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COLLEGE OF ENGINEERING & TECHNOLOGY

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To Xplore...

2nd Edition-April 2011

DEPARTMENT OF INFORMATION TECHNOLOGY

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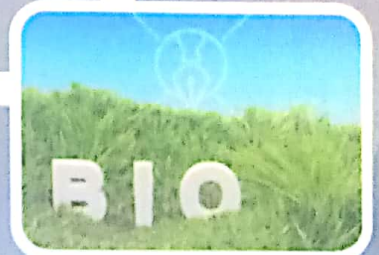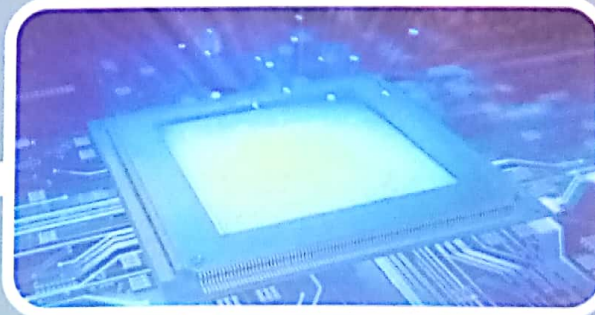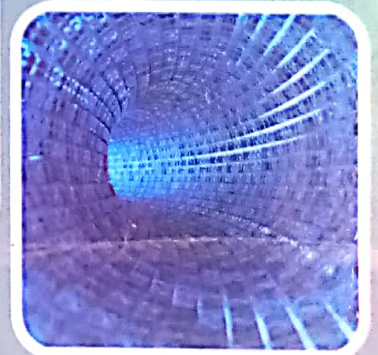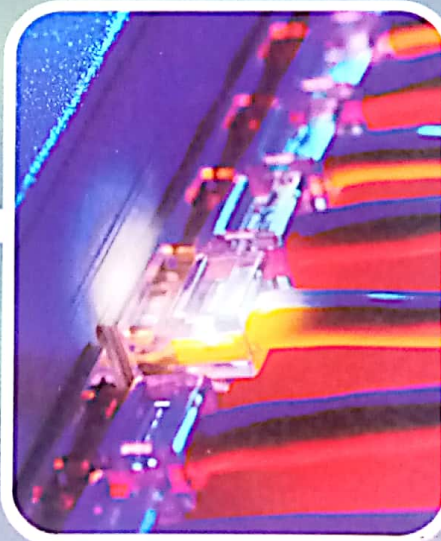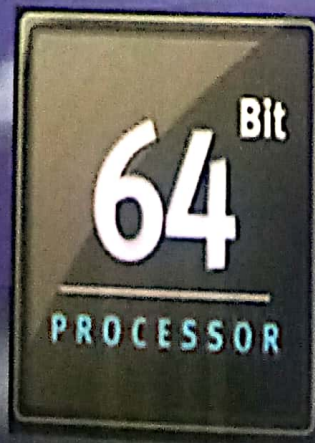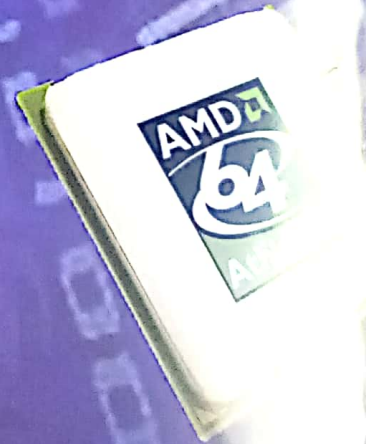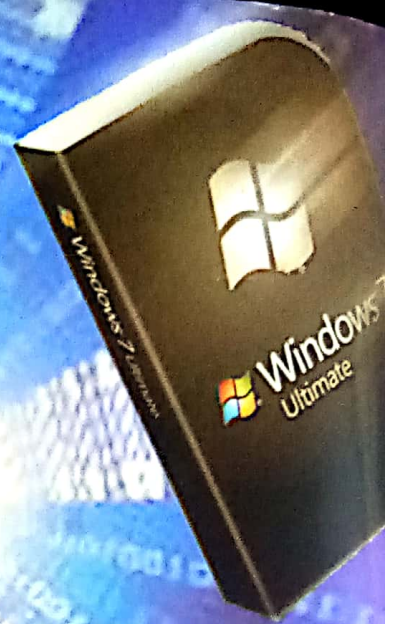
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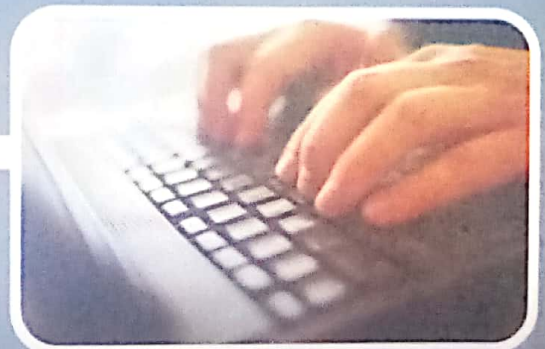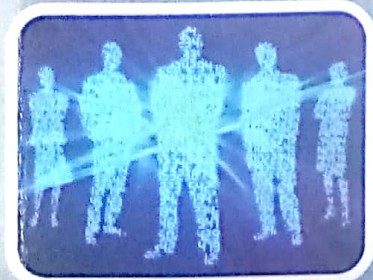
NextGEN COMPUTING

It is a pleasure to present the second Edition of VCET Information Technology's departmental magazine, "LOGIN...To Xplore" for the academic year 2010-11. While many feel that such publications are looked upon with more amusement than serious going over, the fact is, as the discerning reader will find out, this magazine has contributors not only from the students and staff of VCET but also from industry experts on current "Hot Technology" topics; in short, something for everybody!

Apart from student's own endeavors and experiences to learn about the latest on the fast changing technology horizon, the expert's take on which way the "Technology winds", so to speak, are blowing would be both instructive and inspiring to teachers and students alike. For third and fourth year students, such articles provide invaluable insights into what to be ready for, what skill-sets are becoming industry norms and thus how to become employment ready.

The students who have spearheaded this activity and the department staff, notably prof. Mehul Khandhedia, who worked tirelessly for this magazine, are to be warmly commended for bringing out such a fine, informative publication. All the readers, I am sure, join me in hoping that the IT department team will continue to strive and make this a regular, scheduled activity so that the magazine takes on the colours of a regular periodical instead of it's current aperiodicity!

With best wishes, season's greetings and happy reading!!!

Dr. Mohan Bhawe
Principal,
VCET

FROM STAFF INCHARGE'S DESK

It gives me immense pleasure to address you from this desk. The magazine that you hold in your hands now is a output of stupendous and gargantuan efforts fuelled by the right mix of passion, dedication and determination of all involved and this has resulted in the bundle of technical anecdotes that you hold in your hands now.

The core purpose of this magazine is to endorse the trends and developments in the field of Information Technology and to that end you shall see a wide spectrum of subjects right from mobiles to computers within. Also, the I-Tech Committee has and further aspires to continually provide the students with a continual exposure to the ever increasing scope of IT, thereby acquainting them with knowledge pertaining to the real industry that awaits them as also enriching the knowledge base in their chosen field.

For and on behalf of the I-Tech Committee, I would like to extend our gratitude and thanks to our honourable Principal, Dr. Mohan Bhawe for his continual support and guidance as also H.O.D of the I.T department, Prof. Chandan Kolvankar for constantly encouraging us to make this magazine bigger and better and infusing us with a dynamism to succeed in our endeavours. Also a special word of thanks to our dedicated team of designers and editors as also the entire I-Tech Committee who have put in their hearts and souls to the making of this magazine.

I wish you an enjoyable sojourn across the pages of this magazine. Cheers!

Prof. Mehul Khandhedia
Staff-In-Charge
I-Tech Committee

WHAT'S INSIDE

Introduction to RUBY

Ruby is a language of careful balance. Its creator, Yukihiro "Matz" Matsumoto, blended parts of his favorite languages (Perl, Smalltalk, Eiffel, Ada, and Lisp) to form a new language that balanced functional programming with imperative programming.

Ruby is seen as a flexible language, since it allows its users to freely alter its parts. Essential parts of Ruby can be removed or redefined, at will. Existing parts can be added upon. Ruby tries not to restrict the coder.

Ruby has a wealth of other features, among which are the following:

•Ruby has exception handling features, like Java or Python, to make it easy to handle errors.

•Ruby features a true mark-and-sweep garbage collector for all Ruby objects. No need to maintain reference counts in extension libraries.

•Writing C extensions in Ruby is easier than in Perl or Python, with a very elegant API for calling Ruby from C. This includes calls for embedding Ruby in software, for use as a scripting language.

•Ruby can load extension libraries dynamically if an OS allows.

•Ruby features OS independent threading. Thus, for all platforms on which Ruby runs, you also have multithreading, regardless of if the OS supports it or not, even on MS-DOS!

•Ruby is highly portable: it is developed mostly on GNU/Linux, but works on many types of UNIX, M OS X, Windows 95/98/Me/NT/2000/XP, DOS, Be OS/2, etc.

Here is small example, addition is perform with the plus (+) operator. But, you can add a meth "plus" to Ruby's built-in Numeric class. This mal statement easier.

```
class Num
def plus(x)
self.+(x)
end
end
```

Install Ruby. Save the above code as abc.rb. Or command prompt. And execute ruby abc.rb. You will following output.

3.plus(4) will give me 7.

My "helloworld" program can be written as
irb(main):028:0> print "Hello World\n"
Hello World

Here is small example of loop
```
for ss in 1...10
        print ss, "Hello\n";
end
```

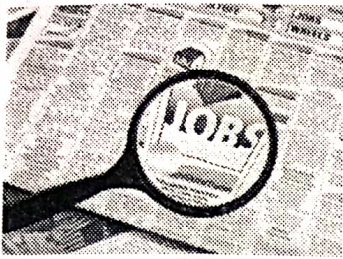This will print "Hello" 9 times. To print it times, remove 1 dot from 1st line.

There are lots of discussions about future Ruby. But it is as powerful as any other language.

-Prof. Chandan Kolvan
(HOD of IT departm(

References: http://www.ruby-lang.org
http://www.troubleshooters.com

Job Opportunities in IT

Technologies are evolving at a pace which creates opportunities for young companies and their entrepreneurs to take risks which have potential of creating world class enterprises. Just some of the possibilities in next 20 years which will make life different.

The moment you have an excellent idea .it gets stored in the storage device implanted in your brain. Whenever you want to revisit that idea you can download the stuff right out of your brain by using the options that are available through the use of small implantable devices ,we might be able to enhance the power of brain. We might become capable of churning number like a supercomputer or better. This kind of technology which can change our personality, societies and the world. We will have thousands of nenobots in our blood which will be more powerful then the supercomputers of today and will fetch energy to run from enzymes and chemicals in our blood. All your experiences and memories will be stored in this nenobots. Life will be longed for other 50 years for everyone. The images you see the sound you hear the experiences you feel sensations you have and private fantasies everything will be backed up or recorded in nenobots.

All this and more is based on science of IC which will have the component doubled every year which is making enormous results in microprocessing and storage. Based on Gordon Moor who wrote paper in 1965 which is so accurate that it's called Moores law. Raymond Cruizeweil' innovator of voice recognition also estimates that the idea of nenobots is only couple of decades away. Just like in early 80s no one thought the worldwide web will be a reality of day to day life and that 2,3,4,5G and beyond would have made life so fast for the real-time information.

The future business opportunities will be in-

1. The world market for nano materials, nano tools, nano devices and nano biotechnology put together is expected to be nearly two hundred billion dollars. It has been noticed that the fastest growing area among these is nano-biotechnology.

NT and Composites: Carbon nano tubes and its composites will give rise to super strong, smart and intelligent structures in the field of material science.

Nano Computers: Molecular switches and circuits along with nano cell will pave the way for the next generation computers. Ultra dense computer memory coupled with excellent electrical performance will give the society low power, low cost, nano size and yet faster assemblies.

Bio-Nano Technology: Nano Bio medical sensors will play a major role in glucose detection and endoscopic implants. Drug delivery system will revolutionize the healthcare to a large extent.The last four decades have also effected the packaging concept. Electronics packaging of the past has given way to the present Microsystems packaging and the shift in the trend is now towards the futuristic nano packaging.

Nano Robots: Doctors and medical experts are showing keen interest in the field of mechano-compatibility for the human body since the past few years. The purpose is to create a nano robot within the human body which can operate both chemically and physically. Although there are currently biomedical instruments and procedures used by physicians to explore tissues and cells, there is a new field of interest in exploring the human body with nano robots. These nanorobots must pass through a person's body without causing excessive bruising, itching, and other disturbances. The key for success in this field of study is finding a way nanorobots can perform the maximum amount of biomedical operations with the least amount of irritation and other possible illnesses to the patient.

