August 2010
Issue #24

ISHARE

Monthly Magazine

K.S.Rangasamy College of Arts & Science (Autonomous), Tiruchengode

Technical Forum
created by students
for students

Inside this issue

Department of Computer Science

UG(BCA & B.Sc)

PG(MCA & M.Sc)

M.Phil(CS)

EDITORIAL …

History plays a vital role in future interventions all the time. This is the time to rewind and look back our past. Here comes we offer computer past scenario to cherish the memories. Many useful tips have been offered in flash and information's about the opera browser could be quite interesting for you. As far as concerns with the AI we offered the sixth sense article. Many More useful and interesting information's are in this edition of I SHARE....

Editorial Board

CONTENTS

Articles

JARGON BUSTER

DivX: Video compression is a patent-pending software technology that compresses digital video so it can be downloaded over DSL or cable modems in a relatively short time with no reduced visual quality.

Dpi: (Dots Per Inch) A measure of resolution for printers, scanners and displays.

Dual In-Line: Small circuit boards carrying memory integrated circuits, with signal and power pins on both sides of the board, in contrast to single-in-line memory modules (SIMM).

Emulation: One system is said to emulate another when it performs in exactly the same way, though perhaps not at the same speed. A typical example would be emulation of one computer by (a program running on) another.

Fatal Error: Any error which causes abrupt termination of the program. The program may be terminated either by itself or by the operating system (a "fatal exception"). In the former instance, the program contains code which catches the error and, as a result, returns to the operating system or calls an operating system service to terminate the program.

FDisk: An MS-DOS utility program which prepares a hard disk so that it can be used as a boot disk and file systems can be created on it. OS/2, NT, Windows 95, Linux, and other Unix versions all have this command or something similar.

FAT: The component of an MS-DOS or Windows 95 file system which describes the files, directories and free space on a hard disk or floppy

disk.

FTP: A client-server protocol which allows a user on one computer to transfer files to and from another computer over a TCP/IP network. Also the client program the user executes to transfer files.

Flood: On a real-time network (whether at the level of TCP/IP, or at the level of, say, IRC), to send a huge amount of data to another user (or a group of users, in a channel) in an attempt to annoy him, lock his terminal, or to overflow his network buffer and thus lose his network connection.

Flush: To delete something, usually superfluous, or to abort an operation.

Handshaking: Predetermined hardware or software activity designed to establish or maintain two machines or programs in synchronisation.

Hard Boot: A boot which resets the entire system.

IRQ: (Interrupt Request) The name of an input found on many processors which causes the processor to suspend normal instruction execution temporarily and to start executing an interrupt handler routine

Java Archive: A compressed archive file containing Java class files, filename extension: ".jar". The Java Development Kit contains a tool called "jar" for creating .jar files, similar to the standard Unix tar command. As well as archiving and compressing the Java class files, it also inserts a "manifest" file which can contain information about the class files, such as a digital signature. Combining class files into a single archive file makes it possible to download them in a single HTTP transaction.

Gigabyte: 2^30 = 1,073,741,824 bytes = 1024 megabytes.

Gigahertz: Billions of cycles per second

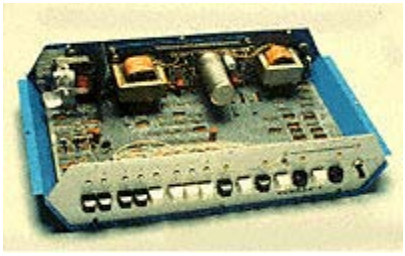
The past

Author

Dhanapal
II BCA –C

This article gives information about the history of computer

1971



Kenbak-1

- The Kenbak-1, the first personal computer, advertised for $750 in Scientific American. Designed by John V. Blankenbaker using standard medium-scale and small-scale integrated circuits, the Kenbak-1 relied on switches for input and lights for output from its 256-byte memory. In 1973, after selling only 40 machines, Kenbak Corp. closed its doors.

1972

HP-35

- Hewlett-Packard announced the HP-35 as *"a fast, extremely accurate electronic slide rule"* with a solid-state memory similar to that of a computer. The HP-35 distinguished itself from its competitors by its ability to perform a broad variety of logarithmic and trigonometric functions, to store more intermediate solutions for later use, and to accept and display entries in a form similar to standard scientific notation.

1973

TV Typewriter

- The TV Typewriter, designed by Don Lancaster, provided the first display of alphanumeric information on an ordinary television set. It used $120 worth of electronics components, as outlined in the September 1973 issue of Radio Electronics. The original design included two memory boards and could generate and store 512 characters as 16 lines of 32 characters. A 90-minute cassette tape provided supplementary storage for about 100 pages of text.

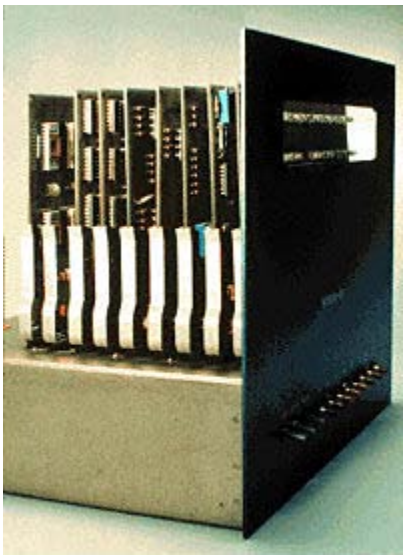
Micral

- The Micral was the earliest commercial, non-kit personal computer based on a micro-processor, the Intel 8008. Thi Truong developed the computer and Philippe Kahn the software. Truong, founder and president of the French company R2E, created the Micral as a replacement for minicomputers in situations that didn´t require high performance. Selling for $1,750, the Micral never penetrated the U.S. market. In 1979, Truong sold Micral to Bull.

1974

Xerox Alto

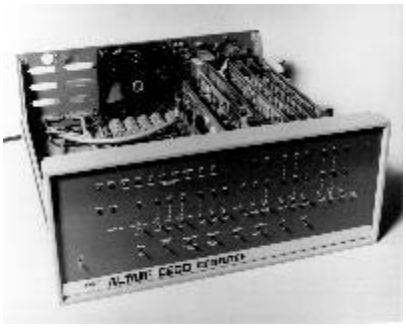
- Researchers at the Xerox Palo Alto Research Center designed the Alto — the first work station with a built-in mouse for input. The Alto stored several files simultaneously in windows, offered menus and icons, and could link to a local area network. Although Xerox never sold the Alto commercially, it gave a number of them to universities. Engineers later incorporated its features into work stations and personal computers.



Scelbi 8H

- Scelbi advertised its 8H computer, the first commercially advertised U.S. computer based on a microprocessor, Intel´s 8008. Scelbi aimed the 8H, available both in kit form and fully assembled, at scientific, electronic, and biological applications. It had 4 kilobytes of internal memory and a cassette tape, with both teletype and oscilloscope interfaces. In 1975, Scelbi introduced the 8B version with 16 kilobytes of memory for the business market. The company sold about 200 machines, losing $500 per unit.

