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ISHARE

Monthly Magazine

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

Technical Forum created by students for students

Inside this issue

- Components of Mother board
- Computer history
- Flash text effects

Lots more. Explore……

Department of Computer Science

UG(BCA & B.Sc)

PG(MCA & M.Sc)

M.Phil(CS)

EDITORIAL …

World Wide Web undergoes a lot of changes since now. This issue tries to focus on current scenario happening in the web. Today semantic web is under the limelight of research. We have offered information's regarding them in this issue. We offered information's regarding the semantic web, Ubiquitous computing, Ambient Intelligence and web 3.0, the current ongoing trend under w3c. Many More useful and interesting information's are in this edition of I SHARE....

Editorial Board

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Articles

Components of Motherboard

Author

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Programmer

This article helps to know about the computer mother board and its components.

Computer Motherboard and its constituent components:

There are primarily two types of motherboards, AT motherboard, and ATX motherboard. AT motherboards are older, and not commonly used now a days. The AT and ATX motherboards differ in the form factor. Full AT is 12" wide x 13.8" deep, and Baby AT is 8.57" wide x 13.04" deep. Full-ATX is 12" wide x 9.6" deep and Mini-ATX is 11.2" wide x 8.2" deep. Other major differences include power supply connector, and keyboard connector. AT has 5-pin large keyboard connector, where as ATX has 6-pin mini connector. Similarly, AT has single row two connectors +/-5V, and +/-12V, whereas ATX motherboard has double row single connector providing +/-5V, +/-12V, and +3.3V.

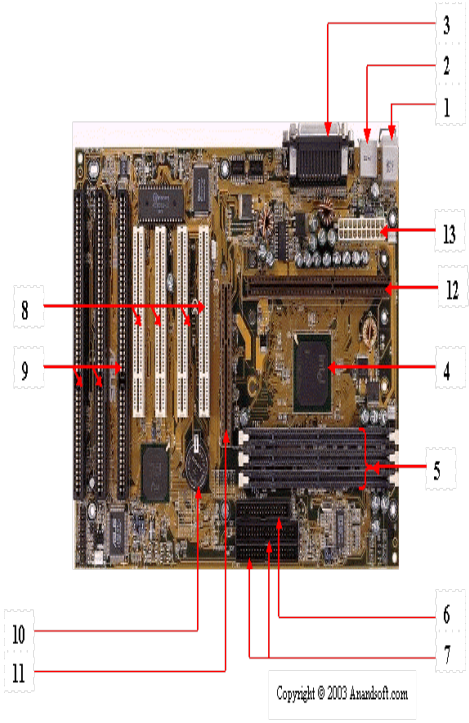
A typical ATX PC motherboard with constituent components is given below:

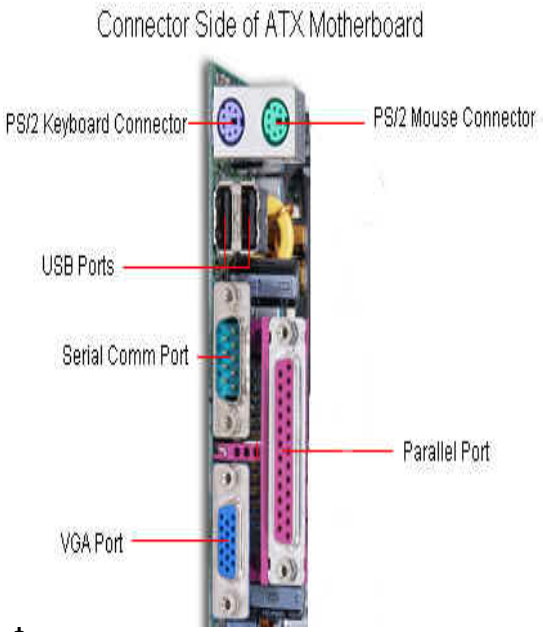
The important constituent components of an ATX Motherboard are given below:

1. Mouse & keyboard
2. USB
3. Parallel port

4. CPU Chip
5. RAM slots
6. Floppy controller
7. IDE controller
8. PCI slot
9. ISA slot
10. CMOS Battery
11. AGP slot
12. CPU slot

13.P



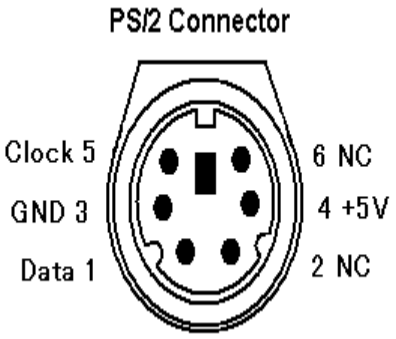


y plug in

1. Mouse & keyboard:

Keyboard Connectors are two types basically. All PCs have a Key board port connected directly to the motherboard. The oldest, but still quite

common type, is a special DIN, and most PCs until recently retained this style connector. The AT-style keyboard connector is quickly disappearing, being replaced by the smaller mini DIN PS/2-style keyboard connector.