Soft Lithography and Nano scale printing: Soft lithography is generally used to construct features measured on the nanometer scale, has some unique advantages over other forms of lithography (such as photolithography and electron beam lithography). They include the following:

1. Lower cost than traditional photolithography in mass production
2. Well-suited for applications in biotechnology
3. Well-suited for applications in plastic electronics
4. Well-suited for applications involving large or nonplanar (nonflat) surfaces
5. More pattern-transferring methods than traditional lithography techniques (more "ink" options)
6. Does not need a photo-reactive surface to create a nanostructure
7. Smaller details than photolithography in laboratory settings (~30nm vs ~100nm)

Fuel Cell: Fuel cells have a Global market of $100 billion by 2011. It has a promising future to fuel our automotive industry, power grid and battery for all type of applications mobile, portable and stationary use.

All of this and more will have huge opportunities for the young minds trained for Technology business. Keep your ideas for career wide open and have courage to embrace new fields and new jobs which never existed last year as you are entering a whole new world of opportunities.

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Cloud Computing

users ———→cloud ——→computing
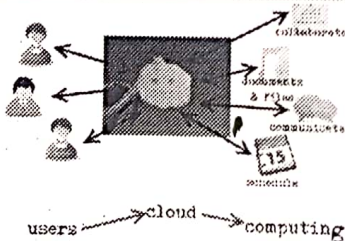
Cloud computing is a new method of distributingcomputing power. All the pieces have been around, but the combination of high bandwidth availability and relatively low cost cluster servers make cloud computing practical.

Cloud computing will help you get out of the bad habit of over-provisioning your own data center. Need an app? Get a server. Need another app? Another server. That's how we reached the point where data centers are full, but averaging only between 8-15 percent of capacity. Sure, there are exceptions to the average, which brings us back to cloud computing as a way to handle that overflow without wasting capacity on your servers every other day of the year.

Some data will always stay private, period. No matter how good cloud security becomes, some companies will always be wary, and some corporate data must be tracked constantly for compliance issues.

This could be because cloud computing vendor can't always tell you where your data is, exactly. Data and workload replication provides excellent disaster recovery support and the horsepower needed to handle transaction surges, but that means the data center you visited and vetted may no longer be the location of your data.

Know your workload before searching for a cloud computing partner. Your partner selection sheet should include details about your workload including CPU types, average workload and capacity, and whether the workload is storage or transaction intensive. HIPAA or PCI data? You must know, and your cloud partner must know, and you must agree on how they should handle (or not) your regulated data.

You will have a mix of public and private clouds. Corporate data centers, full of x86 servers with virtualization in progress, are most of the way to a private cloud already. Create server templates for your workload, as many variations as necessary, and talk with your cloud computing partner about replicating those in their data center.

Match your virtualization hypervisor to a cloud computing vendor using the same type. Shop for a partner who can accept your templates, making it simple to roll your servers out into their cloud support structure.

-Mrs. Vaishali Anil Shirsath
(Professor, Department of IT
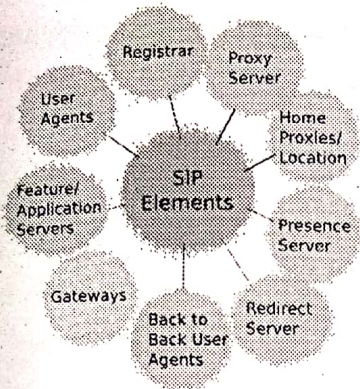
SIP Based Intelligent Multimedia Conferencing

Multimedia conferencing, or video conferencing, is an important application of real time media. In video conferencing, people at different sites are brought together for a meeting by transmitting real time audio, video and collaboration data on communication channels. Video conferencing are widely used in telecommuting, distant collaboration, distant learning, career services and etc. With the fast development of technology, video conferencing will have broader impacts and huge potential market.

As an advanced communication tool, inter-connectivity and inter-operability require that the video conferencing devices involved in the same conference can talk to each other, i.e., they comply with some common standard. Video conferencing standard is an umbrella set of standards because it not only has to specify audio and video coding standards, but also needs to address call control, conference management, media packetization and delivery. There are two major categories of video conferencing standards, H.32x series from the telecommunication world, standardized by ITU (International Telecommunications Union), and SIP (Session Initial Protocol) based video conferencing standard from the Internet world, recommended by IETF (Internet Engineering Task Force).

Multimedia conferencing is rapidly gaining interest in the field of communication. There are already a few products of multimedia conferencing based on H.32x standard. SIP, which is a more feasible protocol, is put on the agenda of being the call signaling protocol for conferencing. Most of the researches on SIP based conferencing, however, have still remained on theories. Multimedia Conferencing is advantageous to people who don't want to spend their time and money flying all over the world for face-to-face meetings. International standardization bodies have defined protocols for multimedia conferencing. On comparing SIP and H.32x protocols, we found that H.32x is widely deployed only because of its early adoption by the market, but has several problems. On the contrary, SIP is more lightweight, flexible and extensible. It is a text-based protocol which can easily interact with other internet protocols.

So, it is intended to implement a multimedia conferencing system using SIP. Once the implementation of conferencing system is complete, enough information will be available regarding the type of conferencing that a user does and with which user does he/she interacts most of the time. So, mining structures can also be added that will give detailed information about the user. Hence the system is named as SIP Based Intelligent Multimedia Conferencing.

THEORETICAL ISSUES:

Handling conferencing data packets is always a problem, as participants work with different platform desktops. Also, transmitting media data across the network in real-time requires high throughput. It's better to compensate for data loss than to compensate for large delays.

TCP is a transport-layer protocol designed for reliable data communications. When a packet is lost or corrupted, it's retransmitted. The overhead of guaranteeing reliable data transfer slows the overall transmission rate. For this reason, underlying protocols other than TCP (e.g. UDP) are typically used for streaming media.

SIP runs on both TCP and UDP, and in fact, can be extended to run on almost any transport protocol. H.32x only runs on TCP, which loads the servers. So, the basic idea behind implementing this system is to overcome the disadvantages of current systems that use H.32x protocol for multimedia conferencing

SCOPE: Transmitting media data across the network in real-time requires high throughput. It's better to compensate for data loss than to compensate for large delays. One major drawback of the H.32x protocol is its lack of scalability. When extended to world-wide networks, SIP has many advantages:

Loop detection: When trying to locate a user over several domains, loops can occur. H.32x has no support for loop detection. Loops are easily detected using SIP headers, as they specify all proxies that have handled the SIP packet.

4

•**Distributed control:** In H.32x, there is a need for a central point when performing multi-user calls, which means that this central point must be dimensioned for the size of the call. SIP sessions are distributed, making the need of this central point disappear.

•**Small connection overhead:** Establishing a connection using H.32x takes about three times the data and turnarounds compared to when using SIP.

TCP is a transport-layer protocol designed for reliable data communications. When a packet is lost or corrupted, it's retransmitted. The overhead of guaranteeing reliable data transfer slows the overall transmission rate. For this reason, underlying protocols other than TCP (e.g. UDP) are typically used for streaming media. SIP runs on both TCP and UDP, and in fact, can be extended to run on almost any transport protocol. H.32x only runs on TCP, which loads the servers. So, the basic idea behind implementing this system is to overcome the disadvantages of current systems that use H.32x protocol for multimedia conferencing.

-Mr. Yogesh pingle
(Professor ,Department of IT)

References-

•Junchao Li, Weimin Lei, Xiuwu Zhang, "Design and Implementation of a SIP-Based Centralized Multimedia Conferencing System", International Conference on Communication Software and Networks, 2009, pp.40-44

•G. ITU-T Rec. H.323, "Packet based Multimedia Communications System", Telecommunication Standardization Sector of ITU, July 2003

•J. Rosenberg, H. Schulzrinne et al., "SIP: Session Initiation Protocol", RFC 3261, IETF, June 2002

•K. Katrinis, S. Zurich, G. Parissidis, and B. Plattner, "A Comparison of Frameworks for Multimedia Conferencing: SIP and H.323", 8th IASTED International Conference on Internet and Multimedia systems and Applications, 2004
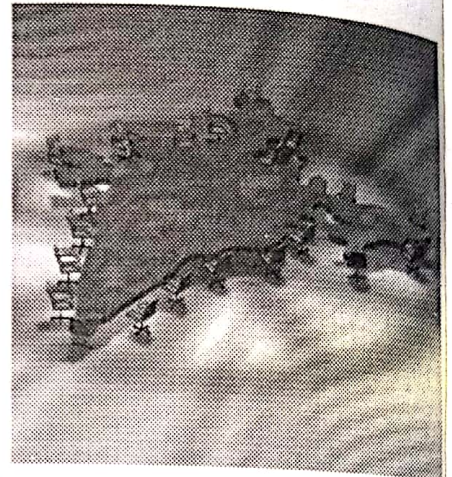
IT INDUSTRY IN INDIA

Each year India produces roughly 500,000 engineers in the country, out of them only 25% to 30% possessed both technical competency and English language skills, although 12% of India's population can speak in English. India developed a number of outsourcing companies specializing in customer support via Internet or telephone connections. By 2009, India also has a total of 37,160,000 telephone lines in use, a total of 506,040,000 mobile phone connections, a total of 81,000,000 Internet users comprising 7.0% of the country's population, and 7,570,000 people in the country have access to broadband Internet making it the 12th largest country in the world in terms of broadband Internet users. Total fixed-line and wireless subscribers reached 543.20 million as of November, 2009.

India's IT Services industry was born in Mumbai in 1967 with the establishment of Tata Group in partnership with Burroughs. The first software export zone SEEPZ was set up here way back in 1973, the old avatar of the modern day IT Park. More than 80 percent of the country's software exports happened out of SEEPZ, Mumbai in 80s.

Next to Bangalore and Chennai plays an important role in IT. Lot of companies was developed in Chennai, in the last few years. And Mumbai too has its share of IT companies that are India's first and largest, like TCS and well established like Reliance, Patni, LnT InfoTech, I-Flex, WNS, Shine, Naukri Jobspert etc. are head-quartered in Mumbai. These IT and dot com companies are ruling the roost of Mumbai's relatively high octane industry of Information Technology.

Today, Bangalore is known as the Silicon Valley of India and contributes 33% of Indian IT Exports. India's second and third largest software companies are head-quartered in Bangalore, as are many of the global SEI-CMM Level 5 Companies.

The Indian Information Technology industry accounts for a 5.19% of the country's GDP and export earnings as of 2009, while providing employment to a significant number of its tertiary sector workforce. More than 2.5 million people are employed in the sector either directly or indirectly, making it one of the biggest job creators in India and a mainstay of the national economy. In 2010-11, annual revenues from IT-BPO sector is estimated to have grown over US$76 billion compared to China with $35.76 billion and Philippines with $8.85 billion. India's outsourcing industry is expected to increase to US$225 billion by 2020. The most prominent IT hub is IT capital Bangalore. The other emerging destinations are Chennai, Hyderabad,Trichy,Coimbatore, Kolkata, Pune, Mumbai, Ahmedabad, NCR and Kochi. Technically proficient immigrants from India sought jobs in the western world from the 1950s onwards as India's education system produced more engineers than its industry could absorb. India's growing stature in the Information Age enabled it to form close ties with both the United States of America and the European Union. However, the recent global financial crises has deeply impacted the Indian IT companies as well as global companies. As a result hiring has dropped sharply and employees are looking at different sectors like the financial service, telecommunications, and manufacturing industries, which have been growing phenomenally over the last few years.

Today, more than 13 million Americans hold IT related jobs, and the rate of growth is six times as fast as overall job growth.

To conclude Information Technology industry is proving to cater the human needs and play major role in the world economy.

-Prof: Maryam K.J.
(Professor, Department. of IT)

Improved Freshness Crawler(IFCrawler)

Progressive use of Web based information retrieval systems such as general purpose search engines (eg.Google, Yahoo,Altavista,etc.) and dynamic nature of the Web make it necessary to continually maintain Web based information retrieval systems. One of significant component of Web search engines is Web crawler. Crawlers are programs that automatically traverse the Web graph, retrieving pages by following hyperlinks in Web pages to automatically download new and updated Web pages and building a local repository of the portion of the Web that they visit.

Depending on the application at hand, the pages in the repository are either used to build search indexes so that searching is efficient. Freshness is one of the important maintaining factors of Web search engine crawlers that takes weeks to months. Many large Web crawlers start from seed pages(start Page), fetch every links from them, and continually repeat this process without any policies that help them to better crawling and improving performance of those.

Data mining techniques can help us to improve the freshness parameter by extracting knowledge from crawling data. Extracted knowledge by data mining techniques can be used as policies for crawling. For this purpose we can include a component to collect additional crawling information.

The crawler starts by non-preferential crawling. After a few crawling, it trained by using mining techniques on crawling data and then uses policies for preferential crawling to improve freshness time.This way, crawling with Multi-threaded general purpose Web crawler, called IFCrawler(Improved Freshness Crawler) has better freshness than generic general purpose Web crawlers.To attain ones goal we contrive two additional components in IFCrawler.

The first component called WebInfoCollector, collects information during crawling process. The second component, called PolicyRepository, uses for extracting policies from collected data by WebInfoCollector which uses data mining functionalities to extract policies.

Architecture of IFCrawler:

IFCrawler is the Java multi-threaded Web crawler that has been developed for surfing the World Wide Web. IFCrawler has six main components for crawling mechanisms, two main data structures for specifying crawled and to crawl Web pages(Frontier), repository for logging crawled Web pages information and a component for doing data mining on repository.

