phone, H/W, RFCallDate.

E-Ball Technology

A.Baskaran

III-BCA-"C"

A new concept of pc is coming now that is **E-Ball** Concept pc. The E-Ball concept pc is a sphere shaped computer which is the smallest design among all the laptops and desktops. This computer has all the feature like a traditional computer, elements like keyboard or mouse, dvd, large screen display. E Ball is designed that pc is be placed on two stands, opens by pressing and holding the two buttons located on each side of the E-Ball pc, this pc is the latest concept technology. The **E-Ball** is a sphere shaped computer concept which is the smallest design among all the laptops and desktops have ever made. This PC concept features all the traditional elements like mouse, keyboard, large screen display, DVD recorder, etc, all in an innovative manner. E-

Ball is designed to be placed on two stands, opens by simultaneously pressing and holding the two buttons located on each side. After opening the stand and turning ON the PC, pressing the detaching mouse button will allow you to detach the optical mouse from the PC body. This concept features a laser keyboard that can be activated by pressing the particular button. E-Ball is very small, it is having only 6 inch diameter sphere. It is having 120×120mm motherboard.

E Ball concept pc don't have any external display unit, it has a button when you press this button a projector will pop and it focus the computer screen on the wall which can be adjusted with navigation keys. If there is no wall then it has a paper sheet holder that divides into three pieces like an umbrella just after popping up, and it will show desktop on the paper sheet. Also, the E-Ball PC supports a paper holder and the paper sheet on the holder could act like a screen where you can watch movies or something. This concept PC will measure 160mm in diameter and it was designed for Microsoft Windows OS, sorry about the others. For the moment there is no word on pricing or when it's going to be available, however, I am sure that everybody would like to see a small spherical PC like this one

Elements of E-Ball

Aren't you tired of your PC? By his ugly shape and the way that it looks? Well, this is exactly what designer Apostol Tnokovski was feeling when he decided to create the smallest PC ever made. It's not going to be like a PDA, it's going to be a PC with all conventional components (mouse, keyboard, normal screen). The concept PC is called E-Ball and it's shaped like a sphere because in Tnokovski's opinion this is the best shape in nature and it draws everybody's attention. E-Ball will feature a dual core processor, 250-500GB HDD, 2GB of RAM, integrated graphic card and sound card, 2 x 50W speakers, HD-DVD recorder, wireless optical mouse and laser keyboard, LAN and WLAN card, modem, Web cam and integrated LCD projector.

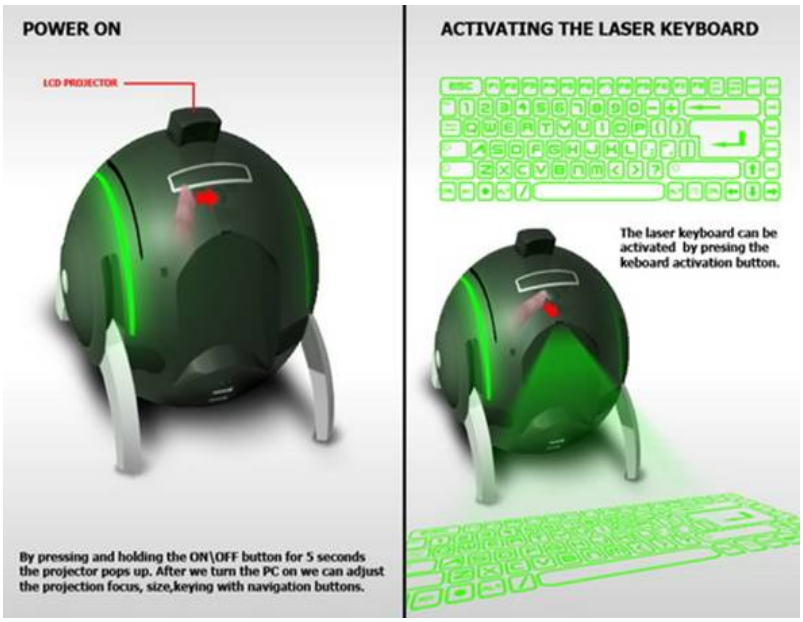
It contains wireless optical mouse and laser keyboard, and LCD projector. It has around 350-600GB of Hard Disk Drive. It contains 5GB RAM. It has two 50W speakers. It has LAN and WLAN card and a Web cam. When you want to carry it around you can easily "pack it" into a ball. This is a futuristic concept, and this, I think, is how the future computers will look like. This device has an optical keyboard and an holographic display. So you don't have a physical keyboard and no monitor! Still, the mouse is physical but it fits in to the computer when you want to carry it around. The bad thing about using a virtual keyboard is that you need a smooth surface, otherwise I don't know how will you be able to use it. It is strange enough to call this device a computer, because it is so small, but as far as I know it doesn't lack any hardware

