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Ishare

Monthly Magazine

Ishare

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

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How to shutdown PC by just sms

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When you have everything set up, you’ll be able to send a text thought with a select keyword such as ‘shutdown’ to your PC. This then activates the shutdown procedure. Here’s how it facility.

First, you start a simple text file with a one line mandate (this is individual in the record) and save it to your hard handbook. Then, you set up a Kwiry tab and sync it with your Email tab which you have set up in Outlook Prompt.

A rule must then be made in Outlook Prompt which will notice any incoming emails with that keyword and then do the shutdown mandate in the text file when it does.

By sending a text with the keyword to your Kwiry tab, a like pea in a pod email is sent to your own email tab, thus you can shut down your PC via SMS when you’re out and about.

It’s best to point out a block out word so a habitual email doesn’t casually shut down your PC.

You could also use this for cueing up a record game or a program which takes a long time to load before you in fact get home to your PC by choosing a additional application above and beyond from the shutdown file when making a rule.

Just a quick word of warning before I sign off: many of the claimed cell phone hacks on the internet are completely fake. When researching this condition (and through some SPAM a few years back) I came diagonally lots of bogus guides which any waste your time or potentially mess up your phone.

Li-Fi Technology

Venu Gopal Chetty P.V.S

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Abstract of Li-Fi Technology:

Whether you're using wireless internet in a coffee shop, stealing it from the guy next door, or competing for bandwidth at a conference, you've probably gotten frustrated at the slow speeds you face when more than one device is tapped into the network. As more and more people and their many devices access wireless internet, clogged airwaves are going to make it increasingly difficult to latch onto a reliable signal. But radio waves are just one part of the spectrum that can carry our data. What if we could use other waves to surf the internet? One German physicist, DR. Harald Haas, has come up with a solution he calls "Data Through Illumination"—taking the fiber out of fiber optics by sending data through an LED light bulb that varies in intensity faster than the human eye can follow. It's the same idea behind infrared remote controls, but far more powerful. Haas says his invention, which he calls D-Light, can produce data rates faster than 10 megabits per second, which is speedier than your average broadband connection. He envisions a future where data for laptops, smartphones, and tablets is transmitted through the light in a room. And security would be a snap—if you can't see the light, you can't access the data.

Li-Fi is a VLC, visible light communication, technology developed by a team of scientists including Dr Gordon Povey, Prof. Harald Haas and Dr Mostafa Afgani at the University of Edinburgh. The term Li-Fi was coined by Prof. Haas when he amazed people by streaming high-definition video from a standard LED lamp, at TED Global in July 2011. Li-Fi is now part of the Visible Light Communications (VLC) PAN IEEE 802.15.7 standard. "Li-Fi is typically implemented using white LED light bulbs. These devices are normally used for illumination by applying a constant current through the LED. However, by fast and subtle variations of the current, the optical output can be made to vary at extremely high speeds. Unseen by the human eye, this variation is used to carry high-speed data," says Dr Povey, , Product Manager of the University of Edinburgh's Li-Fi Program 'D-Light Project'.

Introduction of Li-Fi Technology:

In simple terms, Li-Fi can be thought of as a light-based Wi-Fi. That is, it uses light instead of radio waves to transmit information. And instead of Wi-Fi modems, Li-Fi would use transceiver-fitted LED lamps that can light a room as well as transmit and receive information. Since simple light bulbs are used, there can technically be any number of access points.

This technology uses a part of the electromagnetic spectrum that is still not greatly utilized- The Visible Spectrum. Light is in fact very much part of our lives for millions and millions of years and does not have any major ill effect. Moreover there is 10,000 times more space available in this spectrum and just counting on the bulbs in use, it also multiplies to 10,000 times more availability as an infrastructure, globally.

It is possible to encode data in the light by varying the rate at which the LEDs flicker on and off to give different strings of 1s and 0s. The LED intensity is modulated so rapidly that human eyes cannot notice, so the output appears constant.

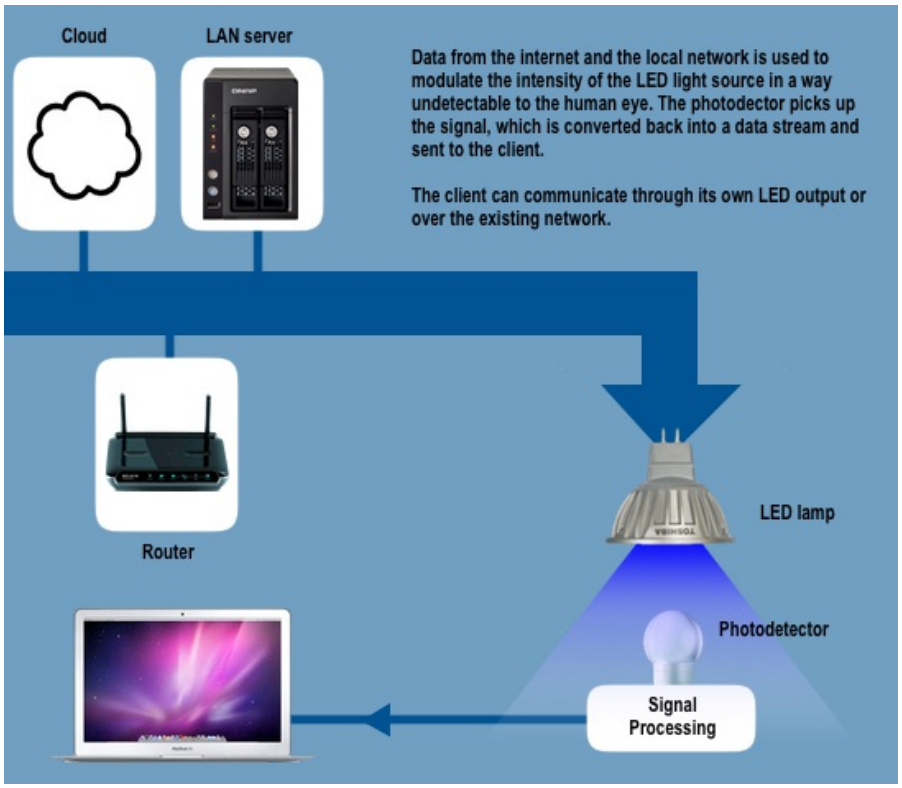
More sophisticated techniques could dramatically increase VLC data rates. Teams at the University of Oxford and the University of Edinburgh are focusing on parallel data transmission using arrays of LEDs, where each LED transmits a different data stream. Other groups are using mixtures of red, green and blue LEDs to alter the light's frequency, with each frequency encoding a different data channel.