1975

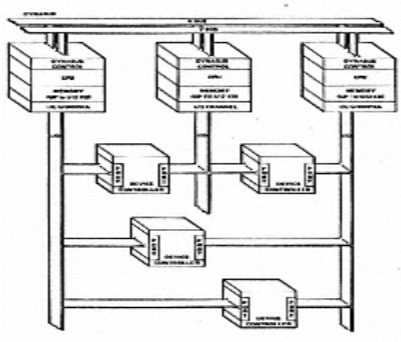


MITS Altair

- The January edition of Popular Electronics featured the Altair 8800 computer kit, based on Intel´s 8080 microprocessor, on its cover. Within weeks of the computer´s debut, customers inundated the manufacturing company, MITS, with orders. Bill Gates and Paul Allen licensed BASIC as the software language for the Altair. Ed Roberts invented the 8800 — which sold for $297, or $395 with a case — and coined the term "personal computer." The machine came with 256 bytes of memory (expandable to 64K) and an open 100-line bus structure that evolved into the S-100 standard. In 1977, MITS sold out to Pertec, which continued producing Altairs through 1978.

Felsenstein´s VDM

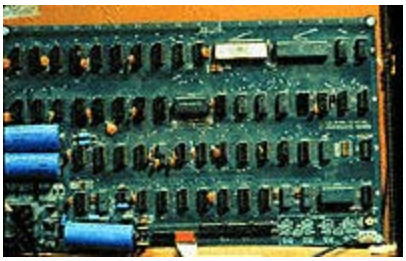
- The visual display module (VDM) prototype, designed in 1975 by Lee Felsenstein, marked the first implementation of a memory-mapped alphanumeric video display for personal computers. Introduced at the Altair Convention in Albuquerque in March 1976, the visual display module allowed use of personal computers for interactive games.



Tandem-16

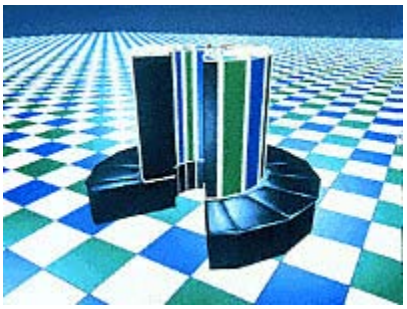
1976

- Tandem computers tailored its Tandem-16, the first fault-tolerant computer, for online transaction processing. The banking industry rushed to adopt the machine, built to run during repair or expansion.



Apple I

- Steve Wozniak designed the Apple I, a single-board computer. With specifications in hand and an order for 100 machines at $500 each from the Byte Shop, he and Steve Jobs got their start in business. In this photograph of the Apple I board, the upper two rows are a video terminal and the lower two rows are the computer. The 6502 microprocessor in the white package sits on the lower right. About 200 of the machines sold before the company announced the Apple II as a complete computer.



Cray I

- The Cray I made its name as the first commercially successful vector processor. The fastest machine of its day, its speed came partly from its shape, a C, which reduced the length of wires and thus the time signals needed to travel across them.

Project started:	1972
Project completed:	1976
Speed:	166 million floating-point operations per second
Size:	58 cubic feet
Weight:	5,300 lbs.
Technology:	Integrated circuit
Clock rate:	83 million cycles per second
Word length:	64-bit words
Instruction set:	128 instructions

1977

Commodore PET

- The Commodore PET (Personal Electronic Transactor) — the first of several personal computers released in 1977 — came fully assembled and was straightforward to operate, with either 4 or 8 kilobytes of memory, two built-in cassette drives, and a membrane "chiclet" keyboard.

Apple II

- The Apple II became an instant success when released in 1977 with its printed circuit motherboard, switching power supply, keyboard, case assembly, manual, game paddles, A/C powercord, and cassette tape with the computer game "Breakout." When hooked up to a color television set, the Apple II produced brilliant color graphics.

TRS-80

- In the first month after its release, Tandy Radio Shack´s first desktop computer — the TRS-80 — sold 10,000 units, well more than the company´s projected sales of 3,000 units for one year. Priced at $599.95, the machine included a Z80 based microprocessor, a video display, 4 kilobytes of memory, BASIC, cassette storage, and easy-to-understand manuals that assumed no prior knowledge on the part of the consumer.

1978

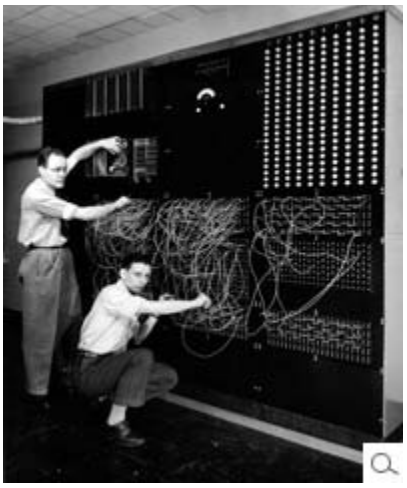
VAX 11/780

- The VAX 11/780 from Digital Equipment Corp. featured the ability to address up to 4.3 gigabytes of virtual memory, providing hundreds of times the capacity of most minicomputers.

George Stibitz circa 1940

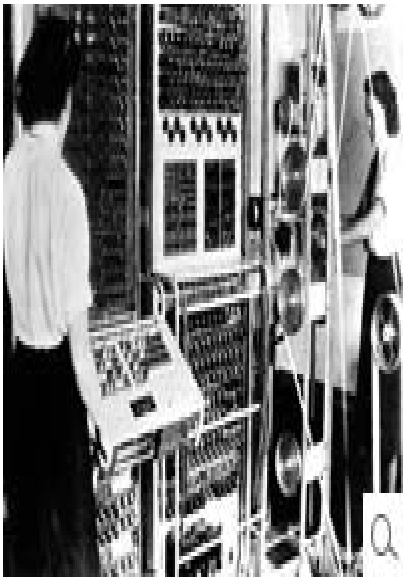
1944

- The Relay Interpolator is completed. The U.S. Army asked Bell Labs to design a machine to assist in testing its M-9 Gun Director. Bell Labs mathematician George Stibitz recommended using a relay-based calculator for the project. The result was the Relay Interpolator, later called the Bell Labs Model II. The Relay Interpolator used 440 relays and since it was programmable by paper tape, it was used for other applications following the war.



Harvard Mark-I in use, 1944

- Harvard Mark-1 is completed. Conceived by Harvard professor Howard Aiken, and designed and built by IBM, the Harvard Mark-1 was a room-sized, relay-based calculator. The machine had a fifty-foot long camshaft that synchronized the machine's thousands of component parts. The Mark-1 was used to produce mathematical tables but was soon superseded by stored program computers.