Current Thread Manager component is the coordinator of other IFCrawler components. It receives Web page starter as Seed, like other Web crawler, and do some initialization for crawling

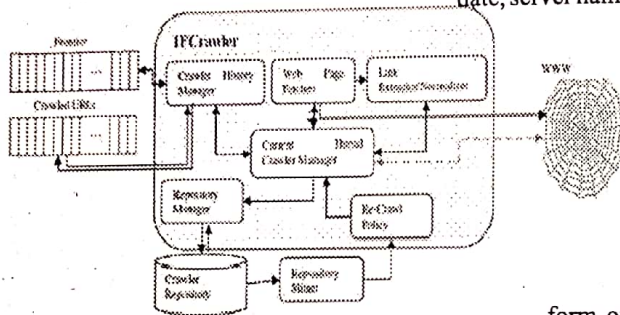(e.g. maximum number Web pages to crawl), then progress crawling with other components.

Web Page Fetcher connects to HTTP servers and fetches the header and content of Web pages. Web page address is determined by Crawler History Manager component and send to Web Page Fetcher by Current Thread Manager. This component

has close solidarity with Link Extractor component. Link Extractor receives Web page content
and extracts hyperlink address. Then it normalizes each address and sends them to Current Thread Manager. These addresses are added to Frontier data structure to crawl

in future.

Crawler History Manager is used to manage sequence of Web page fetching (e.g. Breadth First, Depth First, etc). In the other word it specifies sequence crawling policy.

Repository Manager stores information about Web pages in crawling time (e.g. number of links, types of links, date, server name, Web page class, and etc.). Repository Miner contains data mining algorithms that mine data stored in crawler repository. Extracted knowledge/patterns are in form of rules and are used in Re-Crawl component as policies for re-crawling Web pages.

-Mrs. Anagha Jayesh Patil
(Assistant Professor, Department of IT)

References:

[1] G. Pant, P. Srinivasan, and F. Menczi "Crawling the Web," in In Web Dynamic Adapting to Change in Content, Si Topology and Use, M. Levene and Poulovassilis, Eds.: Springer-Verlag, 200 pp. 153-178.

[2] Sadegh Kharazmi, Ali Farahmand Neja Hassan Abolhassani," Freshness of W Search engines: Improving Performance Web Search Engines Using Data Minir Techniques"IEEE transactions on Da Mining Techniques,2009.

Web-based data mining

The rapid growth of the World Wide Web in this age of information has led to a prolific distribution of a wide variety of public information. Unfortunately, while HTML, the major carrier of this information, provides a convenient way to present information to human readers, it can be a challenging structure from which to automatically extract information relevant to a data-driven service or application.

A variety of approaches have been taken to solve this problem. Most take the form of some proprietary query language that maps sections of an HTML page into code that populates a database with information from the Web page. While these approaches may offer some advantages, most are impractical for two reasons: one, they require a developer to take the time to learn a query language that can not be used in any other setting, and two, they are not robust enough to work in the face of the simple changes to the Web pages they target that are inevitable.

HTML: A blessing and a curse

HTML is often a difficult medium to work with programmatically. The majority of the content of Web pages describes formatting irrelevant to a data-driven system, and document structur can change as often as every connectio to the page, due to dynamic banner add and other server-side-scripting. Th problem is further compounded by th fact that a major portion of all We pages are not well-formed, a result the leniency in HTML parsing b modern Web browsers.

Despite these problems, ther are advantageous aspects of HTML f data miners. Interesting data can ofte be isolated to single <table> or <div tags deeply nested in the HTML tree allowing the extraction process to wor exclusively within a small portion of th

document. In the absence of client-side-scripting, there is only one way to define a drop-down menu and other data lists. These aspects of HTML allow us to focus our efforts in data extraction once we have the data in a format we can work with.

We introduce the method of data extraction by means of an example. Suppose we are interested in tracking the temperature and humidity levels of Seattle, Washington, at various times of the day over the course of a few months. Supposing no off-the-shelf software for this kind of reporting fits our needs, we are still left with the opportunity to glean this information off of one of many public Web sites.

Figurer 1 is an overview of the extraction process. Web pages are retrieved and processed until a data set is created that can be incorporated into an existing data set.
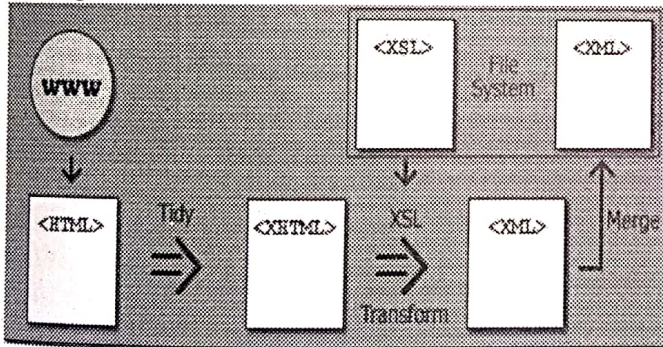

Figure 1. An overview of the
extraction
process

In a few short steps, we will have a reliable system in place that gathers just the information we need. The steps are listed here to give a brief overview of the process, and the process is shown at a high level in Figure 1.

1.Identify the data source and map it to XHTML.

2.Find reference points within the data.
3.Map the data to XML.
4.Merge the results and process the data.

-Mrs. Vaishali Anil Shirsath
(Professor,Department of IT)

References:

Tidy for Java is maintained by Sami Lempinen and can be downloaded from Source Forge.

The XML libraries, Xerces, and Xalan, are available at the Apache Project Web site. For more information on XML, developerWorks has a zone related to the technology.

A tutorial on XSL and XPath. There are many more, just use your favorite Web search engine.

Jussi Myllymaki has related paper on the relation of Web crawling and data extraction in the ANDES system, presented at WWW10 in Hong Kong.
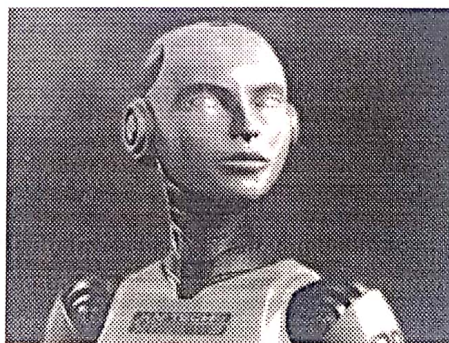
AN INTRODUCTION TO THE WORLD OF ROBOTICS

The objective of this article is to familiarize the reader with the basics of robotics and give him/her a peep into the fascinating world of hobby robotics.

The dictionary meaning of a robot is a mechanical device capable of performing human tasks or behaving in a human like manner. The field of robotics and automation has it's origin in the early decades of the 20th century. The robots made then were only used for performing menial or boring, repetitive and dangerous tasks. They were and still are used in auto industries, nuclear reactors etc. These machines are extremely task specific.

Over the years, the field of robotics and automation has evolved into something more interactive and dynamic. The developments in the computer industry have increased the processing power and capacity of micro-processors and micro-controllers. An example of the same is "ASIMO" of Honda, which can mimic many human functions including human walking. Recent years have also seen an increase in the hobby robotics industry.

The Honda 'asimo' is one of the most complicated robots ever built. It weighs 52 kg &walks at a max speed of 1.6 km/hour. The robot size was chosen to allow it to operate freely in the human living space and to make it people friendly. This size allows the robot to operate light switches and door knobs and work at tables and work benches. Its eyes are located at the level of an adult's eyes when the adult is sitting in a chair. The height of 120 cm makes it easy to communicate with Honda. A robot height between 120 cm and that of an adult is ideal for operating in human living space.

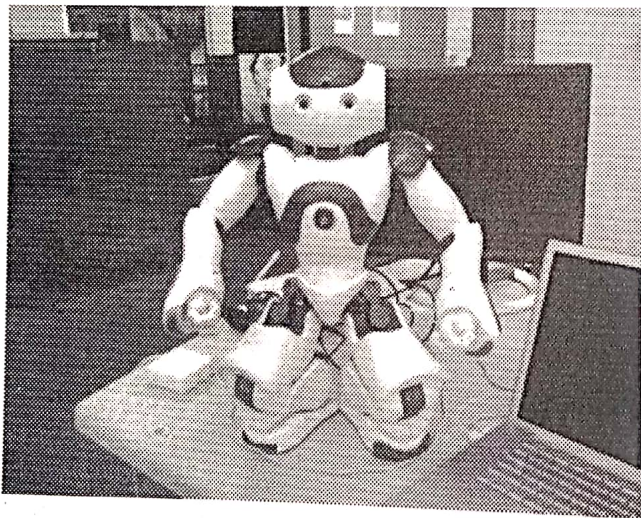Honda added intelligence technology to asimo which is capable of

interpreting the postures and gestures of humans and moving independently in response. Asimo's ability to interact with humans has advanced significantly it can greet approaching people, follow them move in the direction they indicate. And even recognize their faces and address them by name further utilizing network such as the internet. Asimo can provide information while executing task such as reception duty. Asimo is the world's first humanoid robot to exhibit such a broad range of intelligent capability.

NATRAJ:

The Robotics lab of the Department of Mechanical Engineering has indigenously designed and built a six-legged walking robot, one of its kinds in the world and the largest built in India.

Named 'Nataraj', this six-legged robot has the capability to walk, turn, climb stairs and step over obstacles, to negotiate uneven terrain and move around in disaster areas strewn with debris. It is designed to inspect zones where it is difficult for humans to work, like parts of nuclear reactor, bomb detection and disposal. The robot can carry tools, cameras, and manipulator hands for inspection, repair and maintenance.

The six legs are mounted on the sides of the hexagonal chassis to appear like a giant spider. He is designed to have flexible movements he can stand up to six feet tall and five feet short. He has a wide giant for flat ground and narrow giant for negotiating through the internet and corridors. Remote control of Natraj is possible through the internet and in a recent experiment the robot was operated from Bangalore.
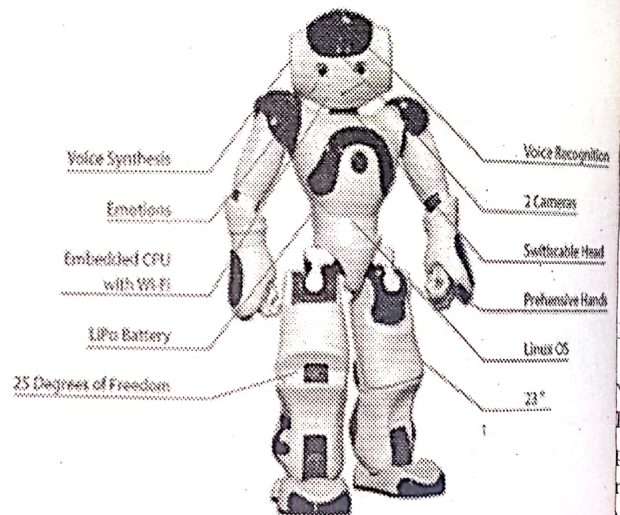
Beam Robots:

The term BEAM is an acronym for Biology, Electronics, Aesthetics and Mechanics. Dr. Mark W. Tilden invented BEAM robotics when he was student at the university in Canada.

BEAM robots do not use computers or microcomputers as brains. They have hard wired electronic control systems. Generally they are much cheaper to build then computer controlled robots. BEAM robots are modeled on biological life forms and they are generally solar powered.

They use a solar engine to acquire a power from the sun light, store it in a capacitor and then amplify the current to drive the motors.

One of the attractions of BEAM design is the way they use the capacitors, transistors and solar cells and the part of robot of chassis. Small motors are often used for the legs in the same kind that make your cell phone vibrate.

Voice Synthesis — Voice Recognition

Emotions — 2 Cameras

Embedded CPU with Wi-Fi — Switchable Head

— Prehensive Hands

LiPo Battery — Linux OS

25 Degrees of Freedom — 23°

CLASSIFICATION OF ROBOTS

1) Self Contained or Human Driven:

People like to debate what makes a machine a 'real' robot. One side says a robot is completely self-contained autonomous (self-governed) machine that needs only occasional instructions from its master to set it about various tasks (something like a terminator). A self contained robot has its own power system, brain, wheels or legs or tracks, and manipulating devices such as claws and hands. This robot does not need any other mechanism or system to perform its tasks. It is complete

in and of itself.

The other side says that a robot is anything that moves under its own motor power for the purpose of performing near human tasks. The mechanism that does the actual task is the robot itself: the support electronics or components may be separate. The link between the robot and its controls components might be a wire, a beam of infrared light or a radio signal.

Tremendous progress has been achieved in both fields of autonomous and manual robots. The functions that are of interest to the robot builder run a wide gamut; from listening to sounds and acting on them, to talking and walking or moving across the floor, to picking up objects and sensing special conditions such as heat, flames or light. Each is no less a robot than the other, though some are more useful and flexible. Some popular examples of self contained Robots include: The Honda Asimo, Sony Qrio and Sony Aibo.

2) Mobile versus Stationary:

Not all robots are meant to move around the floor. Some are designed to stay put and manipulate some objects placed before them. In fact, outside the research lab and hobbyist room the most common types of robots, those used manufacturing, are stationary. Such robots assist is making cars, appliances and today even other robots. Stationary robots are arm like contractions equipped with grippers or special tools. A robot designed for welding the parts of a car is equipped with a welding torch on the end of its arm. The arm itself moves into position for the weld while the car slowly passes in front of a robot on a conveyor belt.