Li-Fi, as it has been dubbed, has already achieved blisteringly high speeds in the lab. Researchers at the Heinrich Hertz Institute in Berlin, Germany, have reached data rates of over 500 megabytes per second using a standard white-light LED. Haas has set up a spin-off firm to sell a consumer VLC transmitter that is due for launch next year. It is capable of transmitting data at 100 MB/s - faster than most UK broadband connections.

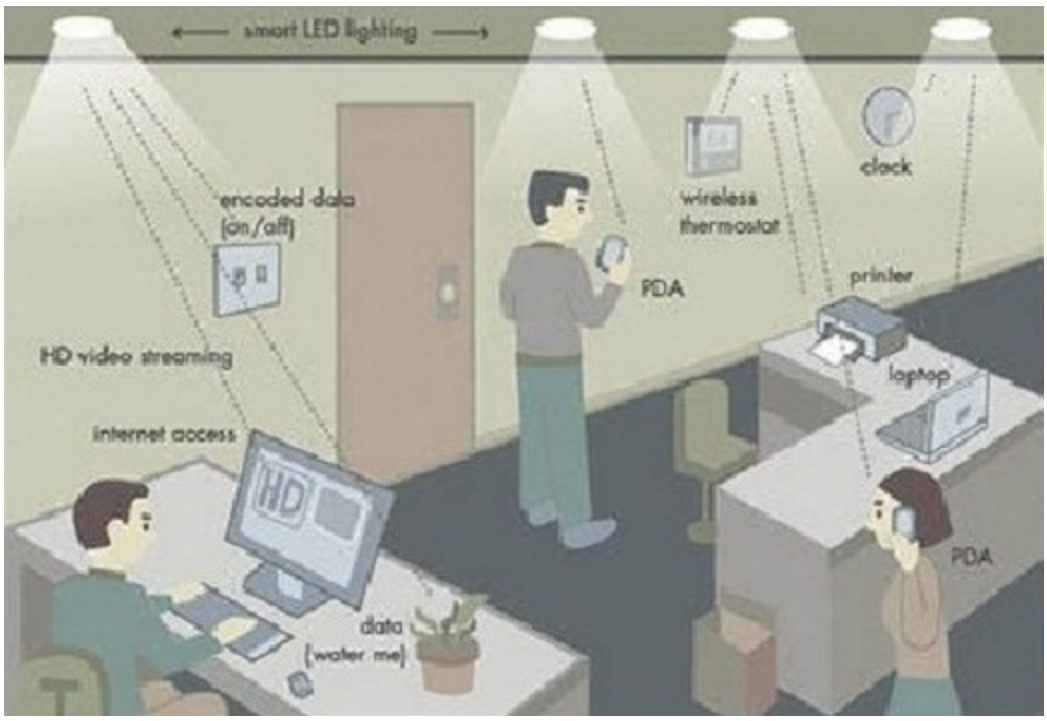
How Li-Fi Works?

Li-Fi is typically implemented using white LED light bulbs at the downlink transmitter. These devices are normally used for illumination only by applying a constant current. However, by fast and subtle variations of the current, the optical output can be made to vary at extremely high speeds. This very property of optical current is used in Li-Fi setup. The operational procedure is very simple-, if the

LED is on, you transmit a digital 1, if it's off you transmit a 0. The LEDs can be switched on and off very quickly, which gives nice opportunities for transmitting data. Hence all that is required is some LEDs and a controller that code data into those LEDs. All one has to do is to vary the rate at which the LED's flicker depending upon the data we want to encode. Further enhancements can be made in this method, like using an array of LEDs for parallel data transmission, or using mixtures of red, green and blue LEDs to alter the light's frequency with each frequency encoding a different data channel. Such advancements promise a theoretical speed of 10 Gbps – meaning one can download a full high-definition film in just 30 seconds.



To further get a grasp of Li-Fi consider an IR remote.(fig 3.3). It sends a single data stream of bits at the rate of 10,000-20,000 bps. Now replace the IR LED with a Light Box containing a large LED array. Light is inherently safe and can be used in places where radio frequency communication is often deemed problematic, such as in aircraft cabins or hospitals. So visible light communication not only has the potential to solve the problem of lack of spectrum space, but can also enable novel application.



The visible light spectrum is unused, it's not regulated, and can be used for communication at very high speeds.

INTERNET BANKING

Vijayakumar . T
III CS – 'A'

Online banking facilities offered by various financial institutions have many features and capabilities in common, but also have some that are application specific.

The common features fall broadly into several categories:

- A bank customer can perform some non-transactional tasks through online banking, including -
  - viewing account balances
  - viewing recent transactions

- downloading bank statements, for example in PDF format
- viewing images of paid cheques
- ordering cheque books
- download periodic account statements
- Downloading applications for M-banking, E-banking etc.

- Bank customers can transact banking tasks through online banking, including -
  - Funds transfers between the customer's linked accounts
  - Paying third parties, including bill payments (see, e.g., BPAY) and telegraphic/wire transfers
  - Investment purchase or sale
  - Loan applications and transactions, such as repayments of enrollments
  - Register utility billers and make bill payments
- Financial institution administration
- Management of multiple users having varying levels of authority
- Transaction approval process

Some financial institutions offer unique Internet banking services, for example

- Personal financial management support, such as importing data into personal accounting software. Some online banking platforms support account aggregation to allow the customers to monitor all of their accounts in one place whether they are with their main bank or with other institutions.

Attacks

Most of the attacks on online banking used today are based on misleading the user to steal login data and valid TANs. Two well known examples for those attacks are phishing and pharming. Cross-site scripting and key logger/Trojan horses can also be used to steal login information.

A method to attack signature based online banking methods is to manipulate the used software in a way, that correct transactions are shown on the screen and faked transactions are signed in the background.

The most recent kind of attack is the so-called Man in the Browser attack, where a Trojan horse permits a remote attacker to modify the destination account number and also the amount.

Countermeasures

There exist several countermeasures which try to avoid attacks. Digital certificates are used against phishing and pharming, the use of class-3 card readers is a measure to avoid manipulation of transactions by the software in signature

based online banking variants. To protect their systems against Trojan horses, users should use virus scanners and be careful with downloaded software or e-mail attachments.

Security

Security of a customer's financial information is very important, without which online banking could not operate. Financial institutions have set up various security processes to reduce the risk of unauthorized online access to a customer's records, but there is no consistency to the various approaches adopted.