The Colossus at Work At Bletchley Park

- The first Colossus is operational at Bletchley Park. Designed by British engineer Tommy Flowers, the Colossus was designed to break the complex Lorenz ciphers used by the Nazis during WWII. A total of ten Colossi were delivered to Bletchley, each using 1,500 vacuum tubes and a series of pulleys transported continuous rolls of punched paper tape containing possible solutions to a particular code. Colossus reduced the time to break Lorenz messages from weeks to hours. The machine's existence was not made public until the 1970s

1945

John von Neumann

- John von Neumann wrote "First Draft of a Report on the EDVAC" in which he outlined the architecture of a stored-program computer. Electronic storage of programming information and data eliminated the need for the more clumsy methods of programming, such as punched paper tape — a concept that has characterized mainstream computer development since 1945.

Do U Know

Intel Core is a brand name used for various mid-range to high-end consumer and business microprocessors. In general, processors sold as Core are more powerful variants of the same processors marketed as entry-level Celeron and Pentium. Similarly, identical or more capable versions of Core processors are also sold as Xeon processors for the server market. The current lineup of Core processors includes the latest Intel Core i7, Intel Core i5 and Intel Core i3, and the older Intel Core 2 Solo, Intel Core 2 Duo, Intel Core 2 Quad and Intel Core 2 Extreme lines

Versions of Flash

FutureSplash Animator
Macromedia Flash 1
Macromedia Flash 2
Macromedia Flash 3
Macromedia Flash 4
Macromedia Flash 5
Macromedia Flash MX
Macromedia Flash MX 2004
Macromedia Flash 8
Adobe Flash CS3 Professional
Adobe Flash CS4 Professional
Adobe Flash CS5 Professional

Questions Asked By :

A.R.Abdul Jabbar Sheriff, III B.Sc(CS) 'B'

Answers Given by :

Author

S.Sasikala
Lecturer,CS

This article gives information about some basic in FLASH.

Can you informations regarding the symbols in flash?

The only object type in Flash, that can detect mouse events is the Button object. This means that there is only one way to make buttons with Flash: Creating a button object.

This may sound a bit too simplified, but many are confused by the techniques behind the more sophisticated buttons, that we will cover later in this tutorial.

Creating a button that changes upon mouseover-events is extremely simple. All you really have to do is to tell Flash how you want the button to look

1) in normal state,

2) when the mouse moves over the button and

3) when the user clicks the button.

Once you've learned this 3-step technique you can create buttons in seconds. However, the buttons you create this way are: simple (that's why they're so easy to make anyway).

If you want to create really fancy buttons you should use a slightly different technique based on movie clips.

THE THREE DIFFERENT OBJECT TYPES

Flash handles three types of objects:

- **Graphics**
- **Buttons**
- **Movieclips**

Graphics objects

You probably allready noticed that when you edit **Graphics objects** you have the entire timeline available for it.

This means that **Graphics objects** aren't limited to static elements. You can easily create looping animations - simply by creating **Graphic objects** that uses more than one frame in the timeline.

Button objects

Buttons are different from this. When you create a **Button object** you only have four frames in the timeline.

One is for drawing the button in normal state. Another is for drawing the button when a mouse-over is detected. The third is for drawing the button as you want it to look when the user clicks the button. The last frame is used to specify which area you want mouse events

to react to. That is: you can create a button that only reacts to mouseevents on certain areas of the drawing, - like the center of the button for example.

Movie clip objects

The final object-type: **Movieclips**, is similar to Graphics objects - on the surface. In both cases you can create entire animations that can be dragged onto your main movie. But while animations made as Graphics objects simply loops over and over you can control the Movieclips completely.

THE TRICK BEHIND FANCY FLASH BUTTONS

You can create more fancy buttons based on very simple programming. (You do not have to be a programmer to learn to do this!).

Actions added to frames give complete access to controlling movieclips. This means that you can use "Play", "Stop", and "Goto Frame" commands on a movieclip, that is triggered when a certain mouse event is detected on a button. Now - if the button is invisible and placed on top of the movie clip it will work as if the movieclip itself was able to detect mouse events.

Sixth Sense

Author

Sowbarni.S
III BCA-'D'

This article gives information about the sixth sense and its uses.

→ 'SixthSense' is a wearable gestural interface that augments the physical world around us with digital information and lets us use natural hand gestures to interact with that information.

→ By using a camera and a tiny projector mounted in a pendant like wearable device, 'SixthSense' sees what you see and visually augments any surfaces or objects we are interacting with.

→ It projects information onto surfaces, walls, and physical objects around us, and lets us interact with the projected information through natural hand gestures, arm movements, or our interaction with the object itself.

→ 'SixthSense' attempts to free information from its confines by seamlessly integrating it with reality, and thus making the entire world your computer.

→ Interacting with the physical objects around us. There is enormous no of there that we use everyday. Unlike most of our computing devices these objects are much more fun to us.

→ When we talk about objects one another thing automatically comes attached to that thing and that is gestures. How we manipulate these objects, how we use these objects in everyday life.

→ It comes as a part of our everyday learning. So, we can very interested from beginning that how can our knowledge about everyday objects and gestures and how we use these objects can be leveraged to our interactions with the digital world. Rather than using a keyboard and mouse, why ca we not use our computer in the same way that we interact in the physical world?.

→ Rather than using it for our computer, we actually opened it and most of them might be aware that, in those days, a mouse used to come with a ball

inside and there were two rollers inside that actually guides the computer where the ball is moving, and accordingly where the mouse is moving.

→ Using these rollers we got basically a gesture interface device that actually acts as a motion-sensing device made for two dollars. So, here whatever movement we do in our physical world is actually replicated inside the digital world just using this small device.

→ Using this integrating these two worlds, A message written on a sticky note on a paper can come to an sms or may be a meeting reminder and automatically syncs with my digital calendar and to-do list that automatically syncs with you.

→ But you can also search in the digital world, or maybe you can write a query, saying, some thing and this small system actually print it out so it actually acts like a paper input-output system, just made out of paper.

→ In another exploration, we thought of making a pen that can draw in three dimensions. So, the implementation of this pen that can help designers and architects, not only think in three dimensions, but they can actually draw so that it's more intuitive to use that way. Then we can thought, "why not make a Google map, but in the physical world?" Rather than typing the keyword to find something, we put objects on top of it.

→ If we put a boarding pass, it will show ours where the flight gate is. A coffee cup will show us where we can find more coffee, or where we can trash the cup. So, these were some of the earlier explorations did because, the goal was to connect these two worlds seamlessly.

→ Among all these experiments, there was one thing in common. "How about we take our digital world and paint the physical world with that digital information?" and because pixels are actually, right now, confined in these rectangular devices that fit in our pockets.