Conversely, mobile robots are designed to move from one place to another. Wheels, tracks, or legs allows robot to traverse a terrain. Mobile robots may also feature an arm like appendage that allows them to manipulate objects around them.

Of the two stationary or mobile the mobile robot is the more popular project for hobbyists to build. As a serious robot experimenter one should not overlook the challenge and education one gains from building both types of robots. Stationary robots require greater precision, power and balance, since they are designed to grasp and lift objects hopefully not destroying the objects they handle in the process.

-Mrs. Madhavi Gangurde
(Professor, Department of IT)
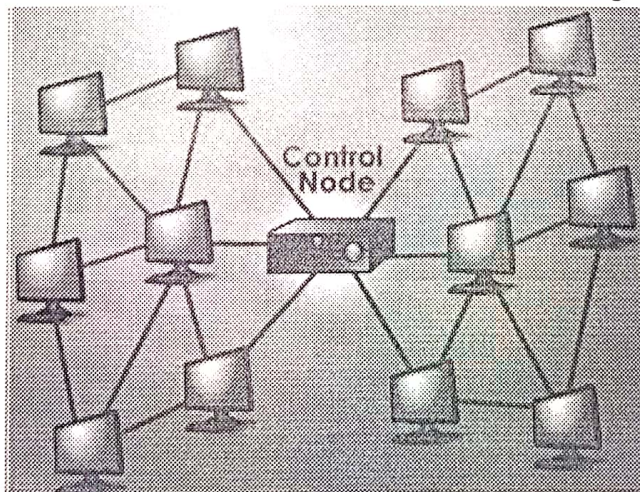
7 things you should know about Grid Computing

1. What is it?

Grid computing uses middleware to coordinate disparate IT resources across a network, allowing them to function as a virtual whole. The goal of a computing grid, like that of the electrical grid, is to provide users with access to the resources they need, when they need them. Grids address two distinct but related goals: providing remote access to IT assets, and aggregating processing power. The most obvious resource included in a grid is a processor, but grids also encompass sensors, data-storage systems, applications, and other resources. One of the first commonly known grid initiatives was the SETI@home project, which solicited several million volunteers to download a screensaver that used idle processor capacity to analyze data in the search for extraterrestrial life.

2. Who's doing it?

Many grids are appearing in the sciences, in fields such as chemistry, physics, and genetics, and cryptologists and mathematicians have also begun working with grid computing. Grid technology has the potential to significantly impact other areas of study with heavy computational requirements, such as urban planning. Another important area for the technology is animation, which requires massive amounts of computational power and is a common tool in a growing number of disciplines. By making resources available to students, these communities are able to effectively model authentic disciplinary practices.

Control Node

3. How does it work?

Grids use a layer of middleware to communicate with and manipulate heterogeneous hardware and data sets.

In some fields astronomy, for example hardware cannot reasonably be moved and is prohibitively expensive to replicate on other sites. In other instances, databases vital to research projects cannot be duplicated and transferred to other sites. Grids overcome these logistical obstacles and open the tools of research to distant faculty and students. A grid might coordinate scientific instruments in one country with a database in another and processors in a third. From a user's perspective, these resources function as a single system differences in platform and location become invisible.

4. Why is it significant?

Grids make research projects possible that formerly were impractical or unfeasible due to the physical location of vital resources. Using a grid, researchers in Great Britain, for example, can conduct research that relies on databases across Europe, instrumentation in Japan, and computational power in the United States. Making resources available in this way exposes students to the tools of the profession, facilitating new possibilities for research and instruction, particularly at the undergraduate level. Although speeds and capacities of processors continue to increase, resource-intensive applications are proliferating as well. At many institutions, certain campus users face ongoing shortages of computational power, even as large numbers of computers are underused. With grids, programs previously hindered by constraints on computing power become possible.

5. What are the downsides?

Being able to access distant IT assets and have them function seamlessly with tools on different platforms can be a boon to researchers, but it presents real security concerns to organizations responsible for those resources. Similarly, directors of research projects will be reluctant to take advantage of the opportunities of a grid without assurances that the integrity of the project, its data, and its participants will be protected. Another challenge facing grids is the complexity in building middleware structures that can knit together collections of resources to work as a unit across network connections that often span oceans and continents. Scheduling the availability of IT resources connected to a grid can also present new challenges to organizations that manage those resources. Increasing standardization of protocols addresses some of the difficulty in creating smoothly functioning grids, but, by their nature, grids that can provide unprecedented access to facilities and tools involve a high level of complexity.

6. Where is it going?

Because the number of functioning grids is relatively small it may take time for the higher education community to capitalize on the opportunities that grids can provide and the feasibility of such projects. As the number and capacity of high-speed networks increase, however, particularly those catering to the research community and higher education, new opportunities will arise to combine IT assets in ways that expose students to the tools and applications relevant to their studies and to dramatically reduce the amount of time required to process data-intensive jobs. Further, as grids become more widespread and easier to use, increasing numbers and kinds of IT resources will be included on grids. We may also start to see more grid tie-ins for desktop applications. While there are obvious advantages to solving complex genetic problem using grid computing, being able to harness spare computing cycles to manipulate an image in Photoshop or create a virtual world in a simulation may be some of the first implementations of grids.
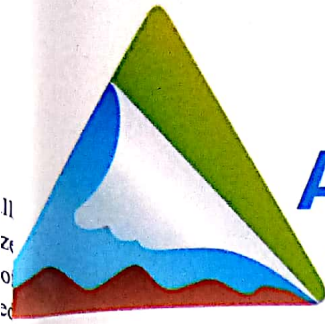
7. What are the implications for teaching and learning?

Higher education stands to reap significant benefit from grid computing by creating environments that expose students to the "tools of the trade" in a wide range of disciplines. Rather than using mock or historical data from an observatory in South America, for example, a grid could let students on other continents actually use those facilities and collect their own data. Learning experiences become far richer, providing opportunities that otherwise would be impossible or would require travel. The access that grid computing offers to particular resources can allow institutions to deepen, and in some cases broaden, the scope of their educational programs. Grid computing encourages partnerships among higher education institutions and research centers. Because they bring together unique tools in novel groupings, grids have the potential to incorporate technology in disciplines with traditionally lower involvement with IT including the humanities, social sciences, and the arts. Grids can leverage previous investments in hardware and infrastructure provide processing power and other technology capabilities campus constituents who need them. This reallocation institutional resources is especially beneficial for applications with high demands for processing and storage, such as modeling animations, digital video production, or biomedical studies.

- Sagar Dilip Haldankar
(TE-IT)

Reference: www.educause.edu/eli

Mahalakshmi

Rice And Flour Mill

Address

Umrale, Bolinj-soparkar
Nalasopara(west), Taluka: Va
District: Thane-401203

Owner's

Anant D. Patil
Ramchandra D.Patil

How to Encrypt and Decrypt files in Linux

Linux and other Unix Operating System's offer strong file permissions and ACL (access control list) concept in Linux/UNIX computer security used to enforce privilege separation.

However, none of them offers a password to protect files. You can use GNU gpg (GNU Privacy Guard) encryption and signing tool. It is a suite of cryptographic software. Many new UNIX/Linux users get confused with this fact.

Solution is to use following commands to encrypt or decrypt files with a password.

* Use GNU gpg command
* Use mcrypt command
* Use openssl command

Using gpg command:

To encrypt single file, use command gpg as follows:

$ gpg -c filename

To encrypt myfinancial.info file, type the command:

$ gpg -c myfinancial.info

Output:

Enter passphrase:<YOUR-PASSWORD>

Repeat passphrase:<YOUR-PASSWORD>

This will create a myfinancial.info.gpg file.

Option:

-c : Encrypt with symmetric cipher.

Caution if you ever forgot your password a.k.a passphrase, you cannot recover the data as it uses very strong encryption.

Decrypt file:

To decrypt file use gpg command:

$ gpg myfinancial.info.gpg

Output:

gpg myfinancial.info.gpg

gpg: CAST5 encrypted data

Enter passphrase:<YOUR-PASSWORD>

Decrypt file and write output to file kohli.info.txt you can run command:

$ gpg myfinancial.info.gpg o kohli.info.txt

Remember if file extension is .asc, it is a ASCII encrypted file and if file extension is .gpg, it is a binary encrypted file.

Using mcrypt command:

Mcrypt is a simple crypting program, a replacement for the old unix crypt. When encrypting or decrypting a file, a new file is created with the extension .nc and mode 0600. The new file keeps the modification date of the original. The original file may be deleted by specifying the -u parameter.

Examples:

Encrypt data.txt file:

$ mcrypt data.txt

Output:

Enter the passphrase (maximum of 512 characters)

Please use a combination of upper and lower case letters and numbers.

Enter passphrase:

Enter passphrase:

A new file is created with the extension .nc i.e. data.txt.nc:

$ ls data.txt.nc

$ cat data.txt.nc

Decrypt the data.txt.nc file:

$ mcrypt -d data.txt.nc

Output:

Enter passphrase:

File data.txt.nc was decrypted.

Verify that file was decrypted:

$ ls data.txt

$ cat data.txt

For mcrypt to be compatible with the Solaris des, the following parameters are needed:

$ mcrypt -a des --keymode pkdes --bare -noiv data.txt

Delete the input file if the whole process of encryption/decryption succeeds (pass -u option):

$ mcrypt -u data.txt

OR

$ mcrypt -u -d data.txt.nc

$ mcrypt -u -d data.txt.nc

Using openssl command:

OpenSSL is a cryptography toolkit implementing the Secure Sockets Layer (SSL v2/v3) and Transport Layer Security (TLS v1) network protocols and related cryptography standards required by them. You can use the openssl program which is a command line tool for using the various cryptography functions of OpenSSL's crypto library from the shell. It can be used for encrypt and decrypt files with a password:

Examples:

Encrypt file.txt to file.out using 256-bit AES in CBC mode

$ openssl enc -aes-256-cbc -salt -in file.txt -out file.out

Decrypt encrypted file file.out

$ openssl enc -d -aes-256-cbc -in file.out

Where,

enc : Encoding with Ciphers.

-Vaibhav Kohl
(TE-IT

Refrences: http://www.cyberciti.biz
Http://www.linuxforums.org

EDUBUNTU-Education oriented Operating System

Edubuntu is a grassroots movement, which aim to get Ubuntu into schools, homes and communities and make it easy for users to install and maintain their systems. We are students, teachers, parents and hackers who believe that learning and knowledge should be available to everyone who wants to improve themselves and the world around them.
who believe that learning and knowledge should be available to everyone who wants to improve themselves and the world around them.

Goals:
The OS aim is to put together a system that contains all the best free software available in education and make it easy to install and maintain.

An Ubuntu Project:
The majority of the technical work that the Edubuntu team performs occurs within the Ubuntu project. All the packages we work on are available in the Ubuntu software repositories and the Edubuntu DVD is built from the exact same repositories as the Ubuntu discs and other official derivatives.

What is Schooltool?
SchoolTool is a suite of free administrative software for schools. Since it can be installed easily and used with no licensing fees, SchoolTool can be used by schools for a single purpose, by individual teachers or small teams within schools, or a whole-school comprehensive student information system, encompassing demographics, grade books, attendance calendars and reporting.

In 2005 when Edubuntu was first released, it shipped with Schooltool installed by default. For a few releases, Schooltool wasn't available in the Ubuntu archives due to many of its dependencies being unavailable.

A collaborative effort that spans SchoolTool itself, Zope maintainers, Ubuntu MOTU, Edubuntu and Ubuntu-NGO over the last 2 releases paid off and now Schooltool is back in the Ubuntu archives.

Users who are testing the upcoming 11.04 release will already be able to install it.SchoolTool won't be installed in Edubuntu by default, but it will be just a few clicks away via the Ubuntu Software Center.

Something new: - WebLive:

Live CDs are great for testing systems, but have you ever seen a live web session before!?

You can now try Edubuntu live from your web browser and try it out before you even download!

You can now try Edubuntu online without needing to download or install anything.

All you need is a computer with Java running Linux, MacOS X, Solaris or Windows.

To try Edubuntu, just fill out the form below and you'll get 2 hours to try it out!

The test server is provided by Stéphane Graber and located in Frankfurt, Germany.

If you are located outside of Europe, you might experience a bit of latency.

There's currently a 10 users limit.

The link to testing is

http://www.edubuntu.org/weblive

Other Educational Systems

Debian-Edu:

Debian-Edu (also known as Skolelinux) is a free and open source software project founded in Norway, now supporting all languages present in Debian. Its name is a direct translation of "school linux" from Norwegian, skole derived from the Latin word schola.

Project Website:

http://wiki.debian.org/DebianEdu

Fedora Education Spin:

A special selection of applications related to educational and scientific purposes based on the Fedora distribution.

Project Website:

http://spins.fedoraproject.org/edu/

Guadalinux-Edu:

Guadalinex-Edu is a custom Ubuntu spin deployed in Spanish schools.