The use of a secure website has become almost universally adopted. Though single password authentication is still in use, it by itself is not considered secure enough for online banking in some countries. Basically there are two different security methods in use for online banking.

- The PIN/TAN system where the PIN represents a password, used for the login and TANs representing one-time passwords to authenticate transactions. TANs can be distributed in different ways; the most popular one is to send a list of TANs to the online banking user by postal letter. The most secure way of using TANs is to generate them by need using a security token. These token generated TANs depend on the time and a unique secret, stored in the security token (two-factor authentication or 2FA). Usually online banking with PIN/TAN is done via a web browser using SSL secured connections, so that there is no additional encryption needed.

  Another way to provide TANs to an online banking user is to send the TAN of the current bank transaction to the user's (GSM) mobile phone via SMS. The SMS text usually quotes the transaction amount and details, the TAN is only valid for a short period of time. Especially in Germany, Austria and The Netherlands, many banks have adopted this "SMS TAN" service as it is considered very secure.

- Signature based online banking where all transactions are signed and encrypted digitally. The Keys for the signature generation and encryption can be stored on smartcards or any memory medium, depending on the concrete implementation.

HOW HACKERS DEFEATED THE ATM

Vaitheeswaran. S

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A £34million theft started with malware and ended with thousands of cash withdrawals from ATMs.

An international gang in the US and Europe is being hunted by the FBI for defrauding two banks of £34million. Seven people have been charged already, but in an age of computer hacking and international money transfers, their crime is rare because it ended in simple cash withdrawals from thousands of ATMs.

- At the root of the problem is the internet security of banks whose systems all interlink to allow customers to take money out from almost any ATM in many countries. The attack began with a break-in to the card processor's network. Using malware, hackers breached the worldwide processors for Rakbank in the United Arab Emirates and the Bank of Muscat in Oman.
- The criminals over-rode the security protocols that would normally have prevented any intrusion. In a sophisticated attack over several months, they were able to hunt for the prepaid debit card systems and delete limits on the accounts.
- The hackers then created new access codes which they loaded onto any card with a magnetic strip – an old hotel key card or an expired credit card would do as long as it carried the account data and correct access codes for the bank's systems.
- From this point, the only thing remaining was the need to start withdrawing the funds as quickly as possible: cells around the globe fanned out and began to make repeated cash machine withdrawals.
- The malware also allowed hackers to maintain access to the systems, and make sure withdrawals ceased as soon as the breach was discovered. Once cash was laundered, collaborators could be paid.
- Experts say that while large sums of money were lost, the attack does not come close to the totals generated by lower-level global fraud – and in fact this large-scale attack could end up prompting banks to tighten their security systems for the future.

Shutdown Computer With Command Prompt or shortcut for shutdown

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- Here is a trick to shutdown your computer at a specific time. You might be thinking what great about it, well you can shut down your computer without the use of any software. Just shutdown your computer at specific time from RUN Command. For example if you wish to shutdown at 09:45 am. Type this in

  Start=>Run
- Type Code: **at 11:35 shutdown -s**

  To cancel or Abort the shutdown:

  Type Code: **shutdown -a**

  Type Code: "**shutdown –s –m\\computername –t60**". This command will shutdown the computer on network if you have administrative

  access. Here computername needs to be replaced by the exact computer name of the computer on the network to work.

  Alternative method to create a shutdown timer or simply computershutdown shortcut

  Step 1: Right click on your desktop and choose "New=>shortcuts". **Step 2:** In the box that says "Type the location of the shortcut", type in "**shutdown -s -t 3600**" without the quotation marks and click next.

  Note: 3600 are the amount of seconds before your computer shuts down. So , this means 3600 seconds = 60 mints (1 hour). You can change the value in the above code. You can even create multiple shutdown shortcuts. For example a computer shutdown shortcut for 30 minutes, 1 hour, 2 hours, 5 hours etc.,

Step 3: Make up a name for the shortcut and you're done.

Optional Step 4 : You can change the icon by right clicking=>properities=>change icon=>browse

To abort or cancel the shutdown: To make an abort key to stop the shutdown timer just create another

shortcut and make the "location of the shortcut" to " shutdown -a" without the quotes.....

Detect And Delete Keyloggers

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These days we would hardly find a completely safe system with the discovery of new and new**viruses**, **Trojans**, **keyloggers** etc. Did I say Keyloggers? Yes, well the fact is Keyloggers are as much harmful as the viruses and Trojans are.

What are Keyloggers?

A Keylogger is an application that is made to record the keystrokes and store them in some file for later retrieval. Keylogger is completely hidden and keep on running in the background without anynotification. They are a form of **spyware** and stores the keystrokes in a file in some encrypted form. These can easily give away your secret information like passwords to the owner.

Detect and Delete the Keylogger

1. Open task manager and check the lists of the processes running in the background. If you do not know about the authenticity of any task look it up in the search engine.
2. Type "**msconfig**" in the command prompt to know more about them and to even disable some of them.
3. Scan your system with the **Anti Virus** and **Anti Spyware** installed on it.
4. Download an **Anti Keylogger** as well to fix it if any Keylogger is encountered.

5. You can try **KL-Detector** which can be downloaded from here. It is a nice Anti Keylogger that can detect and delete several keyloggers known till date. It's a light and good tool available.
Happy and Safe Computing!!

Arnetminer

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Free online service used to index and search academic social networks.

Arnetminer is designed to search and perform data mining operations against academic publications on the Internet, using social network analysis to identify connections between researchers, conferences, and publications. This allows it to provide services such as expert finding, geographic search, reviewer recommendation, association search, course search, academic performance evaluation, and topic modeling.

Arnetminer was created as a research project in social influence analysis, social network ranking, and social network extraction. A number of peer-reviewed papers have been published arising from the development of the system. It has been in operation for more than three years, and has indexed 1,300,000 researchers and more than three million publications. The research was funded by the Chinese National High-tech R&D Program and the National Science Foundation of China.

Arnetminer is commonly used in academia to identify relationships between and draw statistical correlations about research and researchers. It has attracted 2,766,356 independent IP accesses from 220 countries.

Operation

Arnetminer automatically extracts the researcher profile from the web. It collects and identifies the relevant pages, then uses a unified approach to extract

data from the identified documents. It also extracts publications from online digital libraries using heuristic rules.

It integrates the extracted researchers' profiles and the extracted publications. It employs the researcher name as the identifier. A probabilistic framework has been proposed to deal with the name ambiguity problem in the integration. The integrated data is stored into a researcher network knowledge base (RNKB).