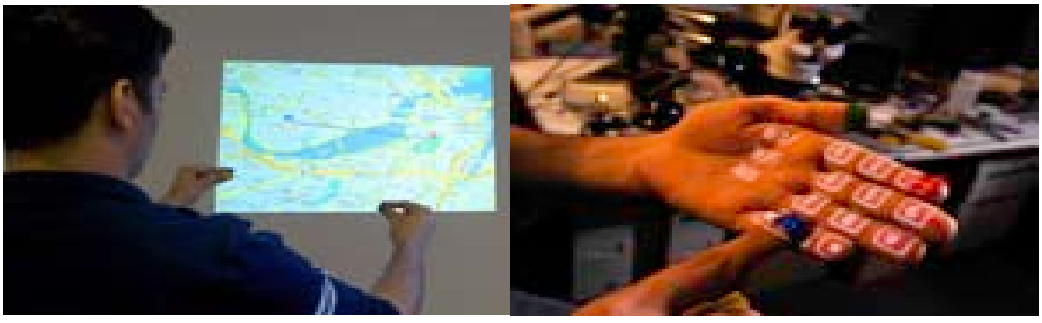
→ Why we can not remove this confine and take that to our everyday objects, everyday life, so that we don't need to learn the new language for interacting with those pixels. The SixthSense prototype is comprised of a pocket projector, a mirror and a camera.

→ The hardware components are coupled in a pendant like mobile wearable device. Both the" **projector and the camera are connected to the mobile computing device in the user's pocket"**. You can start using any surface, any wall around you, as an interface. The camera is actually tracking all our gestures whatever we are doing with our hands it's "**understanding that gesture"**.

→ And actually if we see there are some color markers, that in the beginning version we are using with it. We can start painting on any wall that but we are not only tracking one finger here. We are using all of both of your hands.

→ So we can actually use both of your hands to zoom into or zoom out of a map just by pinching all present.

→ The camera is actually doing, just getting all the images is doing the **edge recognition** and also the **color recognition** and so many other **small algorithms** are going on inside. So, technically it's a little bit complex, but it gives our self an output which is more intuitive to use, in some sense.



→ But we are more excited that we can actually take it outside. Rather than getting our camera out of our pocket, we can just **do the gesture of taking a photo** and it takes a photo for our self.

→ So we are looking for an era where computing will actually merge with the physical world. And, of course, if we don't have any surface, we can start using our **palm for simple operations**.

→ Here, we are dialing a phone number just using our hand. The camera is actually not only understanding our hand movements, but interestingly, is also able to understands what objects we are holding in our hand.

→ So we are seeing the live video of the talk, outside on just a newspaper. Your newspaper will show you live weather information rather than having it updated –like, we have to check our computer in order to do that.

→ Many of us are excited about the next generation tablet computers to come out in the market. So rather than waiting for that, we actually made our own, just using a piece of paper. So what here is removing the camera? The entire web camera has the **microphone** inside the camera.

→ Then removed the microphone from that, and then just pinched that like we just made a clip out of the microphone and **clipped that to a piece of paper**, any paper that we can found around. So now the sound of the touch is getting now when exactly we are touching the paper.

→ But the camera is actually tracking where our fingers are moving. We can of course **watch movies** and we can of **course play games**. Here, the camera actually understands how we are holding the paper and **playing a car racing game**.

→ Of course we can **browse to any websites** or you can do all sorts of computing on a piece of paper wherever we need it. We are interested in how we can take that in a more dynamic way.

→ We can just pinch that information back to our desktop, so we can use our full-size computer. And why only computers? We can just play with the papers. Like paper world is interesting to play with.

→ Switching between these two worlds. So as a last thought, we think that integrating information to everyday objects will not only help us to get rid of the digital divide, the gap between these two worlds, but will also help us, in some way, to stay human, to be more connected to our physical world and it will help us, actually not be machines, sitting in front of other machines.

→ We can develop their own sixth sense device. Because the hardware is actually not that hard to manufacture or hard to make your own.

→ Now the open source software are available to make our own Sixth Sense.

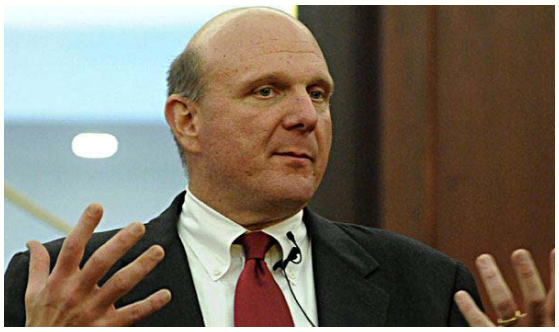
Top 25 Most Influential people

Author

M. Mohammad arif ,
III B.Sc(CS) B

This article gives information about the top most 5 influential people out of 25

The Seeker: Steve Ballmer



MICROSOFT.COM

Ballmer has his work cut out. He needs to make Microsoft (MSFT) an Internet player without jeopardizing its desktop monopolies, restore customers' faith in Windows after Vista sapped it, and imbue the company with a sense of direction after its failure to reel in Yahoo. Microsoft continues to mint money, bringing in about $1.8 billion monthly in cash. But in a world where software is moving from the PC to the Web, the company is being outmaneuvered by Google. Microsoft's ad unit is bleeding cash, and its search sites accounted for just 8.3% of U.S. users' queries in August. Buying Yahoo was supposed to help, but now Ballmer likely will need to chart a new course—without daily help from Bill Gates, who retired in June.

The Marshall: Mitchell Baker

mozilla.org

When Baker, the "Lizard Wrangler" at the Mozilla Foundation, launched the Firefox browser four years ago, Microsoft's Internet Explorer was in her sights. Baker's overarching goal was to keep the Web open. Now, Firefox's market share has risen to nearly 20% while IE's has slipped from 95% to 72%, and most Web

sites treat all browsers equally. These days, Mozilla is faced with a threat of its own: Google's Chrome browser, which launched Sept. 1. Baker says the new browser on the block "forces us to do our best." Mozilla's latest foray is into mobile browsing.

Jeff Bezos

amazon.com

By sending Amazon's (AMZN) stock to all-time highs during the past year, Bezos effectively hushed critics who worried that the company was spending too much on technology and shipping discounts. Now, the company he founded 14 years ago is firmly focused on exactly the kind of new ventures that Bezos relishes. Whether it's the Kindle e-book or cloud computing services aimed at businesses that want to store data and their operations on Amazon's massive server farms, Bezos is committed to developing new kinds of revenue streams for the digital future.

Sergey Brin, Larry Page, and Eric Schmidt

google.com

The Google (GOOG) executive triumvirate, with Schmidt as CEO and co-founders Brin and Page as respective presidents of technology and products, works as a seamless team at the top of the search giant. Up to now, their key task has been to manage the breakneck growth of the company, now comprising more than 18,000 employees and expecting $16.2 billion in sales this year, up 53%. Even the declining economy has not yet seemed to slow its dominance in Web search and search-based advertising. But that very success is creating challenges, namely a backlash against their

increasing power online from competitors, advertisers, and government regulators. Now, their main job will be convincing the world they mean it when they spout their informal corporate motto, "Don't be evil."