Project Website:

http://www.guadalinexedu.org

OpenSuse-Edu:

The openSUSE Education project tries to support schools using openSUSE, create and describe additional software-packages for educational projects and create a live CD for the regular openSUSE distribution.

Project Website:

http://en.opensuse.org/Portal:Education

Qimo for Kids:

Qimo4kids is a kid-friendly desktop environment built entirely with free software. Qimo comes pre-installed with educational games for kids; TuxPaint, eToys, GCompris, Tuxmath, and Tuxtyping.

Project Website:

http://www.qimo4kids.com/

Uberstudent:

Uberstudent is another Ubuntu-based educational distribution which aims at secondary and higher education. There is also an edition that runs the lightweight LXDE desktop environment that is meant to fit on a single CD.

VERSIONS:-

The current latest stable version of Ubuntu is 10.4; thought Edubuntu 11.04 beta 2 is available. And by 28th of April 2011 the table 11.04 version will be released.

-Rohit Singh
(TE-IT)

Reference: www.ebuntu.com

TRICKS

NOTE: *As a good practice, always backup your registry before changing anything. Some of the tricks below require direct/indirect changes to operating system, which may sometimes prove to be fatal. Do any changes on your own risk. Enjoy!!!*

Change The Default Location For Installing Apps:

As the size of hard drives increase, more people are using partitions to separate and store groups of files. XP uses the C:\Program Files directory as the default base directory into which

new programs are installed. However, you can change the default installation drive and/ or directory by using a Registry hack.

Go to :-
- Start > Run
- Type "regedit" (without " ")
- Go to this directory...
HKEY_LOCAL_MACHINE\SOFTWARE \Microsoft\Windows\CurrentVersion

Create One-Click Shutdown and Reboot Shortcuts:

Look for the value named ProgramFilesDir. by default, this value will be C:\Program Files. Edit the value to any valid drive or folder and XP will use that new location as the default installation directory for new programs.

First, create a shortcut on your desktop by right-clicking on the desktop, choosing New, and then choosing Shortcut. The Create Shortcut Wizard appears. In the box asking for the location of the shortcut, type shutdown. After you create the shortcut, double-clicking on it will shut down your PC.

But you can do much more with a shutdown shortcut than merely shut down your PC. You can add any combination of several switches to do extra duty, like this:

Eg:- shutdown -r -t 01 -c "Rebooting your PC"

Double-clicking on that shortcut will reboot your PC after a one-second delay and display the message "Rebooting your PC." The shutdown command includes a variety of switches you can use to customize it.

I use this technique to create two shutdown shortcuts on my desktop one for turning off my PC, and one for rebooting. Here are the ones I use:

shutdown -s -t 03 -c "Bye Bye!"
shutdown -r -t 03 -c "I'll be back ;)!"

What the keywords do:
1)-s=Shuts down the PC.
2)-l=Logs off the current user.
3)-t nn=Indicates the duration of delay, in seconds, before performing the action.
4)-c "messagetext"=Displays a message in the System Shutdown window. A maximum of 127 characters can be used. The message must be enclosed in quotation marks.
5)-f=Forces any running applications to shut down.
6)-r=Reboots the PC.

Delete An "undeletable" File:

1.Open a Command Prompt window and leave it open.
2.Close all open programs.
3.Click Start, Run and enter TASKMGR.EXE
4.Go to the Processes tab and End Process on Explorer.exe.
5.Leave Task Manager open.
6.Go back to the Command Prompt window and change to the directory where AVI file (or other undeletable file) is located in.
7.At the command prompt type DEL <filename> where <filename> is the file you wish to delete.
8.Go back to Task Manager, click File, New Task and enter EXPLORER.EXE to restart the GUI shell.
9.Close Task Manager.

Or you can try this
1.Open Notepad.exe
2.Click File>Save As..>
3.Locate the folder where your undeletable file is
4.Choose 'All files' from the file type box
5.Click once on the file u want to delete so its name appears in the 'filename' box
6.Put a " at the start and end of the filename (the filename should have the extension of the undeletable file so it will overwrite it)
7.Click "Save",
8.It should ask u to overwrite the existing file, choose yes and u can delete it normally.

Here's a manual way of doing it.

1. Start
2. Run
3. Type: command
4. To move into a directory type: cd c:*** (The stars stand for your folder)
5. If you cannot access the folder because it has spaces for example 'Program Files' or 'Kazaa Lite' folder you have to do the following. Instead of typing in the full folder name only take the first 6 letters then put a ~ and then 1 without spaces. Example: cd c:\progra~1\kazaal~1
6. Once your in the folder the non-deletable file it in type in dir - a list will come up with everything inside.
7. Now to delete the file type in del ***.bmp, txt, jpg, avi, etc... And if the file name has spaces you would use the special 1st 6 letters followed by a ~ and a 1 rule. Example: if your file name was bad file.bmp you would type once in the specific folder thorugh command, del badfil~1.bmp and your file should be gone. Make sure to type in the correct extension.

Mozilla Firefox, Speed it up!

Speed up Mozilla FireFox
1. Type "about :config" in the adress field.
2. Set the value of network.http.pipelining to "true".
3.Set the value of network.http.pipelining.maxrequests to "100".
4. Set the value of network.http.proxy.pipelining to "true"
5. Set the value of nglayout.initialpaint.delay to "0" (not availible in newer versions)

Rename 'recycle Bin' To Whatever You Want:

1. Start, Run, 'Regedit'.
2. Press 'Ctrl'+'F' to open find box and type 'Recycle Bin' to search.
3. Change any value data with 'Recycle Bin'

to whatever name you want to give it (ie, like 'Trash Can' or 'Dump' etc).

4. Press F3 to continue searching for 'Recycle Bin' and change wherever you come across 'Recycle Bin' to new its new name.

5. Repeat step 4 until you have finished with searching and changed all values to its new name.

6. Close regedit and hit F5 on desktop to see the new name on screen.

How To Find Serial Numbers On Google:

If you are looking for a serial number for nero (for example) then go to www.google.com and type "Nero 94FBR" and it'll bring it up. This works great in google.

HOW DOES THIS WORK?

Quite simple: 94FBR is part of a Office 2000 Pro cd key that is widely distributed as it bypasses the activation requirements of Office 2K Pro. By searching for the product name and 94fbr, you guarantee two things.

1) The pages that are returned are pages dealing specifically with the product you're wanting a serial for.

2) Because 94FBR is part of a serial number, and only part of a serial number, you guarantee that any page being returned is a serial number list page.
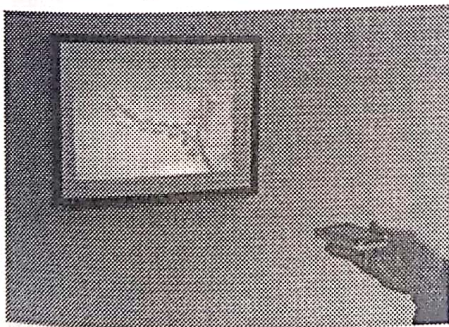
-Yash S. Shah
(T.E.I.T)

Reference: http://www.google.com

PROJECTORS IN PHONE'S

Mobiles or cell phones are bringing us closer to the movies by including miniature DLP projectors.

Three different companies: Texas Instruments (allied with Samsung), Microvision, and 3M have all created these tiny devices. The collaboration between Samsung and TI led to the unveiling of one of the coolest phones ever seen at the Consumer Electronics Show (CES).

This "pico projector" may not have a lot of power, but it can play

The pico projector phone from Samsung makes it easy to share.

videos on a wall, on your shirt, or on your hand.

Not satisfied with just creating a cell phone with a projector, Samsung released the MBP-200, an independent device that just has the pico-projector module. This allows anyone with a micro-SD card to project images, video, or text anywhere they want.

3M has launched the MPro110, a projector with remarkably similar specs to the MBP, though with full VGA. Microvision hopes to trump everyone with their Integrated Photonics Module. The IPM supports the highest resolution of the three. Power consumption is a big issue, so all three companies are being tight-lipped about it.

Not only are 3M, TI, and Microvision going to push each other to make projectors smaller, more powerful, more efficient and with higher resolution, they should keep

the prices low. It will be interesting to see which phone company (if any) picks up the 3M or Microvision module. Already Microvision is soliciting wide spread 3rd party development by offering their pico projector module in an evaluation kit for a (relatively) cheap $5k.

We've talked about large scale projectors as art installations, and cameras with projectors, now that hand held devices and phones are included 2009 is officially the year of the projector. That should provide a lot of new ways to share information and creativity on the fly. I'm thrilled that TI/Samsung will start bringing movies to cell phones. Now, if I can only get people to stop bringing their cell phones to watch movies!
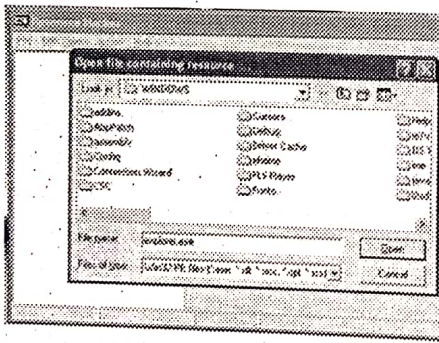
-Ajit Yadav
(TE-IT)

Reference:
http//singularityhub.com

Customize Windows XP Start Button
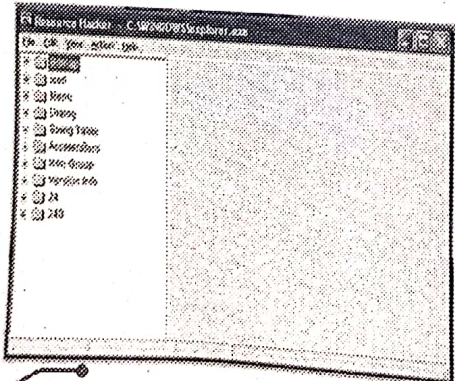
Step-by-Step Process

This is a simple Introduction on how to change your start button text, image, and hover text. This is a fun way to Spruce up your computer to your special touch!
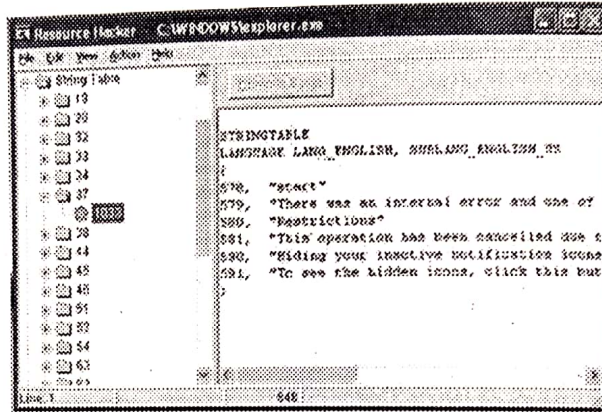
Steps to follow:

1. First of all, make sure you download Resource Hacker. You'll need this little utility application to edit resources inside your Windows shell.
2. Locate explorer.exe in your c:\Windows directory. Make a copy of the file in the same directory and rename it explorer.bak.
3. Unzip the Resource Hacker.
4. Now launch Resource Hacker. In the File menu, open explorer.exe.
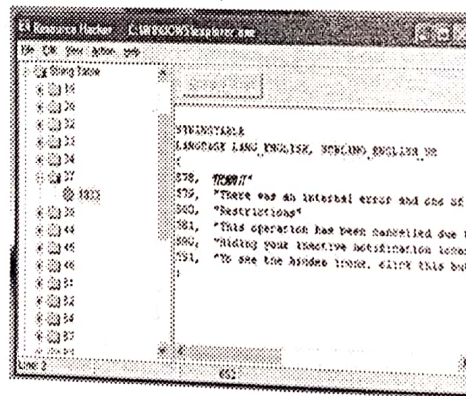

You'll now see a bunch of collapsed folders.

5. Expand the String Table folder and then find folder No. 37 (folder No. 38 if you're in Windows Classic mode).
6. Click on resource 1033 and locate the text that says "Start." This is your Start button, and now you've got control over what it says! Change the "Start" text to your text of choice.

You don't have a character limit, but the text takes up valuable taskbar space, so don't make it too long.

7. Click on the button labeled Compile Script. This updates the settings for your Start button. But nothing will happen until you complete through step #20, so keep going!
8. CHANGE YOUR HOVER TEXT
9. While you're here, why not also change the text that pops up when your mouse hovers over your Start button?
10. Right now it says "Click here to begin".
11. Open folder No. 34 and click on resource 1033.
12. Find the text that says "Click here to begin" and change it to something else.
13. Click on the Compile Script button to update this resource.
14. CUSTOMIZE YOUR START ICON
15. For an added bonus, you can also change the Windows icon to the left of the text, too.
16. Collapse the String Table folder and expand the Bitmap folder at the top of your folder list.
17. Click on folder No. 143 and click on resource 1033. You should see that familiar Windows icon.
18. Go to the Action Menu and select "Replace bitmap." Select 'Open file with new bitmap', and locate the replacement image on your machine. Note: The image must have a .bmp extension and a size of 30 pixels by 30 pixels. Then click the Replace button.
19. Now that you've made your changes, save the file in your Windows folder with another name, such as New_Explorer.exe. Don't name it Explorer.exe, because

hat file is already being
Used by your system.
Close all open programs and restart your system.
20. Boot into Safe Mode With Command Prompt by pressing F8 on startup. Then choose Safe Mode in the command prompt.