The principal other product in the area are Google Scholar, Elsevier's Scirus, and the open source project CiteSeer.

A Citation Network Dataset

Each node is paper associated with rich attribute information (e.g., abstract, title, authors, etc.)

The data set is designed for research purpose only. The first version contains 629,814 papers and 632,752 citations. Each paper is associated with abstract, authors, year, venue, and title.

The data set can be used for clustering with network and side information, studying influence in the citation network, finding the most influential papers, topic modeling analysis, etc.

For the Search Query: K.Duraisamy. The Citation Network is given below:

For the Search Query: S.K.Jayanthi. The Citation Network is given below:

Extract mp3 Audio from Video Files

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It happens most of the times we just like to listen to the audio of a **video file** and add it into our music library. This is not a problem any more as this can be done using many tools available and of course without using them as well.

We can easily convert the video to audio by following methods:

1. Using an application **AoA Audio Extractor** that can convert **AVI, MPEG, MPG, FLV, DAT, WMV, MOV, MP4**, and **3GP** to **MP3**, **WAV** or **AC3** format.

- This tool 3.8 MB in size, is free, easy to use and is not a demo.
- It gives you a preview of the movie (that prevents us to run each time to see which file is it) and we can also change the bit rate of the audio file.
- We can also select to convert only some portion of the video if not all.
- The tool is fast and also maintains the same quality as in the video.

2. Using inbuilt **Windows Movie Maker**:

- Click on "Import Video" in the left pane to import the video file.
- Now just drag it on the Audio/Music field.
- If you want to save whole video into audio then just save it else you can trim it as required.
- The only disadvantage of this is that it supports only few recognized formats.

So go ahead and rip your favorite audio files from videos.

GREEN TECHNOLOGY

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What is meant by Green Technology?

- Green technology referred to technology contribute to a cleaner or less polluted world. It ranged from alternative energy (non-fossil fuel), waste treatmen a close loop production. Recyclable electronics product can be considered falling to this category as well.
- A continuously evolving group of methods and materials, from techniques for generating energy to non-toxic cleaning products.

GOALS:

- Sustainability
- Source Reduction
- Innovation
- Energy
- Green building
- Green chemistry

Sustainability - meeting the needs of society in ways that can continue indefinitely into the future without damaging or depleting natural resources. In short, meeting present needs without compromising the ability of future generations to meet their own needs.

Source reduction - reducing waste and pollution by changing patterns of production and consumption

Innovation - developing alternatives to technologies - whether fossil fuel or chemical intensive agriculture - that have been demonstrated to damage health and the environment.

Energy -Perhaps the most urgent issue for green technology, this includes the development of alternative fuels, new means of generating energy and energy efficiency.

Green building-Green building encompasses everything from the choice of building materials to where a building is located.

Green chemistry-The invention, design and application of chemical products and processes to reduce or to eliminate the use and generation of hazardous substances.

Technology	Economic Impacts	Environmental Impacts	Social Impacts
Geothermal	Large investment cost, very low operating costs, pay back period of about 10 years.	Energy consumption is lowered by 70% on average when compared to a conventional system. Adding heat to the ground has effects on the environment.	Quieter operation when compared to conventional system. Almost eliminates HVAC hot air exhausts into the atmosphere. Education.
Solar-Thermal	Up to 95% savings generated from reduction in electrical consumption from HVAC.	Reduction in electrical consumption removes tons of CO_2, SO_2,No_x, and particulates annually.	Education. Quieter operation when compared to conventional HVAC system. Reduces HVAC hot air exhausts into the atmosphere.
Green Roofs	Electrical savings due to increased insulation.	Reduces stormwater runoff, which reduces erosion. Increases water quality. Decreases heat island effect and noise pollution.	Decreases risk of loss of human life and property due to flooding. Education. Increases to health from reduction of heat island effect, noise pollution, and air quality.
Natural Lighting	Savings generated from reduction in electrical consumption.	About 15% of electrical consumption comes from electric lighting. Reduction in consumption removes tons of CO_2, SO_2, No_x, and particulates annually from atmosphere.	Education. Increase health, happiness, and performance of occupants.
Rain Gardens	Potential source of revenue from growing plants that produce edible food.	Reduces stormwater runoff, which reduces erosion. Increases water quality. Increases groundwater infiltration.	Decreases risk of loss of human life and property. Education. Improved air quality.
Building Materials	Improved insulation. Provides reductions in HVAC costs.	Reduces green house gases by reducing the production of building materials by using natural or recycled materials.	Improves indoor air quality, reduces asthma, flu, and head aches. Education. Reduces construction waste.
Grey Water	Decrease water bill because of water reuse.	Increase water quality, water conservation.	Education. Reduces wastewater sent to treatment plants.
Solar-Photovoltaic	Savings generated from reduction in electrical consumption and electricity generated.	12% reduction in annual electricity consumption, which removes tons of CO_2, SO_2, No_x, and particulates from the atmosphere annually.	Reduces energy demand from the grid especially during peak summer hours, reduces chances of black outs. Education.

Benefits of green technology

- Green technology implies to a system that uses innovative methods to create environment friendly products.

- Mainly, it comprises of various everyday cleaning products, energy sources, inventions, waste, clothing and a host of others.
- Benefits of green technology are listed below:

  - Green technology uses renewable natural resources that never depletes. So future generation can also benefit from them without harming the planet.
  - Green technology uses new and innovative energy generation techniques.
  - Green nanotechnology that uses green engineering and green chemistry is one of the latest in green technologies.
  - One of the important factors for environmental pollution is the disposal of waste. Green technology has answers to that as well. It can effectively change waste pattern and production in a way that it does not harm the planet and we can go green.

- Besides other forms of green technology in filed of generation of energy are done by solar power and fossil fuel. These have no adverse effect on the planet and it won't replenish.

What is the Botnet

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A botnet is a group of computers that are controlled from a single source and run related software programs .While botnets can be used for distributed computing purposes, such as a scientific processing, the term usually refers to multiple computers that have been infected with malicious software.

In order to create a malicious botnet, a hacker must first compromise several computers. This might be done by exploiting a security hole through a Web browser, IRC chat program, or a computer's operating system. For example, if a user has turned off the default firewall settings, his or her computer may be susceptible to such a botnet attack. Once the hacker has gained access to several computers, he can run automated programs or "bots" on all the systems at the same time.