part and tends to be a future machine found in any house or office. I don't know exactly how this computer will be powered but I think it will have a powerful battery so you will have a great stand by time.

Working of E-Ball :

E Ball concept pc don't have any external display unit, it has a button when you press this button a projector will pop and it focus the computer screen on the wall which can be adjusted with navigation keys. If there is no wall then it has a paper sheet holder that divides into three pieces like an umbrella just after popping up, and it will show desktop on the paper sheet. Also, the E-Ball PC supports a paper holder and the paper sheet on the holder could act like a screen where you can watch movies or something. This concept PC will measure 160mm in diameter and it was designed for Microsoft Windows OS, sorry about the others. For the moment there is no word on pricing or when it's going to be available, however, I am sure that everybody would like to see a small spherical PC like this one.

E-Ball concept pc has a laser keyboard that is fully a concept keyboard that is visible when the pc is in working. The keyboard is not physical - it is interpreted by lasers that appear after you press the respective button. It recognizes your fingers with the help of an IR sensor when you are typing at a particular place, while the mouse is a pop out wonder making this an exiting piece of technology.



The software interface of E-Ball concept pc is highly stylized with icons that can be remembered easily that support all type of windows operating system. E-Ball concept pc work very easy while you are making video presentations, listening music watching large screen movies, and chatting on the net. As years passes, the computer size is becoming smaller. This ball is known as E-Ball and its design is given by Apostol Tnokovski. He was trying to create the smallest PC in the world when he came across this idea. It is shaped like a sphere because in Tnokovski's opinion this is the best shape in nature and it draws everybody's attention. you'll see the pop-out laser mouse, a pico projector inside that illuminates either the wall or a sheet of paper for a screen, and that laser keyboard that would almost certainly be a clumsy input

device. Fix that, and find a motherboard that'll fit inside this palm-sized baby, and Apostol might be onto something here. E-Ball will feature a dual core processor, 250-500GB HDD, 2GB of RAM, integrated graphic card and sound card, 2 x 50W speakers, HD-DVD recorder, wireless optical mouse and laser keyboard, LAN and WLAN card, modem, Web cam and integrated LCD projector.

COMPUTER GLOSSARY

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Applet
A small Java application that is downloaded by an ActiveX or Java-enabled web browser. Once it has been downloaded, the applet will run on the user's computer. Common applets include financial calculators and web drawing programs.

Application
Computer software that performs a task or set of tasks, such as word processing or drawing. Applications are also referred to as programs.

ASCII
American Standard Code for Information Interchange, an encoding system for converting keyboard characters and instructions into the binary number code that the computer understands.

Bandwidth
The capacity of a networked connection. Bandwidth determines how much data can be sent along the networked wires. Bandwidth is particularly important for Internet connections, since greater bandwidth also means faster downloads.

Binarycode
The most basic language a computer understands, it is composed of a series of 0s and 1s. The computer interprets the code to form numbers, letters, punctuation marks, and symbols.

Bit
The smallest piece of computer information, either the number 0 or 1. In short ther are called binary digits.

Boot
To start up a computer. Cold boot.restarting computer after having turned off the power. Warm boot.restarting computer without having turned off the power.

Browser
Software used to navigate the Internet. Netscape Navigator and Microsoft Internet Explorer are today's most popular browsers for accessing the World Wide Web.

Bug
A malfunction due to an error in the program or a defect in the equipment.

Byte
Most computers use combinations of eight bits, called bytes, to represent one character of data or instructions. For example, the word .cat. has three characters, and it would be represented by three bytes.