21. Log on as administrator and enter your password.

22. When the command prompt comes up, make sure you're in the right directory by typing "cd c:\windows" (without the quotes).

23. Now type copy c:\New_Explorer.exe c:\windows\explorer.exe" (no quotes). Type "yes" (no quotes) to overwrite the existing file, then restart your system by typing "shutdown -r" (no quotes).

:)Click here to begin ;)
e TECHNO IT

24. When Windows re-launches, you'll see your new Start button in all its glory!

-Darpan Meher
(SE-IT)

Why Internet Explorer will survive and Firefox won't

Three major releases from the three leading browser developers in the same month! That's unheard of. The Three releases are Google released version 10 of its Chrome browser. Microsoft released Internet Explorer 9. And now, after an epic development cycle that included 12 betas, Mozilla has finally said "Ship it" for Firefox 4. A closer look reveals that the rules have changed in the browser space and why the core of Internet Explorer will still be around in five years when Firefox will have, at best, a loyal cult following.

That difference in tempo is fundamental to understanding how the computing world has changed. The idea of branded browsers as standalone pieces of software seems increasingly quaint. Google is setting a blistering pace and defining a world where a browser is simply a piece of plumbing that you refresh every few weeks (unless you think that's just too slow and you want to download a new build every night).

It's tempting to look at Microsoft's history with Internet Explorer and assume that they are just incapable of working at the speed of the Internet. It's also easy to be skeptical about Mozilla's ambitious roadmap that has made them shipping versions 5, 6, and 7 before the end of this year. But take a closer look at the development process for IE 9 and there's a different story to tell.

Microsoft is playing the same game as Google. Mozilla got stuck in 2005 and that's why the core of Internet Explorer will still be around in five years when Firefox will have, at best, a loyal cult following.

The first platform preview of Internet Explorer 9 was released on March 16, 2010. The final release arrives just two days shy of the one-year anniversary of IE9's public debut. I don't think that's a coincidence. IE9 is part of Windows, and its development reflects the same engineering discipline that we saw in Windows 7: Plan, develop, stabilize, ship. Repeat.

During that year-long cycle, Microsoft cranked out one beta and a release candidate. More importantly, they released seven updates to the platform preview at a pace of one every 6-8 weeks or so. It's worth noting that Microsoft could have slapped a user interface and a version number on each of those releases. If they had, the cadence would have matched up neatly with that breakneck pace set by Google. But they chose to leave those distractions off and focus on the rendering engine.

Those platform previews were aimed at developers building applications. Although

Microsoft is mum on its future plans, you can bet that development will continue at that same measured pace, although perhaps not so publicly. This release isn't so much a finish line as it is another milestone in a much larger process. The IE 9 engine will be in phones before the end of the year, and it will play a huge role in the next version of Windows, which should be available to the public in 18 months or so.

And there's the real story.

What is Microsoft's biggest challenge today?

Successfully making that transition involves building a platform that can scale from handheld devices to workstations, from tiny Smartphone screens to tablets or to wall-sized displays. Microsoft isn't going to accomplish that goal by tweaking the classic Windows interface.

At last year's MIX conference, Microsoft talked about its new app platform, which is based on a simple design philosophy: write code once, target for multiple platforms. That's the same space that Google is playing in. Google has an entire family of apps that are designed to work exclusively in a browser. There's Google Mail and Google Docs, and more importantly there's Google Apps Marketplace, where third parties are building project management, CRM, and accounting apps designed to work in Chrome. Microsoft has Outlook Web Access 2010, which is an astonishing replication of the Outlook interface.

Microsoft's Office Web Apps are an interesting first step, but their limitations are glaring and the gap between Word and Excel in a browser and their standalone counterparts is huge. By this time next year, I expect we'll see a beta version of Microsoft

Office for the Web that is designed to run in a browser window. More importantly, I am certain that Windows 8 will be in beta by that time, and I'm convinced that we'll see an alternative shell for Windows 8, written in HTML5 and intended for use on tablets. It will use Internet Explorer's rendering engine, which has already proven to be wicked fast, without needing any of its old-school user interface.

So where does that leave Firefox? It doesn't have an app ecosystem or a loyal core of developers. Extensions? Those were worth bragging about in 2005, but in 2012 the story is apps. Businesses and consumers will want to use the same browser that powers their installed apps. In the PC space, that means Google or Microsoft. It doesn't leave room for a third player.

-Sanket Tawte
(TE-IT)

Cross-site scripting (XSS)

Cross-site scripting (XSS) is a type of computer security vulnerability typically found in web applications that enables malicious attackers to inject client-side script into web pages viewed by other users. An exploited cross-site scripting vulnerability can be used by attackers to bypass access controls such as the same origin policy. Cross-site scripting carried out on websites were roughly 80% of all security vulnerabilities documented by Symantec as of 2007. Their impact may range from a pretty nuisance to a significant security risk, depending on the sensitivity of the data handled by the vulnerable site, and the nature of any security mitigations implemented by the site's owner.

Cross-site scripting holes are web-application vulnerabilities which allow attackers to bypass client-side security

mechanisms normally imposed on web content by modern browsers. By finding ways of injecting malicious scripts into web pages, an attacker can gain elevated access privileges to sensitive page-content, session cookies, and a variety of other information maintained by the browser on behalf of the user. Cross-site scripting attacks are therefore a special case of code injection.

The expression "cross-site scripting" originally referred to the act of loading the attacked, third-party web application from an unrelated attack site, in a manner that executes a fragment of JavaScript prepared by the attacker in the security context of the targeted domain (a reflected or non-persistent XSS vulnerability). The definition gradually expanded to encompass other modes of code injection, including persistent and non-

JavaScript vectors (including Java, ActiveX, VBScript, Flash, or even pure HTML), causing some confusion to newcomers to the field of information security.

XSS vulnerabilities have been reported and exploited since the 1990s. Prominent sites affected in the past include the social-networking sites Twitter, Facebook, MySpace and Orkut. In recent years, cross-site scripting flaws surpassed buffer overflows to become the most common publicly-reported security vulnerability, with some researchers viewing as many as 68% of websites as likely open to XSS attacks.

TYPES:

There is no single, standardized classification of cross-site scripting flaws,

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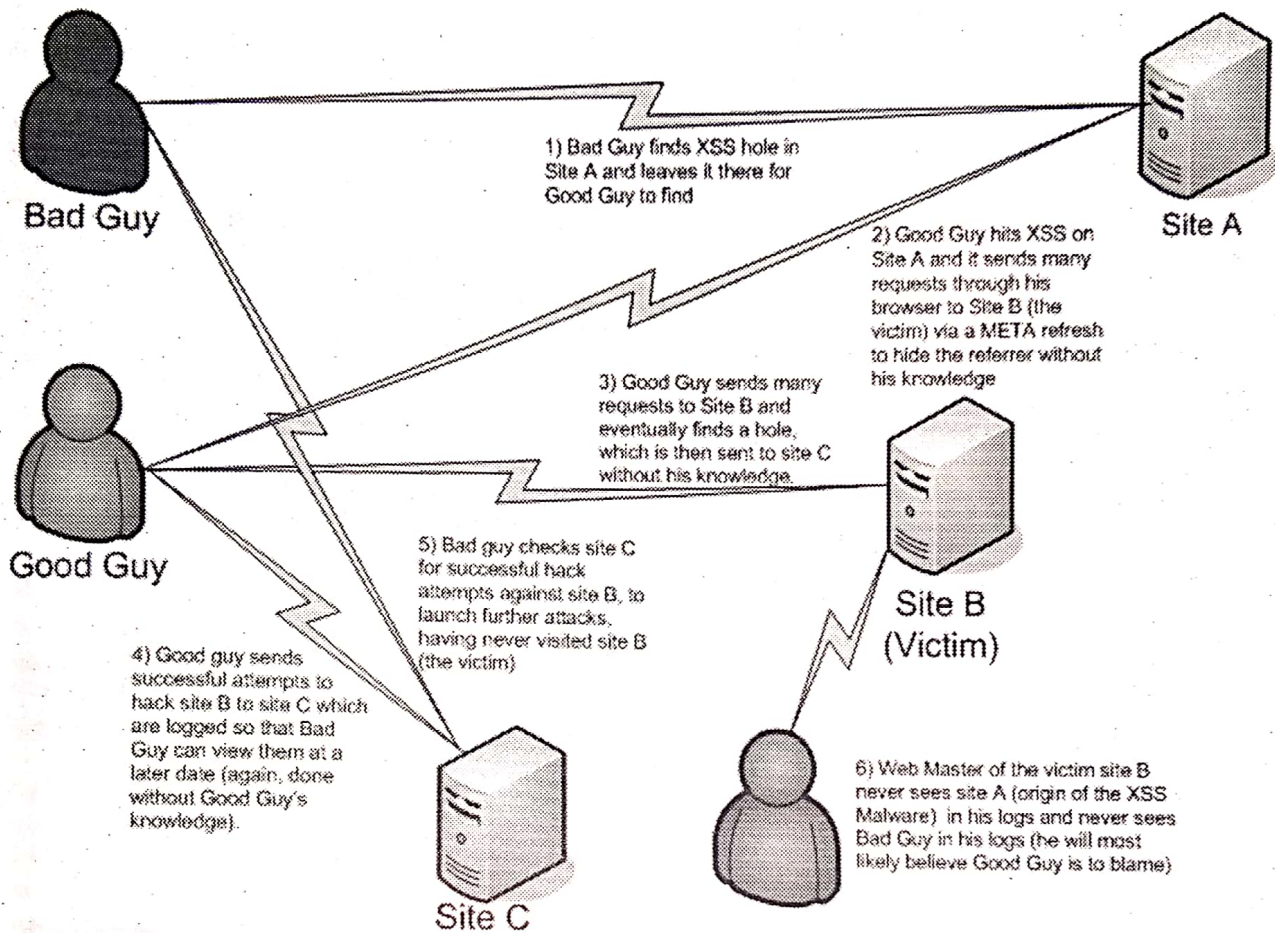SNEHA KADAM

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TREASURER
JAYMIT SHAH

1) Bad Guy finds XSS hole in Site A and leaves it there for Good Guy to find

2) Good Guy hits XSS on Site A and it sends many requests through his browser to Site B (the victim) via a META refresh to hide the referrer without his knowledge

3) Good Guy sends many requests to Site B and eventually finds a hole, which is then sent to site C without his knowledge.

5) Bad guy checks site C for successful hack attempts against site B, to launch further attacks, having never visited site B (the victim)

4) Good guy sends successful attempts to hack site B to site C which are logged so that Bad Guy can view them at a later date (again, done without Good Guy's knowledge).

6) Web Master of the victim site B never sees site A (origin of the XSS Malware) in his logs and never sees Bad Guy in his logs (he will most likely believe Good Guy is to blame)

Bad Guy

Good Guy

Site A

Site B (Victim)

Site C

but most experts distinguish between at least two primary flavors of XSS: non-persistent and persistent.

Non-persistent:

The non-persistent (or reflected) cross-site scripting vulnerability is by far the most common type. These holes show up when the data provided by a web client, most commonly in HTTP query parameters or in HTML form submissions, is used immediately by server-side scripts to generate a page of results for that user, without properly sanitizing the request. Because HTML documents have a flat, serial structure that mixes control statements, formatting, and the actual content, any non-validated user-supplied data included in the resulting page without proper HTML encoding, may lead to markup injection. A classic example of a potential vector is a site search engine: if one searches for a string, the search string will typically be redisplayed verbatim on the result page to indicate what was searched for. If this response does not properly escape or reject HTML control characters, a cross-site scripting flaw will ensue.

At first blush, this does not appear to be a serious problem: by submitting a malicious input to the web site, the user would only be able to compromise their own security context—that is, their own browser cookies, cache objects, and so forth. It is important to realize, however, that a third-party attacker may easily place hidden frames or deceptive links on unrelated sites and cause victims' browsers to navigate to URLs on the vulnerable site automatically—often completely in the background—and in such a case, the attacker can intrude into the security context that rightfully belonged to the victim.

Persistent:

The persistent (or stored) XSS vulnerability is a more devastating variant of a cross-site scripting flaw: it occurs when the data provided by the attacker is saved by the server, and then permanently displayed on "normal" pages returned to other users in the course of regular browsing, without proper HTML escaping. A classic example of this is with online message boards where users are allowed to post HTML formatted messages for other users to read.

Persistent XSS can be more significant than

Other types because an attacker's malicious script is rendered automatically, without the need to individually target victims or lure them to a third-party website. Particularly in the case of social networking sites, the code would be further designed to self-propagate across accounts, creating a type of a client-side worm.

The methods of injection can vary a great deal; in some cases, the attacker may not even need to directly interact with the web functionality itself to exploit such a hole. Any data received by the web application (via email, system logs, etc.) that can be controlled by an attacker could become an injection vector.

-Sarvesh Matwankar
(TE-IT)

Reference:
//en.wikipedia.org/wiki/Cross_sit e_scripting

How to write a C program without a main function?

How to write a C program without a main function? Is it possible to do that?