A hacker may create a botnet for several different purposes, such as spreading viruses, sending e-mail spam, or crashing Web servers using a denial of service attack. Botnets can range from only a few computers to several thousand machines. While large botnets can cause the most damage, they are also easiest to locate and break apart. The unusual amount of bandwidth used by large botnets may trigger an alert at one or more ISPs, which might lead to the discovery and dismantling of the botnet.

In most situations, users do not know that their computers have become part of a botnet. This is because hackers typically hide their intrusion by masking the activity within regular processes, similar to a rootkit attack. Therefore, it is a good idea to install antivirus or anti-malware software that regularly checks for such intrusions on your computer. It is also wise to make sure your system firewall is turned on, which is usually the default setting.

Botnets are also called "zombiearmies".

Top10 Largest Botnet Outbreaks

Botnet	Percentage of Victim Population
ZeusBotnet[X]	19%
KoobfaceBotnetB	15%
ClickfraudBotnet[X]	9%
SpamfraudBotnet[X]	8%
MonkifBotnetA	8%
KoobfaceBotnetD	5%
TidservBotnet[X]	5%
MonkifBotnetB	4%
KoobfaceBotnetC	4%
Conficker BotnetA	4%

How to prevent and remove viruses

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

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What is a computer virus?

A computer virus is a small software program that spreads from one computer to another and interferes with computer operation. A computer virus might corrupt or delete data on a computer, use an email program to spread the virus to other computers, or even delete everything on the hard disk.

Computer viruses are frequently spread by attachments in email messages or by instant messaging messages. Therefore, you must never open an email attachment unless you know who sent the message or you are expecting the email attachment. Viruses can be disguised as attachments of funny images, greeting cards, or audio and video files. Computer viruses also spread through downloads on the Internet. They can be hidden in pirated software or in other files or programs that you might download.

What is a worm?

A worm is computer code that spreads without user interaction. Most worms begin as email attachments that infect a computer when they're opened. The worm scans the infected computer for files, such as address books or temporary webpages that contain email addresses. The worm uses the addresses to send infected email messages, and frequently mimics (or spoofs) the "From" addresses in later email messages so that those infected messages seem to be from someone you know.

Worms then spread automatically through email messages, networks, or operating system vulnerabilities, frequently overwhelming those systems before the cause is known. Worms aren't always destructive to computers, but they usually cause computer and network performance and stability problems.

What is a trojan horse?

A trojan horse is a malicious software program that hides inside other programs. It enters a computer hidden inside a legitimate program, such as a screen saver. Then it puts code into the operating system that enables a hacker to access

the infected computer. Trojan horses do not usually spread by themselves. They are spread by viruses, worms, or downloaded software.

What is spyware?

Spyware can install on your computer without your knowledge. These programs can change your computer's configuration or collect advertising data and personal information. Spyware can track Internet search habits and can also redirect your web browser to a different website than you intend to go to.

What is rogue security software?

A rogue security software program tries to make you think that your computer is infected by a virus and usually prompts you to download or buy a product that removes the virus. The names of these products frequently contain words like Antivirus, Shield, Security, Protection, or Fixer. This makes them sound legitimate. They frequently run right after you download them, or the next time that your computer starts. Rogue security software can prevent applications, such as Internet Explorer, from opening. Rogue security software might also display legitimate and important Windows files as infections.

Typical error messages or pop-up messages might contain the following phrases:

> Warning!
> Your computer is infected!
> This computer is infected by spyware and adware.

Note If you receive a message in a popup dialog box that resembles this warning, press **ALT + F4** on your keyboard to close the dialog box. Do not click anything inside the dialog box. If a warning, such as the one here, keeps appearing when you try to close the dialog box, it's a good indication that the message is malicious.

> Are you sure you want to navigate from this page?

Your computer is infected! They can cause data lost and file corruption and need to be treated as soon as possible. Press CANCEL to prevent it. Return to System Security and download it to secure your PC.

> Press OK to Continue or Cancel to stay on the current page.

If you see this kind of message, then don't download or buy the software.

What is malware?

Malware is a term that is used for malicious software that is designed to do damage or unwanted actions to a computer system. Examples of malware include the following:

- Viruses
- Worms
- Trojan horses
- Spyware
- Rogue security software

How to remove malware such as a virus, spyware, or rogue security software

Removing a computer virus or spyware can be difficult without the help of malicious software removal tools. Some computer viruses and other unwanted software reinstall themselves after the viruses and spyware are detected and removed. Fortunately, by updating the computer and by using malicious software removal tools, you can help permanently remove unwanted software.

Note: A computer virus may prevent you from accessing the Microsoft Update website to install the latest updates.

To remove a computer virus and other malicious software, follow these steps in order.

- Install the latest updates from Microsoft Update.
- Use the free Microsoft Safety Scanner - Microsoft offers a free online tool that scans and helps remove potential threats from your computer.
- Use the Windows Malicious Software Removal Tool.
- Manually remove the rogue security software - If the rogue security software can't be detected or removed by using Microsoft Safety Scanner or the Windows Malicious Software Removal Tool, try the following steps:

Install and run Microsoft Security Essentials or Windows Defender

How to protect your computer against malware

There are actions that you can take to help protect your computer against malware.

1. Turn on the firewall.
2. Keep your computer up to date.
3. Install Microsoft Security Essentials and keep it up to date.
4. Don’t be tricked into downloading malware.

Here are some tips that can help protect you from downloading software that you don't want:

- Only download programs from websites that you trust. If you're not sure whether to trust a program that you want to download, enter the name of the program into your favorite search engine to see whether anyone else has reported that it contains spyware.
- Read all security warnings, license agreements, and privacy statements that are associated with any software that you download.
- Never click "Agree" or "OK" to close a window that you suspect might be spyware. Instead, click the red "x" in the corner of the window or press **Alt + F4** on your keyboard to close a window.
- Be wary of popular "free" music and movie file-sharing programs, and make sure that you understand all the software packaged with those programs.
- Use a standard user account instead of an administrator account.

How to reset your Internet Explorer proxy settings

Malicious software might change Internet Explorer proxy settings, and these changes can prevent you from accessing Windows Update or any Microsoft Security sites.