Cache
A small data-memory storage area that a computer can use to instantly re-access data instead of re-reading the data from the original source, such as a hard drive. Browsers use a cache to store web pages so that the user may view them again without reconnecting to the Web.

CAD-CAM
Computer Aided Drawing-Computer Aided Manufacturing. The instructions stored in a computer that will be translated to very precise operating instructions to a robot, such as for assembling cars or laser-cutting signage.

CD-ROM
Compact Disc Read-Only Memory. An optically read disc designed to hold information such as music, reference materials, or computer software. A single CD-ROM can hold around 640 megabytes of data, enough for several encyclopedias. Most software programs are now delivered on CD-ROMs.

CGI
Common Gateway Interface. A programming standard that allows visitors to fill out form fields on a Web page and have that information interact with a database, possibly coming back to the user as another Web page. CGI may also refer to Computer-Generated Imaging, the process in which sophisticated computer programs create still and animated graphics, such as special effects for movies.

Chat
Typing text into a message box on a screen to engage in dialog with one or more people via the Internet or other network.

Chip
A tiny wafer of silicon containing miniature electric circuits that can store millions of bits of information.

Client
A single user of a network application that is operated from a server. A client/server

architecture allows many people to use the same data simultaneously. The program's main component (the data) resides on a centralized server, with smaller components (user interface) on each client.

Cookie
A text file sent by a Web server that is stored on the hard drive of a computer and relays back to the Web server things about the user, his or her computer, and/or his or her computer activities.

CPU
Central Processing Unit. The brain of the computer.

Cracker
A person who .breaks in. to a computer through a network, without authorization and with mischievous or destructive intent.

Crash
A hardware or software problem that causes information to be lost or the computer to malfunction. Sometimes a crash can cause permanent damage to a computer.

Cursor
A moving position-indicator displayed on a computer monitor that shows a computer operator where the next action or operation will take place.

Cyberspace
Slang for internet ie. An international conglomeration of interconnected computer networks. Begun in the late 1960s, it was developed in the 1970s to allow government and university researchers to share information. The Internet is not controlled by any single group or organization. Its original focus was research and communications, but it continues to expand, offering a wide array of resources for business and home users.

Database
A collection of similar information stored in a file, such as a database of addresses. This information may be created and stored in a database management system (DBMS).

Debug
Slang. To find and correct equipment defects or program malfunctions.

Default
The pre-defined configuration of a system or an application. In most programs, the defaults can be changed to reflect personal preferences.

Desktop
The main directory of the user interface. Desktops usually contain icons that represent links to the hard drive, a network (if there is one), and a trash or recycling can for files to

be deleted. It can also display icons of frequently used applications, as requested by the user.

Desktoppublishing
The production of publication-quality documents using a personal computer in combination with text, graphics, and page layout programs.

Directory
A repository where all files are kept on computer..

Diskdrive
The equipment that operates a hard or floppy disc.

Domain
Represents an IP (Internet Protocol) address or set of IP addresses that comprise a domain. The domain name appears in URLs to identify web pages or in email addresses. For example, the email address for the First Lady is first.lady@whitehouse.gov, .whitehouse.gov. being the domain name.

Domainname
The name of a network or computer linked to the Internet. Domains are defined by a common IP address or set of similar IP (Internet Protocol) addresses.

Download
The process of transferring information from a web site (or other remote location on a network) to the computer. It is possible to .download a file. or .view a download.

DOS
Disk Operating System. An operating system designed for early IBM-compatible PCs.

Drop-downmenu
A menu window that opens vertically on-screen to display context-related options. Also called pop-up menu or pull-down menu.

DSL
Digital Subscriber Line. A method of connecting to the Internet via a phone line. A DSL connection uses copper telephone lines but is able to relay data at much higher speeds than modems and does not interfere with telephone use.

DVD
Digital Video Disc.Similar to a CD-ROM, it stores and plays both audio and video.

E-book
An electronic (usually hand-held) reading device that allows a person to view digitally stored reading materials.

Email
Electronic mail; messages, including memos or letters, sent electronically between networked computers that may be across the office or around the world.