Yes there can be a C program without a main function. Here's the code of the program without a main function.

```c
#include<stdio.h>
#define decode(s,t,u,m,p,e,d) m##s##u##t
#define begin decode(a,n,i,m,a,t,e)
int begin()
{
printf(" hello ");
}
```

Does the above program run without the main function? Yes, the above program runs perfectly fine even without a main function. But how, whats the logic behind it? How can we have a C program working without main?

Here we are using preprocessor directive #define with arguments to give an impression that the program runs without main. But in reality it runs with a hidden main function.

The '##' operator is called the token pasting or token merging operator. That is we can merge two or more characters with it.

NOTE: A Preprocessor is program which processess the source code before compilation.

Look at the 2nd line of program -
#define decode(s,t,u,m,p,e,d) m##s##u##t
What is the preprocessor doing here. The macro decode(s,t,u,m,p,e,d) is being expanded as "msut" (The ## operator merges m,s,u & t into msut). The logic is when you pass (s,t,u,m,p,e,d) as argument it merges the 4th,1st,3rd & the 2nd characters(tokens).

Now look at the third line of the program -
#define begin decode(a,n,i,m,a,t,e)

Here the preprocessor replaces the macro "begin" with the expansion decode(a,n,i,m,a,t,e). According to the macro definition in the previous line the argument must be expanded so that the 4th,1st,3rd & the 2nd characters must be merged. In the argument (a,n,i,m,a,t,e) 4th,1st,3rd & the 2nd characters are 'm','a','i' & 'n'.

So the third line "int begin" is replaced by "int main" by the preprocessor before the program is passed on for the compiler. That's it...

The bottom line is there can never exist a C program without a main function. Here we are just playing a gimmick that makes us beleive the program runs without main function, but actually there exists a hidden main function in the program. Here we are using the proprocessor directive to intelligently replace the word begin" by "main". In simple words int begin=int main.

-Ravi Ramanathan(TE-IT)

To connect two computers wirelessly

Always you must have thought how to connect two pc's wirelessly, below are the steps to do so using Wi-Fi. This method is applicable only if you have wireless adapters or Wi-Fi cards installed in both PCs. To follow the wireless way, you just need a Wi-Fi card in each computer. This method is also known as Adhoc wireless networking. If you are using a laptop, chances are you already have Wi-Fi adapters built in. We refer to the two computers as PC1 and PC2.

We configure both the computers as given below,

PC1:

1. Just right-click "My Computer" and click Properties.
2. Select the "Computer Name" tab and click the "Change" button.
3. Change the computer name to whatever you want, here we name it PC1. Change the workgroup to WG. (The workgroup name should be the same in both computers)
4. Click OK.
Go to Start > My Computer > My Network Places > Network Connections.
Right click on your wireless adapter and select Properties. Go to the Wireless Network Tab and click on the "Advanced button". Select Computer to Computer (Ad hoc) networking option.
If you get a window with an SSID box, you can specify the network name in it, in our example we use XNET.
Now go to your Wireless Adapter >> Properties >> Wireless Networks and click Add Preferred Networks. Enter the settings as follows:
Network name (SSID): XNET
Network Authentication : Open
Data Encryption : Disabled
Also, do tick the This is a computer-to-computer (ad hoc) network, wireless access points are not used option if it isn't already done.
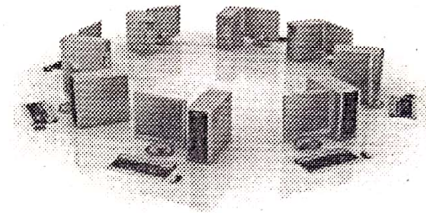
To automatically connect to the network, select the Connection tab and tick on the Connect automatically when in range option. Now, to configure the TCP/IP connection settings,
1. Go to "Control Panel" >> "Network connections"
2. Right -click on your Wireless Adapter and click "Properties". In the "General" tab, select "Internet Protocol (TCP/IP)". Click the "Properties" button.
3. Set the Values
IP Address 192.168.0.1
Subnet Mask 255.255.255.0
Default Gateway 192.168.0.2
4. Click OK and you are done for PC1.

PC2:

1. Just right-click "My Computer" and click Properties.
2. Select the "Computer Name" tab

and click the "Change" button.
3. Change the computer name to Pc2. Change the workgroup to WG. (The workgroup name should be the same in both computers)
4. Click OK.
Go to Start > My Computer > My Network Places > Network Connections.

Right click on your wireless adapter and select Properties. Go to the Wireless Network Tab and click on the Advanced button. Select Computer to Computer (Ad hoc) networking option.
If you get a window with an SSID box, you can specify the network name in it, in our example we use XNET.
Now go to your Wireless Adapter >> Properties >> Wireless Networks and click Add Preferred Networks. Enter the settings as follows:
Network name (SSID): XNET
Network Authentication : Open
Data Encryption : Disabled
Also, do tick the This is a computer-to-computer (ad hoc) network, wireless access points are not used option if it isn't already done.

Now, to configure the TCP/IP connection settings,
1. Go to "Control Panel" >> "Network connections"
2. Right -click on your Wireless Adapter and click "Properties". In the "General" tab, select "Internet Protocol (TCP/IP)". Click the "Properties" button.
3. Set the Values
IP Address 192.168.0.2
Subnet Mask 255.255.255.0
Default Gateway 192.168.0.1

4. Click OK and you are all set with PC2 as well.

You are almost done now. Just open the Wireless network settings and click on View Available Wireless Networks. Select your network and you are connected.

Note:

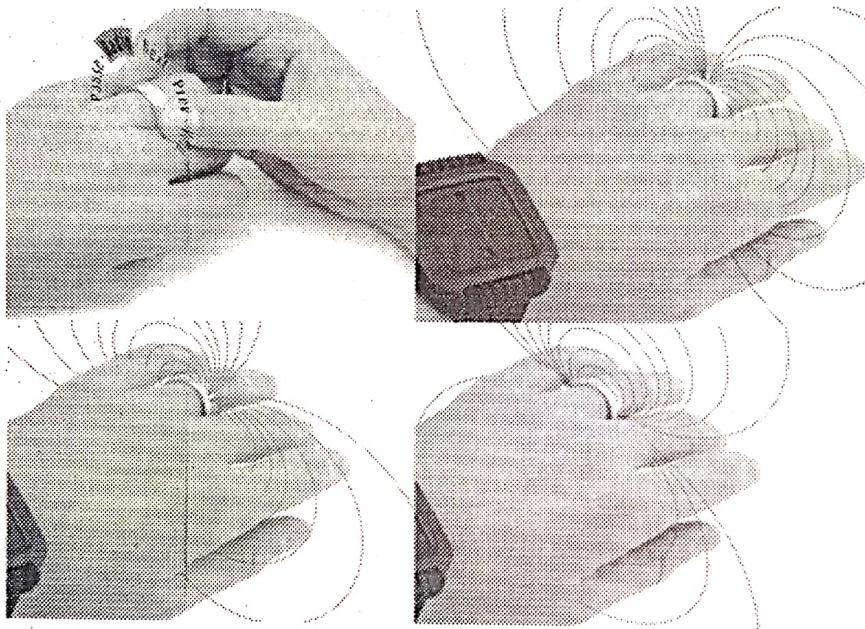1. The settings mentioned may vary in case of different adapters. But most of them should be similar to the above settings.
2. Your adapter should be compatible with WZC Windows Zero Configuration.

-Vaibhav Kohli (TE-IT)

References:

Http://www.digitgeek.com
http://www.conniq.com

Control your Phone with a Magnetic Ring:

These days smartphones let you do practically anything, but you still have to reach in to your pocket to use them. Now, researchers at Nokia aim to solve that problem with a magnetic ring dubbed Nenya, after a ring found in The Lord of the Rings, that you can twist around your finger to control your phone.

The ring itself looks like a standard piece of jewellery, but is actually a strong magnet. Moving the ring causes changes in the surrounding magnetic field, which is picked up by a bracelet worn by the user that connects to their phone via Bluetooth. You rotate the ring to pick from a number of options, which could be memorized, played as audio through headphones, or displayed on a screen, then push the ring towards your fingertip to select. The options could include asking a caller to hold, or updating your location on a social network.

Users can turn the ring with either their other hand or the same hand, though the latter is more difficult. The researchers conducted two small trials and found that people could accurately position the ring in roughly 45-degree increments, suggesting that a ring-controlled menu could contain up to eight options

There are few problems to solve before you can start ringing your phone, however. The bracelet is currently a rather bulky and unattractive device, but the electronics inside could be incorporated into a watch or jewellery bracelet, and the system also detects the ring when users move about, which could execute unwanted commands. There's also the issue of walking around with a great big magnet on your finger, with the potential to attract nearby metallic objects and damage credit cards or hard drives.
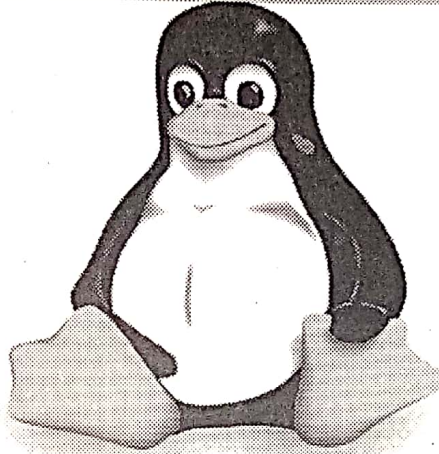
Linux - Is It Still Standing Strong?

Windows has been predominantly the OS of choice for most of us. Linux too has been around and it has struggled on the desktop space. Things haven't turned out as well as Linux hoped. There is no denying Linux's success on the server side of things. Many expected Linux to be an easy replacement for Windows, but for a number of reasons, it hasn't been so. To open for its own good Linux, because of the way it has been developed has different faces in the form of distributions. On one hand, there are still distributions that require a certain level of expertise just to install and there are some others like Ubuntu, which have toned down to the level of any other Windows OS installation. The distributions that are getting the most attention are a handful. Ubuntu is most definitely the largest one in the crowd. For the rest of them, there seems to be no direction of development. There are many distributions that are similar to each other while there are some that are complete opposites.

Ubuntu has come a long way in the sense that installing the OS is no longer a painstaking process as it is with many other distributions. The other distributions should try and follow this mind of thought. A channeled effort in such areas would make it an easier operating system to make transition to Linux has its many advantages. The most obvious one is the virus-free, secure environment where you don't need to use an antivirus or firewall just to stay secure. The other advantage it had was the stability but recent Windows kernels offer the same level of stability.

Reboots and blue screens which were common in the Windows 95 era are a thing of the past. On the other hand, the disadvantage while switching over to Linux is that a new user faces is the lack of fresh applications for Linux. Windows being a much more Stable operating system than it used to be means that there's even less a reason for users to switch over to Linux. Linux on the desktop is then dying a slow death where there aren't many new adopters, but just the Existing loyal users.

Influence of user interface there are some other things that influence a user to use an operating system. The success of an operating system does also have a lot to do with how it looks and how it is also doing with the interface of the operating systems in use. The Windows operating system uses a traditional method of accessing programs. This was started back in the Windows 95 era. Today, mobile operating systems are way more simplistic in the way they look and the way you interact with them.

In fact, we've seen a transformation in the desktop OS space as well. For the sake of saving workspace and making things more intuitive, Linux distributions such as Jolicloud, Ubuntu Netbook Edition adopted a completely different approach. A similar approach is now being adopted into the mainstream desktop version of Ubuntu in the form of the Unity user interface. There are fewer menus and submenus and applications and features are easily accessible through a click or two.

While these are moves in the right direction, it's hard to deny that Linux as a desktop OS is slowly diminishing. The Camouflaged Linux - Android While some of us have written off Linux as a solid Windows replacement, it's a pleasant surprise to find Linux stronger than ever in a different avatar. We've completely ignored the mobile platform space. It's mainly dominated by Android, iOS and a couple of other platforms. Android is easily one of the largest and it's also one of the most open source ones. Android is in fact based on the Linux framework. Unlike all other desktop distributions that were developed bit by bit, Android was branched off and developed in isolation. When it was launched and even today, not too many users realize that it is in fact Linux running in the backend. What you see is just a cloaked interface. iOS, the OS used on Apple's popular iPod, iPhone and iPads is extracted from the desktop OS Mac OS X, which in turn is a distant of Linux.

The Android Wiki itself is scattered with information of Linux. It's not only Android and the iOS which are related to Linux. Even the upcoming Blackberry tablet will be powered by QNX, another remotely related to the Unix branch. Windows Phone 7 isn't a direct descendant of the desktop Windows operating system.

Maybe, that's what Linux needed from the very beginning a distribution that was isolated from the rest and worked on thoroughly. Google did things its own way, and finally released a refined product. Android doesn't look anything like any Linux distribution you'll see today.

If all of the popular mobile and tablet OS' are offshoots of the Linux framework, and if we go by figures, Linux could very well be much bigger than Windows. Maybe, Linux isn't doing as bad as we thought then?