To change your Internet Explorer proxy settings yourself, follow these steps:

Windows XP, Windows Vista, and Windows 7

1. Click the Start button, and then click Run.
2. In the Run box, copy and paste the following:

   reg add "HKCU\Software\Microsoft\Windows\CurrentVersion\Internet Settings" /v ProxyEnable /t REG_DWORD /d 0 /f

3. Click OK.
4. Click the Start button, and then click Run.
5. In the Run box, copy and paste the following:

   reg delete "HKCU\Software\Microsoft\Windows\CurrentVersion\Internet Settings" /v ProxyServer /f

6. Click OK.

Locking the folder by coding

S.Dhivyaraj
II-BCA-"B"

- Here the way to lock folders by coding, without resorting to any software:
- Select the folder you wish to lock. Assume that 'folder' is the private folder you want to secure, and its location is drive E:\.
- Create 2 '.bat' files in the same drive. Make a new text file in that location. Access that text file via Notepad. Enter the following code: [ren folder folder.{21EC2020-3AEA-1069-A2DD-08002B30309D}] Save this as 'lock.bat'
- Open one more text file and enter this code: [ren folder.{21EC2020-3AEA-1069-A2DD-08002B30309D} folder] Save this one as 'unlock.bat'.
- You currently have 2 batch files under the names 'lock' and 'unlock'. Double-click [lock.bat].
- The folder icon will turn into that of the Control Panel, and the contents are inaccessible for viewing.
- Simply double-click the [unlock.bat] file to revert to the original folder.

The Best Data Mining Tools You Can Use for Free in Your Company

S. Ranichandra

Lecturer, Dept of CS

Data mining or "Knowledge Discovery in Databases" is the process of discovering patterns in large data sets with artificial intelligence, machine learning, statistics, and database systems.

The overall goal of a data mining process is to extract information from a data set and transform it into an understandable structure for further use.

Here is a simple but fascinating example of how data mining helped dissipate wrong assumptions and conclusions about girls, and take action with tremendous social impact.

For long time, the high rate of dropout of girls in schools in developing countries were explained with sociological and cultural hypothesis: girls are not encouraged by indigenous societies, parents treat girls differently, girls are pushed to get married earlier or loaded with much more work than boys. Some others using economic theories, speculated that girls education is not seen by those societies as a good investment.

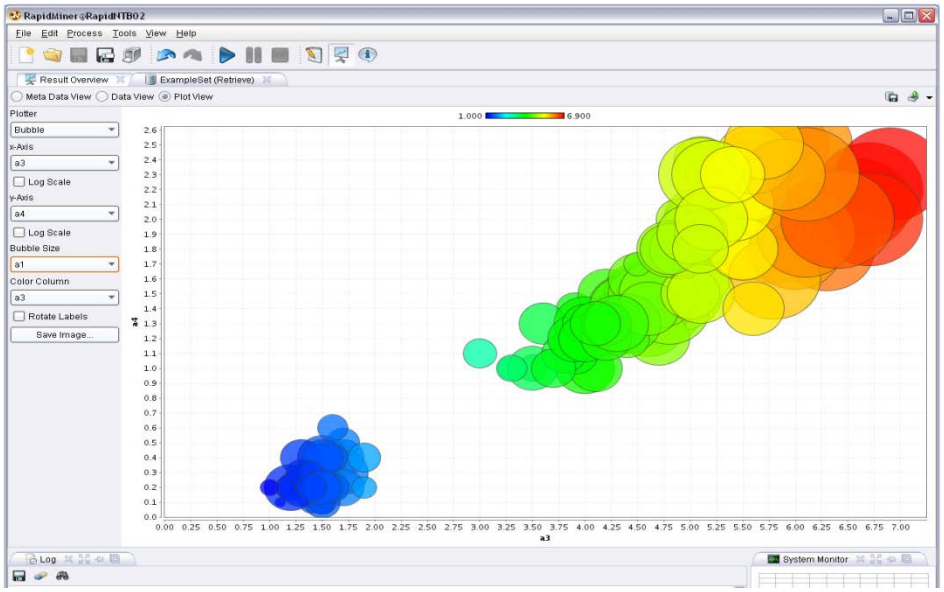
Then, in the years 90s, came a group of young data miners who plugged into several schools records on absenteeism, and slowly discovered that girls were missing schools for few days every month, with stunning regularity and predictability. A little bit more analysis reveals that girls were missing schools mostly during their menstruation period, and because there were no safe way for them to feel clean and comfortable to come to school during that period.

Consequence, "millions of girls living in developing countries like Uganda skip up to 20% of the school year simply because they cannot afford to buy mainstream sanitary products when they menstruate. This deliberate absenteeism has enormous consequences on girls' education and academic potential." - Afripads.com

In western countries and in Asia, companies and governments are using data mining to make great discoveries. We can do the same in Africa. There are numerous free tools to do so. I have collected the best of them here for you. Try it, start slowly but persist with patience. It could yield amazing and transformational results like A fripads is now helping African girls stay at school. (You can also download the MIT Open course materials on Data Mining here)

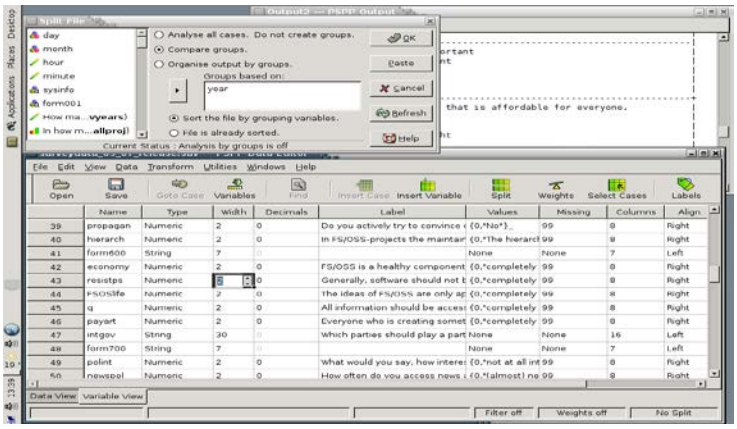
1. RapidMiner

RapidMiner is unquestionably the world-leading open-source system for data mining. It is available as a stand-alone application for data analysis and as a data mining engine for the integration into own products. Thousands of applications of RapidMiner in more than 40 countries give their users a competitive edge.