Encryption
The process of transmitting scrambled data so that only authorized recipients can unscramble it. For instance, encryption is used to scramble credit card information when purchases are made over the Internet.

Ethernet
A type of network.

Ethernetcard
A board inside a computer to which a network cable can be attached.

File
A set of data that is stored in the computer.

Firewall
A set of security programs that protect a computer from outside interference or access via the Internet.

Folder
A structure for containing electronic files. In some operating systems, it is called a .directory.

Fonts
Sets of typefaces (or characters) that come in different styles and sizes.

Freeware
Software created by people who are willing to give it away for the satisfaction of sharing or knowing they helped to simplify other people's lives. It may be freestanding software, or it may add functionality to existing software.

FTP
File Transfer Protocol. A format and set of rules for transferring files from a host to a remote computer.

Gigabyte(GB)
1024 megabytes. Also called gig.

Glitch
The cause of an unexpected malfunction.

Gopher
An Internet search tool that allows users to access textual information through a series of menus, or if using FTP, through downloads.

GUI
Graphical User Interface. A system that simplifies selecting computer commands by enabling the user to point to symbols or illustrations (called icons) on the computer screen with a mouse.

Groupware
Software that allows networked individuals to form groups and collaborate on documents, programs, or databases.

Hacker
A person with technical expertise who experiments with computer systems to determine how to develop additional features. Hackers are occasionally requested by system administrators to try and .break into. systems via a network to test security. The term hacker is sometimes incorrectly used interchangeably with cracker. A hacker is called a .white hat. and a cracker a .black hat.

Hardcopy
A paper printout of what you have prepared on the computer.

Harddrive
Another name for the hard disc that stores information information in a computer.

Hardware
The physical and mechanical components of a computer system, such as the electronic circuitry, chips, monitor, disks, disk drives, keyboard, modem, and printer.

Homepage
The main page of a Web site used to greet visitors, provide information about the site, or to direct the viewer to other pages on the site.

HTML
Hypertext Markup Language. A standard of text markup conventions used for documents on the World Wide Web. Browsers interpret the codes to give the text structure and formatting (such as bold, blue, or italic).

HTTP
Hypertext Transfer Protocol. A common system used to request and send HTML documents on the World Wide Web. It is the first portion of all URL addresses on the World Wide Web

Hyperlink
Text or an image that is connected by hypertext coding to a different location. By

selecting the text or image with a mouse, the computer .jumps to. (or displays) the linked text.

Hypermedia
Integrates audio, graphics, and/or video through links embedded in the main program.

Hypertext
A system for organizing text through links, as opposed to a menu-driven hierarchy such as Gopher. Most Web pages include hypertext links to other pages at that site, or to other sites on the World Wide Web.

Icons
Symbols or illustrations appearing on the computer screen that indicate program files or other computer functions.

Input
Data that goes into a computer device.

Inputdevice
A device, such as a keyboard, stylus and tablet, mouse, puck, or microphone, that allows input of information (letters, numbers, sound, video) to a computer.

Instantmessenging(IM)
A chat application that allows two or more people to communicate over the Internet via real-time keyed-in messages.

Internet
An international conglomeration of interconnected computer networks. Begun in the late 1960s, it was developed in the 1970s to allow government and university researchers to share information. The Internet is not controlled by any single group or organization. Its original focus was research and communications, but it continues to expand, offering a wide array of resources for business and home users.

IP(InternetProtocol)address
An Internet Protocol address is a unique set of numbers used to locate another computer on a network. The format of an IP address is a 32-bit string of four numbers separated by periods. Each number can be from 0 to 255 (i.e., 1.154.10.266). Within a closed network IP addresses may be assigned at random, however, IP addresses of web servers must be registered to avoid duplicates.

Java
An object-oriented programming language designed specifically for programs (particularly multimedia) to be used over the Internet. Java allows programmers to create small programs or applications (applets) to enhance Web sites.

Javascript/ECMAscript
A programming language used almost exclusively to manipulate content on a web page. Common Javascript functions include validating forms on a web page, creating dynamic page navigation menus, and image rollovers.

kilobyte(KorKB)
Equal to 1,024 bytes.