-CHINMAYA H. GANDHI
(TE-IT)

References:
Http://tech2.in.com/opinions/linux/linux-is-it-still-standing-strong/212852

http://tech2.in.com/opinions/linux/linux-is-it-still-standing-strong/212852

Nokia and Intel launch new mobile operating system

IDG News Service - Nokia and Intel will merge two of their mobile operating systems into Meego, a Linux-based, open operating system for everything from advanced smart phones to net books, connected TVs and tablet computers, the companies said at a joint press conference on Monday.

The new operating system will combine the best features from each operating system, including the Moblin core and the UI (user interface) toolkit from Maemo. Intel developed Moblin, and Nokia developed Maemo. The first version of MeeGo will ship during the second quarter.

The first devices based on the operating system are expected to arrive during the second half of 2010, according to Renée James, senior vice president and general manager at Intel's Software and Services Group.

The operating system will support both Intel's Atom and ARM architectures. The MeeGo source code, along with the build system and developer tools will be released in the coming weeks, according to a FAQ on the MeeGo website.

The MeeGo code will be hosted by the Linux Foundation, and anyone who wants to develop an application for MeeGo will use the Qt framework. The use of Qt will let users develop an application once and then run it on multiple platforms, according to Kai Öistämö, executive vice president for devices at Nokia.

So far, Nokia is the only company that has said it will ship phones with MeeGo. However, more hardware partners and operators will announce support and product plans for MeeGo in the coming weeks, James said. The arrival of MeeGo will not change Nokia's plans for Symbian. That operating system will still be used on cheaper smartphones, according to Öistämö.

-Jaymit shah
(TEIT)

HTML5

HTML5 is a language for structuring and presenting content for the World Wide Web, a core technology of the Internet. It is the latest revision of the HTML standard (originally created in 1990) and currently remains under development. Its core aims have been to improve the language with support for the latest multimedia while keeping it easily readable by humans and consistently understood by computers and devices (web browsers, parsers etc.).

Following its immediate predecessors HTML 4.01 and XHTML 1.1, HTML5 is a response to the observation that the HTML and XHTML in common use on the World Wide Web is a mixture of features introduced by various specifications, along with those introduced by software products such as web browsers, those established by common practice, and the many syntax errors in existing web documents. It includes detailed processing models to encourage more interoperable implementations; it extends, improves and rationalises the markup available for documents, and introduces markup and APIs for complex Web applications.

In particular, HTML5 adds many new syntactical features. These include the <video>, <audio>, and <canvas> elements, as well as the integration of SVG content. These features are designed to make it easy to include and handle multimedia and graphical content on the web without having to resort to proprietary plugins and APIs. Other new elements, such as <section>, <article>, <header>, and <nav>, are designed to enrich the semantic content of documents. New attributes have been introduced for the same purpose, while some elements and attributes have been removed. Some elements, such as <a>, <cite> and <menu> have been changed, redefined or standardised.

Differences with HTML 4.01 and XHTML 1.x

The following is a cursory list of differences and some specific examples.
1) New parsing rules: oriented towards flexible parsing and compatibility; not based on SGML
2) Ability to use inline SVG and MathML in text/html

command, datalist, details, embed, figcaption, figure, footer, header, hgroup, keygen, mark, meter, nav, output, progress, rp, rt, ruby, section, source, summary, time, video, wbr

3) New types of form controls: dates and times, email, url, search, number, range, tel, color[41]

4) New attributes: charset (on meta), async (on script)

5) Global attributes (that can be applied for every element): id, tabindex, hidden, data-* (custom data attributes)

XHTML5

FILENAME extension .htm	.xhtml, .xht .xml, .html,
Internet media type	application /xhtml+ xml
Developed by	World Wide Web Consortium, WHATWG
Initial release	26 January 2000
Latest release	5
Type of format	Markup language
Extended from	xml, HTML5
Standard(s) Draft)	5(Working

6) Deprecated elements will be dropped altogether: acronym, applet, basefont, big, center, dir, font, frame, frameset, isindex, noframes, strike, tt, udev.w3.org provides the latest Editors Draft (last dated 13 January 2011) of HTML5 differences from HTML4,[42] which provides a complete outline of additions, removals and changes between HTML5.

-Unknown

Handy Steps to install Wireless USB modem in Linux

i) You will have to install the package USB-ModeSwitch. It is available here:

http://packages.debian.org/sid/usb-modeswitch

Note : When you open the above link, you should check its dependencies and also install the dependency package " usb-modeswitch-data".

Just download and double-click on it to install the package.

ii) After you've installed usb-modeswitch and usb-modeswitch-data packages, reboot your computer.

iii) Connect the Modem and wait for 30 seconds. While you're waiting, the usb-modeswitch package is doing magic in the background; you can check the status using the following command:

dmesg

iv) I hope you have "wvdial" pre-installed on your system. You can check that by typing "wvdial" and see if the computer recognises it. If it doesn't then you have to install it.

v) Now edit the file /etc/wvdial.conf (If it doesn't exists, then create it) as Root and copy paste the following code:

```
[Dialer cdma]
Stupid Mode = 1
Inherits = Modem0
Password = mts
Username = internet@internet.mtsindia.in
Phone = #777
[Modem0]
Init1 = ATZ
SetVolume = 0
Modem = /dev/ttyUSB0
Baud = 115200
FlowControl = Hardware (CRTSCTS)
Dial Command = ATDT
```

Note that ttyUSB0 may be different for your system. However, first try with the above code, if it doesn't work and shows some error like "ttyUSB0 doesn't exists" or something similar to it, then

actual one by going through the actual one by going through the output of following command:

dmesg | grep -e "modem" -e "tty"

Vi) That's it, you're done. Now start browsing with the following command:

wvdial cdma

As soon as you start seeing some IP addresses, you're online! DO NOT close the terminal in which you executed the command, otherwise you will get disconnected.

And from next time, you don't have to it all over again. Simply connect your modem, wait for 30 seconds and type the last command. To disconnect, go to the terminal, and press Ctrl + C.

-Unknown

Is The Apple sweeter than The Honeycomb?

If you think that you are about to read another article from an Apple fanboy or an Android aficionado favoring either of them, then you're in for a surprise. I have no wish to get into the age-old debate of 'open vs. closed system'. But what I've attempted here is to present a real truth from a developer's perspective. Since I'm a self-proclaimed chef, I am ready to share the recipe of my gourmet meal with you and you can choose what tickles your taste buds best. Ingredients:

I'm a self-taught coder who was lured into the tech world and is trying to infuse creativity with technology. So you can jolly well understand that I had to start with a clean slate. And that is exactly what I did before creating My first app.

My obvious choice was Amazon to source out my beginner's tools - books. There are 320 paperbacks available on iPhone Development vis-à-vis 173 paperbacks on Android. Advantage Apple. I then required tech stuff from the two Goliaths.

Android has really great documentation. The Android approach fundamentally exposes everything to the developer, rather than try to hide important stuff. The branding guideline is however, just a single page, compared to Apple's 9 pages. That being said, the iOS Human Interface Guideline is astonishingly detailed.

App development means developing a killer app in exchange for a big-fat paycheque. If you're a one-man-show i.e. an indie developer, you need to market your app to earn money. And, I have to say that the iTunes App Store is miles ahead of the Android Market Place.

Preparation:

While developing my first app, MeterDown (a Mumbai Taxi and Auto Fare app), I was clear about one fact the graphics need to be simple. The success of an app not only depends on flawless coding but also on impeccable visuals. A great product with shoddy packaging can never have a lasting shelf life. It took us weeks to create the current UI that's designed to be simplistic yet creative.

iOS   Android

However, when I ported the same app to the Android platform my entire effort took a beating. The Picker view changes its color depending on the handsets. On an HTC device, the Picker view will be green and it turns blue on Samsung. How do you control that!? Open Platform, ahem!

Cooking Time:

In January, Appcelerator's Q1 report showed that Google has nearly caught up to Apple in smart phone popularity and is closing the gap in tablets. Microsoft and RIM made solid gains through their product line update, while Google TV and Apple TV interest dropped off. As these trends unfold, it is also becoming clear that the days of mobile app experimentation are over. This year, developers and businesses expect to triple their app development efforts and the average developer is now building for four different platforms.

A dramatic increase in the integration of geo-location, social, and cloud-connectivity services underscores new focus on sustaining user engagement. Increased plans to integrate advertising and in-app purchase points to a new focus on longer-term financial viability over free brand affinity apps. In short, the developers favor Apple near-term while Android long-term. Hold on to that thought, because I think the meal is ready.

Ready to serve:

In 2010, we saw the tussle between the two Superpowers. Both the archrivals rolled up their sleeves and took their best shots to lure developers. There will be blood in 2011 and the first victim of this war is Symbian. But before we move on to this future carnage, let's evaluate the strength and weaknesses of the two OS.

Apple:

The good:- In my opinion, the iOS apps are successful not just because of the dev support and simplicity of coding but also because of its ecosystem. iTunes, Mac, and iOS devices all speak the same language. The hardware (iPhone/iPod touch) plays a humongous role. iOS apps can leverage on killer features like the Accelerometer,3 axis Gyroscope and proximity sensors.

The bad:- OCD (Obsessive Compulsive Disporder). I think that's the one word that best describes Apple. The rules are simple while developing apps for iOS - do what they say. If you try to be a maverick, your app will disappear from the store. Problem number two. 100 million people across the globe are carrying the same model.No flip,no slide,no trackpad...just touch.

from the store. Problem number two. 100 million people across the globe are carrying the same model.No flip,no slide,no trackpad...just touch.

Android:

The good:- As an iOS developer, every time I submit an app my pulse races as I wait for the judgment day. It's the fear of rejection. On Android, it's unbelievably easy - upload and minutes later, your app is available on the Market Place. And the best part is that unlike iOS apps you can develop Android apps on a PC, any PC.

The bad:- The Android operating system is open source and so hardware makers can take it and do almost anything they want with it. Result - double shift for a developer to make the app look the same on all handsets. Developers need testing devices. And there are only two developer devices available that are far costlier than an iOS test device.

So which one is sweeter? Well, as WWDC is knocking at the door and as this year will be all about apps, the little Green Robot is not my best mate at the moment so for now, I'm savoring the taste of the Cupertino Apple.

-Chinmaya H. Gandhi

Reference:
http://tech2.in.com/opinions/apps/is-the-apple-sweeter-than-the-honeycomb-confession-of-an-app-developer/212872

JMS Adapter and .net

The **Java Message Service (JMS)** API is a Java Message Oriented Middleware (MOM) API for sending messages between two or more clients. JMS is a part of the Java Platform, Enterprise Edition. **JNBridgePro** is a Java and .NET interoperability tool that allows you to access your entire object-oriented API from the other side, in the same process or across a network.

JNBridgePro removes the complexity of cross-platform interoperability, so you can generate solutions within a day, instead of weeks. JNBridgePro is faster than Web services.

JNBridge JMS Adapter for .NET provides single-step integration of JMS (Java Message Service) capabilities into Microsoft .NET applications. The **JNBridge JMS Adapter for .NET** enables you to access JMS services from a wide variety of .NET applications.

Benefits of JNBridge JMS Adapter for .NET

·Works with *any* vendor's JMS server.

·Fast to implement, quick to deploy.

·Expects no programming

Login

knowledge of JMS.

·Leaves your JMS server untouched.

Detailed Features

- Explore available JMS queues and topics with the design tool integrated into Visual Studio.

- Send and receive messages.

- Support for multiple types of receive, including:

  - Blocking receive

  - Blocking receive with timeout

  - .NET-style asynchronous receive

  - Inbound (hosted service) receive

- Accommodates:

  - JMS local transactions and .NET distributed transactions, with full rollback capability

  - Text messages, byte messages, map messages

  - Point-to-point messaging (queues) and publish/subscribe (topics)

- Durable subscriptions

- Message selectors/filters

- JMS header properties

- Configure and run as a single process via the shared-memory channel, or in separate processes or on separate machines across a network via TCP/IP.

- Supports Microsoft's Azure AppFabric API, allowing .NET client endpoints running in the cloud to consume and produce JMS messages from JMS servers on the ground.

- Based on the dependable and robust JNBridgePro Java and .NET technology.

How the JNBridge JMS Adapter for .NET Work

At design time, the JNBridge JMS Adapter for .NET uses a simple Visual Studio plug-in interface to provide integration and configuration information. With this Add Adapter Service Reference plug-in, you can explore the available JMS queues and topics, select the send and receive operations to be performed and the optional queues and topics to be accessed. You can choose specific send and receive operations particular to the queues and topics found on any JMS implementation, including BEA Web Logic, Glassfish/OpenMQ, IBM WebSphereMQ, Open JMS, Oracle AQ, Pramati JMS Server, SonicMQ, SunOne Message Queue, and Tibco Enterprise for JMS.

The plug-in will then generate an API class containing the selected JMS operations and their queue and topic destinations. You can then use that API to send and receive messages in the .NET application you're developing.

The resulting application will send messages to, and receive messages from, the indicated JMS server using simple .NET data types. The adapter supports both blocking and non-blocking (asynchronous) receive operations.

JNBridgePro can be used to access any Java API from .NET, or any .NET API from Java. The JMS adapters implement JNBridgePro's interoperability technology to access the JMS API automatically for you; you don't need any knowledge of JMS to use the adapter.

-Sneha Kadam
(TEIT)

Reference:
www.jnbridge.com

INDUSTRIAL VISIT

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