2. RapidAnalytics

Built around RapidMiner as a powerful engine for analytical ETL, data analysis, and predictive reporting, the new business analytics server



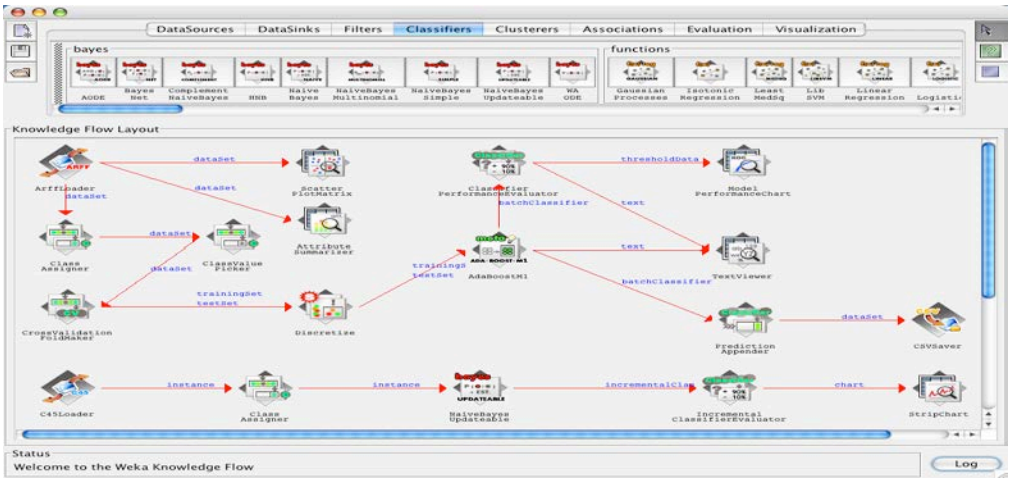
RapidAnalytics is the key product for all business critical data analysis tasks and a milestone for business analytics.

3. Weka

Weka is a collection of machine learning algorithms for data mining tasks. The algorithms can either be applied directly to a dataset or called from your own Java code. Weka contains tools for data pre-processing, classification, regression, clustering, association rules, and visualization. It is also well-suited for developing new machine learning schemes.

4. PSPP

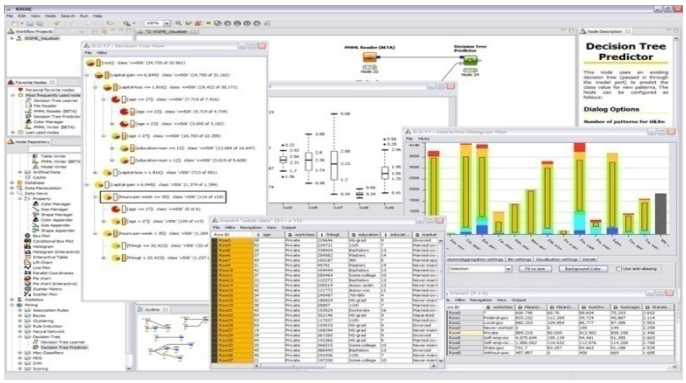
PSPP is a program for statistical analysis of sampled data. It has a graphical user interface and conventional command-line interface. It is written in C, uses GNU



Scientific Library for its mathematical routines, and plotutils for generating graphs. It is a Free replacement for the proprietary program SPSS (from IBM) predict with confidence what will happen next so that you can make smarter decisions, solve problems and improve outcomes.

5. KNIME

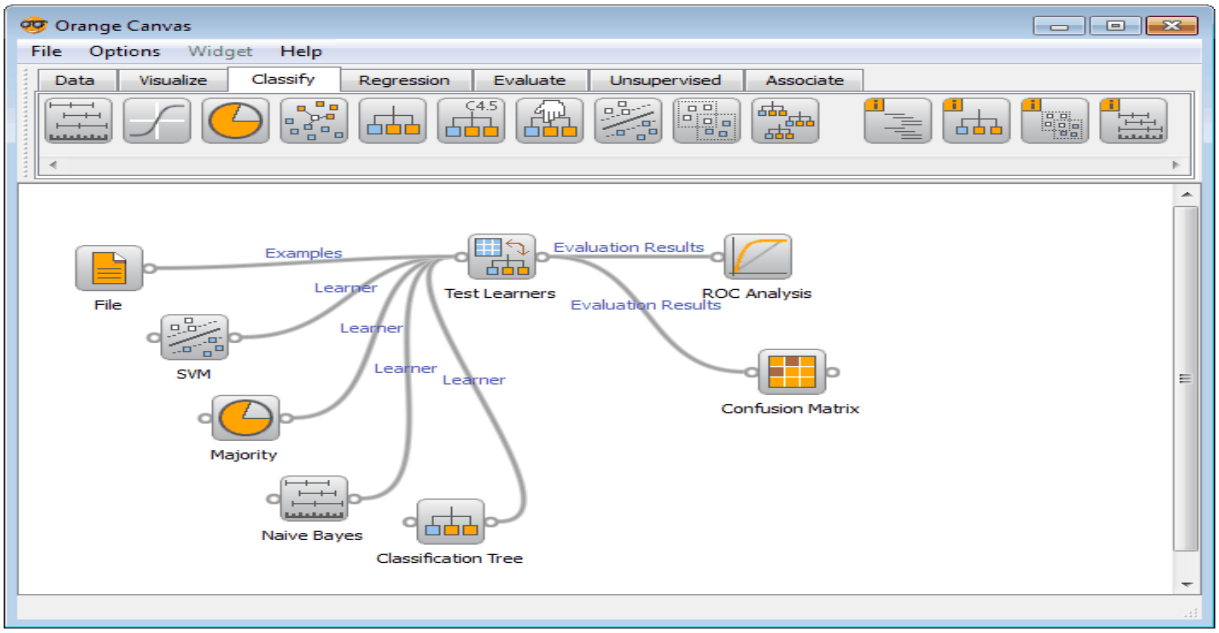
KNIME is a user-friendly graphical workbench for the entire analysis process: data access, data transformation, initial investigation,



powerful predictive analytics, visualisation and reporting. The open integration platform provides over 1000 modules (nodes)

6. Orange

Orange is an Open source data visualization and analysis for novice and experts.