Opera Browser

Author

S.Nithya
Lecturer, CS

This article gives information about the history and different versions of Opera browser.

Introduction

The Opera browser started out in 1994 as a research project in Norway's telecom company, Telenor. Independent development was continued by Opera Software ASA in 1995. The first public release of the Opera Browser was version 2.12 although earlier demo versions have been found and screenshots of the 1.0 version are available on the web.

Opera's co-founder Jon von Tetzchner made the first public announcement of Opera on usenet on July 14th 1996. He used the following introduction, which after many years of development still capture the core qualities of Opera!

Are you looking for an alternative to Netscape and Microsoft Explorer? Do you like the idea of having an MDI user interface and being able to browse in multiple windows? Care for a full keyboard interface for your browsing?

Want to start up with multiple windows? Is your browser slow? Try Opera at http://opera.nta.no/opera.

This page tries to give a short overview of Opera's history, from the early beginnings up to the most recent state of the art releases. Opera Software now provides their own Feature History page, which is much more detailed (and up-to-date) than this page.

Series 1

Though not publicly released there are screenshots of the then-called MultiTorg Opera. It's fun to recognise the features that are still present in Opera's current form. In serverlogs across the web evidence of a Multitorg Opera 1.0b4 can be found. I'm still hoping to find it one day.

Series 2

The first public versions of Opera was the 2-series. They are of course extremely outdated but test-driving them you can witness the birth of the legend that is called Opera. The oldest version found is a Norwegian demo version of Opera 2.0 which was included with a PC Magazine. It will only load local pages but you can already see a lot of key features that have made Opera famous! This is serious test-driving fun!

Series 3

The Opera 3 series saw Opera evolve from a geek's tool to a powerful browsing machine with a climax in features, stability and speed with version 3.62. This version was long regarded as a the standard to which future

version of Opera were compared. It was far ahead of its time in CSS support, but unfortunately not equally strong in the JavaScript department.

Series 4: "Fly the web!" / "The Best Internet Experience on any Device"

Opera 4 was long-awaited the first browser based on a new cross-platform core which facilitated the release of Opera for different Operating Systems and thus speeding up Project Magic. The core supported more standards such as CSS1, CSS2, HTML4, XML and WML and a new integrated e-mail client was included.

The O4 browser was meant as the leap towards the larger public. Unfortunately the earlier versions were very unstable and buggy and didn't do Opera's reputation much good, though the later maintenance release 4.02 was very usable.

Series 5: "The fastest browser on earth"

The 5 series really made the jump to the large public due to the new ad-sponsored version instead of the 30-day trial period. Furthermore Opera 5 was stable and during following releases it gained new features such as the integrated Instant Messaging, the fantastic mouse-gestures, hotlist panels and the integrated search. The 5 series ended with the 5.12 release which was a good and mature release.

Series 6: "Simply the best Internet Experience"

The Opera 6 series introduced the long-awaited unicode support. Also a new SDI/MDI interface was introduced, facilitating the transition from the SDI-browsers to Opera's unfulpraised MDI-interface. During the later bugfixreleases the kioskmode was enhanced, the integrated searches became editable and a lot of printing problems were solved. When it retired, the Opera 6 series was stable and feature rich and formed an increasingly strong competition for Netscape and Internet Explorer.

Series 7: "Hey Presto!"

Opera 7 was released in early 2003. It featured a brand new rendering engine under the name Presto, which enhanced and expanded its support for standards. The major changes included support for W3C DOM, reflow capabilities allowing for more dynamic pages, and BiDi (right-to-left) support (Opera 7.20), as well as the Small Screen Rendering technique for handheld devices. The entire interface was redone, making use of a custom cross-platform skinning system and the entire UI became configurable: keyboard shortcuts, mouse gestures, menus and toolbars! With the new combined SDI/MDI interface the user has even more power at his command and new innovative features such a FastForward, Notes and Slideshow make the user experience even more enjoyable.

An especially noteworthy change in Opera 7 is the new mail and news client, called M2. This e-mail client is based on a powerful filtering system

and offers revolutionizing mail organizing abilities, which for many people changed the way they handle their e-mail.

Opera 7.5 introduced a brand new default skin as well as a revamped interface that removed a lot of clutter. A RSS newsreader as well as an IRC chat client was introduced and M2 was optimized for speed. With the 7.60 beta version, Opera introduced their first iteration of a multimodal browser that can be operated by voice commands alone and that can obey aural CSS while reading pages aloud. A true step forward!

Series 8: "Free at last, free at last!"

Opera 8 was released in early 2005, and in September that year the ad banners were removed and Opera is now completely free!

The interface was further improved: more focus on the tabbed interface, security features in the interface, the introduction of the Trash can on the pagebar, which allows for easy retrieval of previously closed pages and blocked pop-ups, and the Start bar providing access to common features such as bookmarks. Under the hood, it included the new ERA system, which allows for seamless display of various media types, and is more commonly known as "Fit to window width", a feature that eliminates horizontal scrollbars. Other technological improvements were support for XMLhttprequest (the technology behind for instance GMail) and User JavaScript. User JavaScript allows users to alter pages dynamically, for instance to fix problems, or introduce new features: a feature for the future!

Series 9: "Your web, your choice"

Opera 9 is the first of the next generation of browsers.

Aside from many bugfixes, new core technologies include XSLT 1.0, XPath, some CSS3 selectors, CSS3 opacity, and contentEditable for rich text editing interfaces. It also contains initial WebForms 2 support, and the `<canvas>` element from the WebApps spec. SVG support was increased to 1.1 Basic

An important change is the new Preferences back-end: all settings can now be changed from `opera:config`, and Site Specific Preferences are now also available, making it possible to have true SSP stylesheets and settings. New features further include a simple source editor, improved history, and an interface for adding and editing searches: simply right-clicking in a search field allows the addition of new searches. Another major new feature is the content blocker: remove ads from pages in a powerful way, not on an image-by-image setting, but for a full domain. This version also introduced widgets: small webpages that run outside of Opera, interact with webservices and are completely platform independent.

The Opera 9.10 update introduced a fraud-filter, which checks pages for trustworthiness.

Opera 9.20 introduced Speed Dial; when opening a new tab, thumbnails of your favourite sites appear, providing unprecedented easy access to them.

Opera 9.5 — Kestrel

Codenamed 'Kestrel', Opera 9.5 possibly deserved a new version number as it improved a great deal and added numerous features. Major work was done to the rendering engine, including a new JavaScript engine, full support for CSS3 selectors, dynamically updated media queries, several CSS3 features such as text-shadow and background-size, basic MathML support and overall standards improvements. The new developer tools, Opera Dragonfly, also make their first (alpha) appearance; completely written in HTML/CSS/JS, it is a locally cached web application that will also work when you are offline.