Linux
A UNIX.-like, open-source operating system developed primarily by Linus Torvalds. Linux is free and runs on many platforms, including both PCs and Macintoshes. Linux is an open-source operating system, meaning that the source code of the operating system is freely available to the public. Programmers may redistribute and modify the code, as long as they don't collect royalties on their work or deny access to their code. Since development is not restricted to a single corporation more programmers can debug and improve the source code faster.

Laptopandnotebook
Small, lightweight, portable battery-powered computers that can fit onto your lap. They each have a thin, flat, liquid crystal display screen.

Macro
A script that operates a series of commands to perform a function. It is set up to automate repetitive tasks.

MacOS
An operating system with a graphical user interface, developed by Apple. for Macintosh. computers. Current System .X.1. (10) combines the traditional Mac interface with a strong underlying UNIX. operating system for increased performance and stability.

Megabyte(MB)
Equal to 1,048,576 bytes, usually rounded off to one million bytes (also called a .meg.).

Memory
Temporary storage for information, including applications and documents. The information must be stored to a permanent device, such as a hard disc or CD-ROM before the power is turned off, or the information will be lost. Computer memory is measured in terms of the amount of information it can store, commonly in megabytes or gigabytes.

Menu
A context-related list of options that users can choose from.

Menubar
The horizontal strip across the top of an application's window. Each word on the strip has a context sensitive drop-down menu containing features and actions that are available for the application in use.

Merge
To combine two or more files into a single file.

MHz
An abbreviation for Megahertz, or one million hertz. One MHz represents one million clock cycles per second and is the measure of a computer microprocessor's speed. For example, a microprocessor that runs at 300 MHz executes 300 million cycles per second. Each instruction a computer receives takes a fixed number of clock cycles to carry out, therefore the more cycles a computer can execute per second, the faster its programs run. Megahertz is also a unit of measure for bandwidth.

Microprocessor
A complete central processing unit (CPU) contained on a single silicon chip.

Minimize
A term used in a GUI operating system that uses windows. It refers to reducing a window to an icon, or a label at the bottom of the screen, allowing another window to be viewed.

Modem
A device that connects two computers together over a telephone or cable line by converting the computer's data into an audio signal. Modem is a contraction for the process it performs: modulate-demodulate.

Monitor
A video display terminal.

Mouse
A small hand-held device, similar to a trackball, used to control the position of the cursor on the video display; movements of the mouse on a desktop correspond to movements of the cursor on the screen.

MP3
Compact audio and video file format. The small size of the files makes them easy to download and e-mail. Format used in portable playback devices.

Multimedia
Software programs that combine text and graphics with sound, video, and animation. A multimedia PC contains the hardware to support these capabilities.

MS-DOS
An early operating system developed by Microsoft Corporation (Microsoft Disc Operating System).

Network
A system of interconnected computers.

Opensource
Computer programs whose original source code was revealed to the general public so that it could be developed openly. Software licensed as open source can be freely changed or adapted to new uses, meaning that the source code of the operating system is freely available to the public. Programmers may redistribute and modify the code, as long as they don't collect royalties on their work or deny access to their code. Since development is not restricted to a single corporation more programmers can debug and improve the source code faster.

Operatingsystem
A set of instructions that tell a computer on how to operate when it is turned on. It sets up a filing system to store files and tells the computer how to display information on a video display. Most PC operating systems are DOS (disc operated system) systems, meaning the instructions are stored on a disc (as opposed to being originally stored in the microprocessors of the computer). Other well-known operating systems include UNIX, Linux, Macintosh, and Windows.

Output
Data that come out of a computer device. For example, information displayed on the monitor, sound from the speakers, and information printed to paper.

Telnet
A way to communicate with a remote computer over a network.

Trackball
Input device that controls the position of the cursor on the screen; the unit is mounted near the keyboard, and movement is controlled by moving a ball.

Terabytes(TB)
A thousand gigabytes.

Teraflop
A measure of a computer's speed. It can be expressed as a trillion floating-point operations per second.

TrojanHorse
See virus.

UNIX.
A very powerful operating system used as the basis of many high-end computer applications.