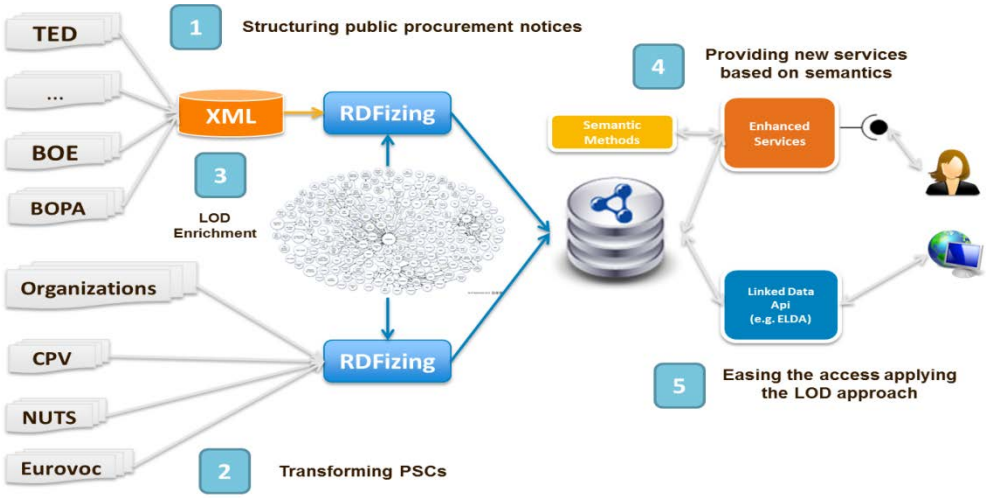


Data mining through visual programming or Python scripting. Components for machine learning. Add-ons for bioinformatics and text mining. Packed with features for data analytics.

7. Apache Mahout

Apache Mahout is an Apache project to produce free implementations of distributed or otherwise scalable machine learning algorithms on the Hadoop platform.

Currently Mahout supports mainly four use cases: Recommendation mining takes users' behavior and from that tries to find

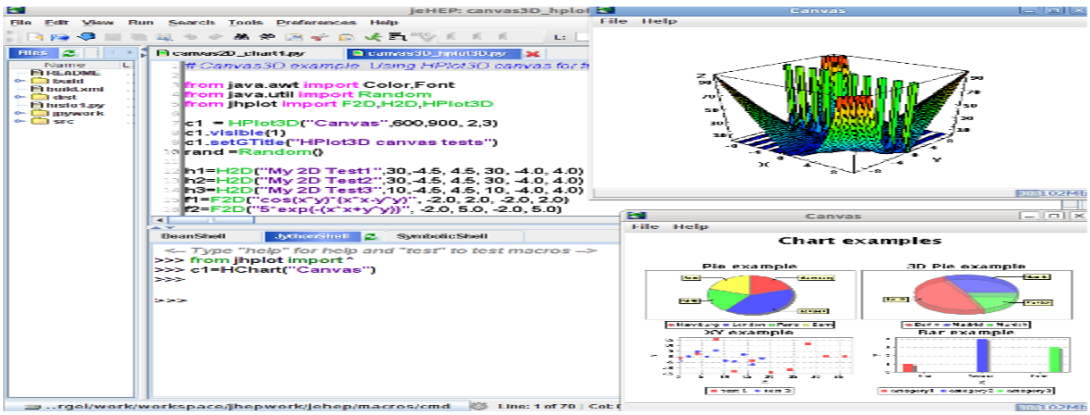


items users might like. Clustering takes e.g. text documents and groups them into groups of topically related documents. Classification learns from exisiting categorized documents what documents of a specific category look like and is able to assign unlabelled documents to the (hopefully) correct category. Frequent itemset mining takes a set of item groups (terms in a query session, shopping cart content) and identifies, which individual items usually appear together.

8. jHepWork

jHepWork (or "jWork") is an environment for scientific computation, data analysis and data visualization designed for scientists, engineers and students. The program incorporates many open-source software packages into a coherent interface using the concept of scripting, rather than only-GUI or macro-based concept.

jHepWork can be used everywhere where an analysis of large numerical data volumes, data mining, statistical analysis and mathematics are essential (natural sciences, engineering, modeling and analysis of financial markets).



9. Rattle

Rattle (the R Analytical Tool To Learn Easily) presents statistical and visual summaries of data, transforms data into forms that can be readily modelled, builds both unsupervised and supervised models from the data, presents the performance of models graphically, and scores new datasets.

It is a free and open source data mining toolkit written in the statistical language R using the Gnome graphical interface. It runs under GNU/Linux, Macintosh OS X,

and MS/Windows. Rattle is being used in business, government, research and for teaching data mining in Australia and internationally.

CHALLENGING PUZZLES

Mrs.J.Mary Dallfin Bruxella

Assistant Professor, Dept of CS

KSRCAS

1. A Quick Puzzle:

What do you have to add to nine to make it six?

2. Can you solve this puzzle?

In the jungle I caught it.

Then I sat and sought it.

When I could not find it,

To my home I brought it.

What was it?

3. The 'Stamps' puzzle:

This stamps puzzle will stump you. We all know that there are 12 one-rupee stamps in a dozen. But how many 50-paise stamps are there in a dozen?

4. Cars and Bumpers:

Five cars are parked bumper to bumper. How many bumpers are touching each other?

5.Test your knowledge of Maths :

If	5	-	5	=	20
	7	+	1	=	50
	8	/	1	=	50
	8	/	2	=	32
Then	6	x	5	=	?

6. The 'Mango Distribution' puzzle:

You have six mangoes in a special gift box, and there are half a dozen guests in your drawing room. Is there any way to give each guest a mango and have one remain the special box?

7. The First and the last

My first is the first of first; my second and third are zeroes two; my last is the first of the last. People don't call me wise. Can you recognize me?

8. Behind each other:

The husband and wife were quarreling as to who would stand behind whom. She wanted to stand behind him, while he wished to stand behind her. In the end, both of them decided to stand behind each other simultaneously. How did they do it?

9. A basket full of eggs:

The number of eggs in a basket doubles every minute. The basket is full of eggs in an hour. When was the basket half full?

10. The Mis-Pronounced Word:

What everyday word in the English Language is most often pronounced in incorrectly?

Answers:

1. The letter 'S'. By putting 'S' to IX, it becomes SIX.
2. A thorn

3. Twelve

4. Eight

5. 180. In the puzzle the first digit in each line has been squared. Therefore:

5^2 - 5 = 20;

7^2 + 1 = 50;

8^2 / 2 = 32;

and 6^2 x 5 = 180.

6. Yes. Give the sixth guest the gift box with the mango in it.

7.F O O L

8. Yes, they can stand behind each other if they stand back to back.

9. In 59 minutes.

10. INCORRECTLY

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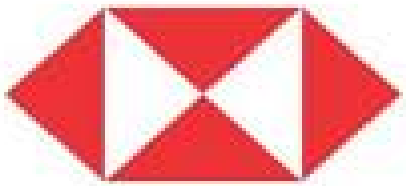
Identify the logos and their slogan



Mail your answers to ksrcas.ishare@gmail.com

Wait for the answers in the next issue

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