A major new feature is Quick Find, which indexes the content of every page you visit, making it easier to retrieve pages from history. The advanced history search is automatically available in the addressbar. Furthermore, Opera Link is introduced, which allows you to automatically synchronize bookmarks, notes and Speed Dial settings between Opera installations on desktop and Opera Mini. In the Security corner, Opera now comes with Netcraft anti-phishing and Haute Secure anti-malware filters, and supports the Extended Validation (EV) for websites. Receiving a major internal overhaul is Opera Mail (M2) with improved performance and stability. To cap it all off, Opera 9.5 comes with a fully redesigned skin, marking the big changes under the hood with a big change in the UI.

The follow-up release, Opera 9.6, mostly included work on the Opera Mail client, such as Low Bandwidth Mode and ability to follow threads. It also introduced Feed Preview, which effectively styles RSS News Feeds, enabling the user to decide whether or not to subscribe to the feed. Hidden in

the preferences, the new Scroll Marker improved the readability of long pages,.

Series 10

Developed under the 'Peregrine' moniker, Opera 10 moved up its standard support a notch and passed the Acid 3 test. A notable CSS improvement was the introduction of Webfonts support, which included SVG fonts. Support for alpha-transparency was also improved, in the form of RGBA and HSLA support.

More striking changes were introduced in the UI, which underwent another default skin change, partly prompted by the development of Visual Tabs, which show thumnail previews of open pages. Speeddial was given some configuration options, inline spellchecking was added, Opera Mail received HTML editing capabilities. Also introduced to this release was an Auto Update feature, integrated crashlogger and Opera Turbo. This service speeds up slow (dial-up) connections, by sending the page through Opera's proxy servers which compress.

Release compatibility

Operating system		Latest version
Mac OS	v8.x	6.03
	v9.x	7.54u2
Mac OS X	10.0-v10.1	7.54u2
	v10.2	8.54
	v10.3	10.10
	v10.4-10.6	10.60
OS/2 and eComStation		5.12
Microsoft	Windows 3.1x	3.62

Windows	Windows 95/98/Me/NT 4.0	10.10 (The latest version of Opera Web Browser can be installed with the Classic Installer)
	Windows 2000 to Windows 7 As of version 10.10 the official minimum requirement is Windows 2000 [1].	10.60
GNU/Linux	Debian, Fedora, Gentoo, Mepis, Mandriva, RedHat, Skolelinux, SUSE, and Ubuntu	10.60
FreeBSD	6.x and 7.x	10.60
Solaris	Intel and SPARC	10.11
	QNX	5.2.1 (stable) and 6.01b (beta)
	BeOS	3.62

MAP, IMAGE, VIDEO AND VOICE PROCESSING

S.Piramu Kailasam, MCA, M.Phil.

Lecturer, CS.

K.S.Rangasamy College of Arts & Science, Tiruchengode.

Abstract

Multimedia is having widespread applications in different fields. Maps, images, videos and audios are the key processing parameters that require automatic monitoring by computer. The generation of topic maps, Digitization, Image compression, video processing, Mammographic image processing and voice processing are discussed in this

present work. All the points are not related and each of them is very important in application.

MAPS

Topic maps standard has been gradually recognized as an emerging standard for information exploration and knowledge organization. One advantage of topic maps is that they enable a user to navigate and access the documents he wants in an organized manner, rather than browsing than hyperlinks that are generally unstructured and often misleading. Nowadays, the topic maps are generally manually constructed by domain experts or users since the functionality and feasibility of automatically generated topic maps still in progress. The input data types may be different types such as structured documents, structured knowledge, unstructured documents and semi-structured data and propose different techniques to build topic map such as merging, mapping from RDF(Resource description framework) to TM(Topic mapping) and learning techniques.

The topic map building approach has the following functionalities

- Defining resources: identifying resource types, adding, deleting, modifying and merging resources.
- Identifying and maintaining concepts/topics.
- Identifying and maintaining relationships/associations between topics: adding and deleting relationship types, member roles (with no constraint on the number of members in a relationship) and relationship instances.
- Defining different views on a topic map including selected topics, relationships, and /or resources.
- Storing topic maps persistently either in standard XTM files or in databases.
- Merging topic maps.
- Importing /exporting topic maps.
- Including expternal resources
- Providing a user interface for search and navigation in the TM.
- Evaluating and validating the resulting topic map.

The automatic generation of topic maps from XML documents has the following algorithms.

(1) Initially, for the given ontology creates all the topics types, occurrences roles, occurrences types and associations types;

(2) During a document tree traversal, for each association, define the association type and association members.

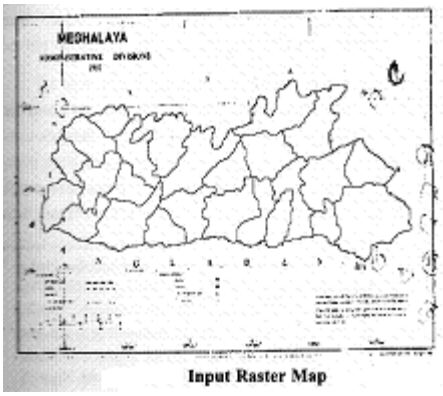
(3) For each element in the source that is seen as a topic, create the topic ID, topic type, topic names and topic occurrences.

By this way many maps can be generated automatically in the computer in the internet and the required maps can be found out.

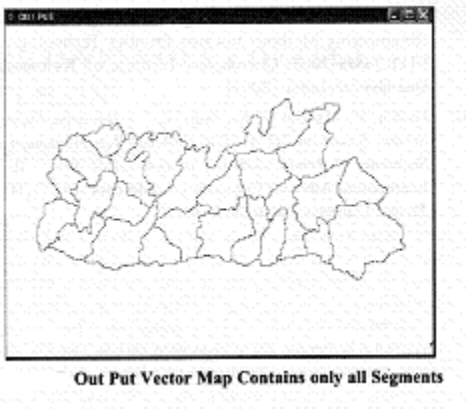
Digitize polygon segments of a Map/Image

The maps obtained by automatic generation can be improper due to various reasons. A GIS tool is used where the whole border of a closed section of a black and white map is digitized using a single click inside the section. The boundary point of a segment contains RGB values. Digitization means calculation of the spatial data for three basic components of vector map. For polygon objects the boundary points are calculated. For line and point objects the coordinates of the object constructing points are calculated in the process of digitization.

The complete scheme can be splitted into four subtasks namely Image correction, Spatial data generation, creation of database and output generation. The RGB values of eight connected pixels of the selected points are calculated and compared with the RGB values of black pixel. Computer automatically generates the vector image of the figure with the closed boundaries.