Upload
The process of transferring information from a computer to a web site (or other remote location on a network). v. To transfer information from a computer to a web site (or other remote location on a network).

URL
Uniform Resource Locator.
1. The protocol for identifying a document on the Web.
2. A Web address (e.g., www.tutorialspoint.com). A URL is unique to each user. See also domain.

UPS
Universal Power Supply or Uninterruptible Power Supply. An electrical power supply that includes a battery to provide enough power to a computer during an outage to back-up data and properly shut down.

USB
A multiple-socket USB connecter that allows several USB-compatible devices to be connected to a computer.

USENET
A large unmoderated and unedited bulletin board on the Internet that offers thousands of forums, called newsgroups. These range from newsgroups exchanging information on scientific advances to celebrity fan clubs.

Videoteleconferencing
A remote "face-to-face chat," when two or more people using a webcam and an Internet telephone connection chat online. The webcam enables both live voice and video.

Virtualreality(VR)
A technology that allows one to experience and interact with images in a simulated three-dimensional environment. For example, you could design a room in a house on your computer and actually feel that you are walking around in it even though it was never built. (The Holodeck in the science-fiction TV series Star Trek: Voyager would be the ultimate virtual reality.) Current technology requires the user to wear a special helmet, viewing goggles, gloves, and other equipment that transmits and receives information from the computer.

Virus
An unauthorized piece of computer code attached to a computer program or portions of a computer system that secretly copies itself from one computer to another by shared discs and over telephone and cable lines. It can destroy information stored on the computer, and in extreme cases, can destroy operability. Computers can be protected from viruses if the operator utilizes good virus prevention software and keeps the virus definitions up to date. Most viruses are not programmed to spread themselves. They have to be sent to another computer by e-mail, sharing, or applications. The worm is an exception, because it is programmed to replicate itself by sending copies to other computers listed in the e-mail address book in the computer. There are many kinds of viruses, for example: Boot viruses place some of their code in the start-up disk sector to automatically execute when booting. Therefore, when an infected machine boots, the virus loads and runs. File viruses attached to program files (files with the extension ..exe.). When you run the

infected program, the virus code executes.
Macro viruses copy their macros to templates and/or other application document files.
Trojan Horse is a malicious, security-breaking program that is disguised as something benign such as a screen saver or game.
Worm launches an application that destroys information on your hard drive. It also sends a copy of the virus to everyone in the computer's e-mail address book.

WAV
A sound format (pronounced .wave.) used to reproduce sounds on a computer.

Webcam
A video camera/computer setup that takes live images and sends them to a Web browser.

Window
A portion of a computer display used in a graphical interface that enables users to select commands by pointing to illustrations or symbols with a mouse. "Windows" is also the name Microsoft adopted for its popular operating system.

WorldWideWeb("WWW"or"theWeb")
A network of servers on the Internet that use hypertext-linked databases and files. It was developed in 1989 by Tim Berners-Lee, a British computer scientist, and is now the primary platform of the Internet. The feature that distinguishes the Web from other Internet applications is its ability to display graphics in addition to text.

Wordprocessor
A computer system or program for setting, editing, revising, correcting, storing, and printing text.

Worm
See virus.

WYSIWYG
What You See Is What You Get. When using most word processors, page layout programs (See desktop publishing), and web page design programs, words and images will be displayed on the monitor as they will look on the printed page or web page.

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- 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.

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Google Glass

Google Glass is a wearable computer with an optical head-mounted display (OHMD) that is being developed by Google in the Project Glass research and development project, with a mission of producing a mass-market ubiquitous computer.

Google Glass displays information in a smartphone-like hands-free format, that can communicate with the Internet via natural language voice commands.

While the frames do not currently have lenses fitted to them, Google is considering partnerships with sunglass retailers such as Ray-Ban or Warby Parker, and may also open retail stores to allow customers to try on the device.

The Explorer Edition cannot be used by people who wear prescription glasses, but Google has confirmed that Glass will eventually work with frames and lenses that match the wearer's prescription; the glasses will be modular and therefore possibly attachable to normal prescription glasses.

Glass is being developed by Google X,which has worked on other futuristic technologies such as driverless cars.