Input Raster Map

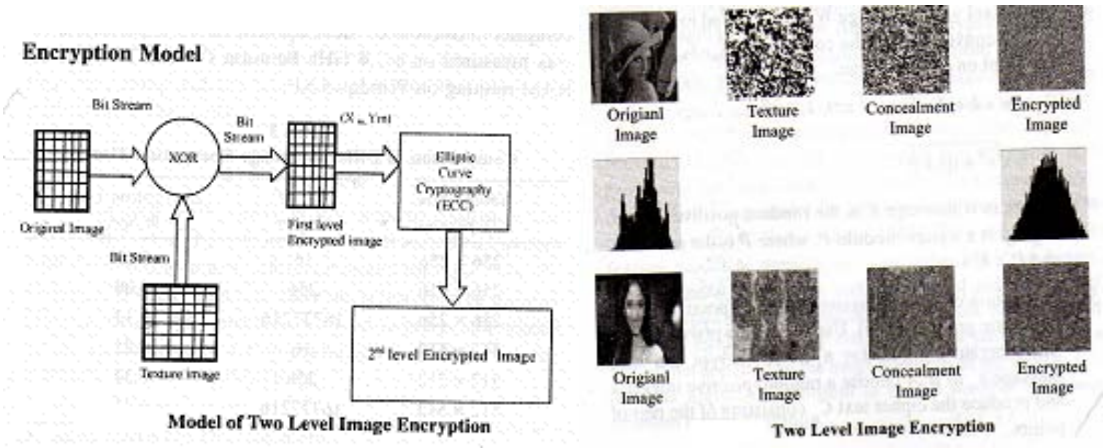


Out Put Vector Map Contains only all Segments

By this technique digitization of the image of high accuracy is achieved.

Efficient image encryption using MRF and ECC(3)

After getting map/image it is sent through internet. Sending as it is have no security. Hence encryption of them is essential. A two level image encryption method using elliptic curve cryptography (ECC) which has been made more efficient by Markov random field (MRF) is done. In this method a texture image generated using seed by MRF. This seed is used as secrete key that generated by elliptic curve method. XOR method are used to concealed original image with texture image, the mixed image pixel is encrypted using ECC for transmission. The resulting system gives comparatively small block size, high speed and high security.



Model of Two Level Image Encryption

Two Level Image Encryption

Image compression

Uncompressed multimedia data requires considerable storage capacity and transmission bandwidth despite rapid progress in mass storage density, processor speeds and digital communication system performance. A 4 MB image will take more than a minute to download using a 64 kbps channel, whereas, if the image is compressed with a ratio of 10:1 it will have a size of 400kb and will take about 6 seconds to download. Some of the commonly used techniques are Transform coding, namely transform etc, Vector Quantization, segmentation and approximation method, spline approximation methods, fractal coding etc.

The goal of the quantization is to encode the data from a source, with some loss, so that the best reproduction is obtained. Vector quantization (VQ) achieves more compression than scalar quantization. Vector quantization has been widely used for image and speech compression in recent years, since it provides two attractive features; optimal rate-distortion performance and quite simple decoder. VQ can be roughly classified into two categories: memoryless VQ and memory VQ. In memoryless VQ, the

input image vector (block) are encoded independently, whereas the memory VQ exploits the correlation among neighbouring block to further reduce the bit rate.

The steps used in our compressor are

1. An image to be compressed is decomposed into a set of non-overlapped image (blocks of size 2x2 pixels).
2. A codebook is generated for the image blocks using algorithm.
3. The redundancy present in the data, in the codebook is eliminated.
4. And final codebook is generated which is referred as final optimize reference codebook.
5. Assign indices to each code vector and sending these indices on communication channel for transmission at the decoder, in state of code vector.
6. Reverse process is apply at decoder to reconstruct the original image.

Thus the vector quantization is done and image compression is done.

Video Processing:

Identifying moving objects is a critical task for many computer vision applications; it provides a categorization of the pixels into either foreground or background.A common approach used to achieve such categorization is removing background. There are many background removal algorithms in the literature, most of them pass through four major steps, which are preprocessing, background modeling, foreground detection and data validation. An important constituent of vision systems is background modeling. Existing work in background modeling has mostly addressed scenes that consist of stationary structures. We propose a theoretical agenda to obtain an estimate of the probability distribution of the observed data in a higher dimensional space. Several methods parametric and nonparametric can be considered for determining this probability distribution. A mixture of multivariate Gaussians can be considered to approximate this distribution. The parameters of the model, i.e. the mean and the covariance matrix of the Gaussians, can be estimated and updated. Care has to be exercised, however in dealing with the uncertainties in the correct manner.

Once an appropriate mechanism for density approximation is built, the next step is to determine a categorization mechanism for the observed data. Categorization may be

performed by thresholding on the probability of a new observation to belong to the background. However two observations need to be taken into account.

The threshold should be adaptive and determined based on the uncertainty or spread of the background distribution at particular pixel (called entropy in in-formation theory). Any available prior information about the foreground distribution should be utilized.

Once the appropriate generic model for background subtraction is introduced, addressing the selection/estimation of the features is to be considered. As mentioned earlier, we utilize five features-two for optical flow and three for the intensity in the normalized color space. The covariance for an observation may be estimated from the covariances of the components the normalized color and optical flow. Assuming that the intensity and optical flow features are uncorrelated (which may not be true in general) , an expression for the covariance matrix may be derived.

The algorithm is able to detect events of interest in the land and simulated events on the ocean front with extremely low false alarm rate. The algorithm was able to detect simulated objects having almost no visual difference from the ocean if they were moving in a pattern that was different from the ocean .A typical traffic surveillance scenario was considered next where the challenge was due to the vigorous motion of the trees and bushes.

Mammographic image processing

Women suffering from breast cancer have been taken as a serious concern all around, the world, as it directly affects the next generation to come. Mammography has become a major field in medical diagnostics as there is one out of eight women affected by breast cancer. Constant mammographic screening program for women of a particular age group are taking place world-wide. The digital mammography for scrutiny with the angle of finding the microcalcification in the mammographic images through the help of artificial neural networks (ANN) and wavelet based sub band image decomposition. When mammographs are digitized the micro calcification present in it will be in the form of high frequency component of the image matrix. In the order to detect it we filter the image using Hessian filter and apply DWT and finding the Skewness and Kutosis of the resulting image, before applying the BPN algorithm for diagnosing the cancer. The neural

network contains one input , two hidden and one output layer. The described method has been tested on many memographic images taken from the digital data base for screening mammography (DDSM)

Mammographic image is initially made to be convoluted with the Hessian matrix to smoothen and filter it. The filtered images are more bound to heave higher detection ratio then the one without filtering. Hessian matrix is a gradient method of filtering the image. The Hessian matrix is the square matrix of second order partial derivatives of a function; that is it describes the local curvature of a function of many variables.

The Hessian matrix was developed in the nineteenth century by the German mathematician Ludwig Otto Hesse and later named after him. Hesse himself had used the term functional determinants.

The simulation is carried out by using the following conditions.

1) Test mammogram images were obtained by scanned as raw format with 8 bit grayscale and 256 X 256 pixels size.
2) The chosen wavelet basis function is the Daubechies with four coefficients as a filter banks.
3) Global image enhancement procedure was applied only on 4 level decomposed detail sub band image using multiscale adaptive gain method.

The regions of clustered microcalcification can be detected and the presence another location of clustered microcalcification could be considered to clarify the diagnoses. In order to test the detection method, we used the visual analysis to detect presence microcalcification in mammograms based on comparison between the result images and the original ones. The result of test images shown effectiveness simulation on microcalcification detection, even there are some result could not detect the clustered microcalcification. Fail of detection process will reduce the calculation of simulation effectiveness.

Voice Processing:

Voice transmission on net has increased significantly in last three years voice quality can be degraded due to number reason such as unpredictable short term loads lack of guarantees on network performance, lack of control over the end systems. Enormous advances have been made in computer technology to send packet voice data.

A media gate way plays a critical role of interoperability between packet networks and existing telephone networks. Inevitably, it involves many complex processors such as packetization./depacketization of voice frames , jitter smoothing and error concealment etc. It has been found that three factors can profoundly affect VOIP quality. They are delay, jitter and packet loss.

The traditional measurement for voice quality measurement in telecommunications is the Mean Opinion Score(MOS). The MOS test is also called the Absolute Category Rating (ACR) test.

The E-model tries to address in a qualitative manner several of the quality issues that will affect voice over packet systems. One of the driving forces behind the E-model is that the Actual quality of the speech is not always as crucial as the perceived quality. The European telecommunications standards institute (ETSI) developed the e-model to address the needs of network planners. The E-model is based on the premise that “Psychological factors on the psychological scale are additive”. The E-model defines the “R” value as the measure of voice quality.

In Perceptual Evaluation of Speech Quality (PESQ) the original and degraded signals are mapped onto an internal representation using a perceptual model. The difference in this representation is used by a cognitive model to predict the perceived speech quality of the degraded signal .This perceived listening quality is expressed in terms of Mean Opinion Score, an average quality score over a large set of subjects. PESQ is able to predict subjective quality with good correlation in a very wide range of conditions that may include coding distortions, errors, noise filtering, delay and variable delay. Other related evaluations are perceptual speech quality measure (PQSM), Measuring Normalizing Blocks (MNB), and Perceptual Analysis Measurement Systems (PAMS).

Conclusion.

The computer is very advanced and the automatic generation of the topic, image encryption, image compression, video processing, mammographic image processing, and voice processing is done easily with the various present work.

Mailing List

To whom we send

- **The Vice-Chancellor, Periyar University ,Salem-11**
- **The Registrar, Periyar University ,Salem**
- **The Controller of Examination, Periyar University ,Salem-11**
- **The HOD, Department of Computer Science, Periyar University,Salem-11**
- **The HOD, Government Arts College for Women, Salem-8**
- **The HOD, Government Arts College for Women , Krishnagiri**
- **The HOD, Government Arts & Science College (W), Burgur, Kirshnagiri**
- **The HOD, J.K.K Nataraja College of Arts & Science**
- **The HOD, M.G.R College of Arts & Science**
- **The HOD, Sengunthar Arts & Science College**
- **The HOD, Muthayammal College of Arts & Science**
- **The HOD, PEE GEE College of Arts &, Science**
- **The HOD, Harur Muthu Arts & Science College for Women**
- **The HOD, Vivekanandha College of Arts & Sciences (W)**
- **The HOD, Mahendra Arts & Science college**
- **The HOD, Selvam Arts & Science college**
- **The HOD, St.Joseph's College of Arts & Science for (W)**
- **The HOD, Vysya College of Arts &, Science**
- **The HOD, NKR Government Arts College for Women**

- **The HOD, Arignar Anna Government Arts College**
- **The HOD, Salem Sowdeswari College**
- **The HOD, P.G.P College of Arts & Science**
- **The HOD, Attur Arts & Science College**
- **The HOD, SSM College of Arts & Science**
- **The HOD, Government Arts College Salem**
- **The HOD, Government Arts College Men**
- **The HOD, Government Arts College, Dharmapuri**
- **The HOD, Gobi Arts and Science College (Autonomous)**
- **The HOD, Sri Kandhan College of Arts & Science**
- **The HOD, Sri Ganesh College of Arts & Science**
- **The HOD, Jairam Arts & Science College**
- **The HOD, Sri Balamurugan College of Arts & Science**
- **The HOD, PSG College of Arts and Science**
- **The Secretary, PSG College of Arts and Science**
- **The HOD, Kongunadu Arts and Science College(Autonomous)**
- **The HOD, Vivekanandha College for Women**
- **The HOD, Sri Vidhya Mandir Arts & Science College**
- **The HOD, *St.*John's College *Palayamkottai* - 627 007**
- **Mr. S.T.Rajan, St. Joseph's College, Trichy**

We request the recipients of the book to kindly convey their feedback

KSRCAS TIMES

"KSR Community radio has been started by KSR Eductaional Institutions at 90.4 Mhz and happenings in KSR college of Arts and Science Could be heard as a Program weekly for 2 Hrs"

We'll met you in radio waves

CERTIFICATE COURSE ON OFFICE AUTOMATION AND WEB DESIGN

Power Point	***Web Animation Flash***
01-08-10	22-08-10
Ms.S.Latha	Mr.M.Prakasam
Ms.A.Nirmaladevi	Ms.S.Nithya
Web design – HTML	***Java***
08-08-10	29-08-10
Ms.F.Regina Mary	Mr.S.Krishnamoorthy
Ms.D.Mythili	Ms.S.Gowri

Department of Computer Science
Extension Activity to School students

Spyware Blaster 4.3

Javacool Software - 2.96MB (Non-Commercial Freeware)

Spyware, adware, browser hijackers, and dialers are some of the fastest-growing threats on the Internet today. By simply browsing to a web page, you could find your computer to be the brand-new host of one of these unwanted fiends!

The most important step you can take is to secure your system. And SpywareBlaster is the most powerful protection program available.

- Prevent the installation of ActiveX-based spyware, adware, browser hijackers, dialers, and other potentially unwanted software.
- Block spyware/tracking cookies in Internet Explorer and Mozilla/Firefox.
- Restrict the actions of potentially unwanted sites in Internet Explorer.

Title: SpywareBlaster 4.3
Languages: en-US
Filename: spywareblastersetup43.exe
License: Non-Commercial Freeware
File size: 2.96MB (3,103,640 bytes)
Date added: April 14, 2010
Requirements: Windows (All Versions)
Author: Javacool Software