You can use an AT-style keyboard with a PS/2-style socket (or the other way around) by using a converter. Although the AT connector is unique in PCs, the PS/2-style mini-DIN is also used in more modern PCs for the mouse. Fortunately, most PCs that use the mini-DIN for both the keyboard and mouse clearly mark each mini-DIN socket as to its correct use. Some keyboards have a USB connection, but these are fairly rare compared to the PS/2 connection keyboards.

2. USB (Universal serial bus):

USB is the General-purpose connection for PC. You can find USB versions of many different devices, such as mice, keyboards, scanners, cameras, and even printers. a USB connector's distinctive rectangular shape makes it easily recognizable.

USB has a number of features that makes it particularly popular on PCs. First, USB devices are hot swappable. You can insert or remove them without restarting your system.

3. Parallel port:

Most printers use a special connector called a parallel port. Parallel port carry data on more than one wire, as opposed to the serial port, which

uses only one wire. Parallel ports use a 25-pin female DB connector. Parallel ports are directly supported by the motherboard through a direct connection or through a dangle.

4. CPU Chip:

The *central processing unit*, also called the *microprocessor* performs all the calculations that take place inside a pc. CPUs come in Variety of shapes and sizes. Modern CPUs generate a lot of heat and thus require a cooling fan or heat sink. The cooling device (such as a cooling fan) is removable, although some CPU manufactures sell the CPU with a fan permanently attached.

5. RAM slots:

Random-Access Memory (RAM) stores programs and data currently being used by the CPU. RAM is measured in units called bytes. RAM has been packaged in many different ways. The most current package is called a 168-pin DIMM (Dual Inline Memory module).

6. Floppy controller:

The floppy drive connects to the computer via a 34-pin *ribbon cable*, which in turn connects to the motherboard. A *floppy controller* is one that is used to control the floppy drive.

7. IDE controller:

Industry standards define two common types of hard drives: EIDE and SCSI. Majority of the PCs use EIDE drives. SCSI drives show up in high

end PCs such as network servers or graphical workstations. The EIDE drive connects to the hard drive via a 2-inch-wide, 40-pin ribbon cable, which in turn connects to the motherboard. *IDE controller* is responsible for controlling the hard drive.

8. PCI slot:

Intel introduced the *Peripheral component interconnect* bus protocol. The PCI bus is used to connect I/O devices (such as NIC or RAID controllers) to the main logic of the computer. PCI bus has replaced the ISA bus.

9. ISA slot: (Industry Standard Architecture)

It is the standard architecture of the Expansion bus. Motherboard may contain some slots to connect ISA compatible cards.

10. CMOS Battery:

To provide CMOS with the power when the computer is turned off all motherboards comes with a battery. These batteries mount on the motherboard in one of three ways: the obsolete external battery, the most common onboard battery, and built-in battery.

11. AGP slot:

If you have a modern motherboard, you will almost certainly notice a single connector that looks like a PCI slot, but is slightly shorter and usually brown. You also probably have a video card inserted into this slot. This is an Advanced Graphics Port (AGP) slot.

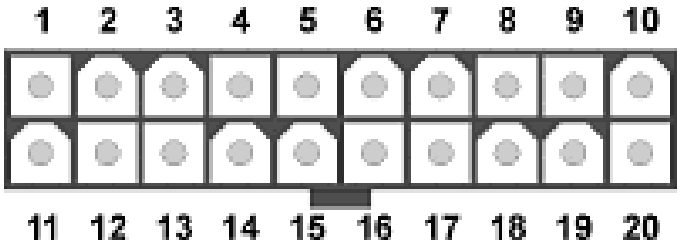
12. CPU SLOT:

To install the CPU, just slide it straight down into the slot. Special notches in the slot make it impossible to install them incorrectly. So remember if it does not go easily, it is probably not correct. Be sure to plug in the CPU fan's power.

13. POWER SUPPLY PLUG IN:

The Power supply, as its name implies, provides the necessary electrical power to make the pc operate. the power supply takes standard 110-V AC power and converts into +/-12-Volt, +/-5-Volt, and 3.3-Volt DC power.

The power supply connector has 20-pins, and the connector can go in only one direction.



Free Blog Creation

Author

Ms. F.Regina Mary,
Lecturer

This article gives information about how to create a Blog for free.

How To Create a Blog for Free in 4 Easy Steps

1. Step 1: Choose a free blogging software.

   Read these articles from About.com Web Logs to help you choose the best blogging software for you:

   - 6 Questions to Ask Yourself to Find the Best Blogging Software for You
   - Blogging Software Comparison

2. Step 2: Register for an account and create your blog

   These articles from About.com Web Logs provide step-by-step instructions to help you start a blog with either of the two most popular free blogging softwares - Blogger.com and Wordpress.com.

   - How to Start a Free Blog with Blogger.com
   - How to Start a Free Blog with Wordpress.com

3. Step 3: Select Your Domain, Theme and Other Options.

   During the registration process for your new blog account, you'll need to choose a domain name and blog theme. You also might want to take a few minutes before you actually start blogging to customize some of the other preferences for your blog that your blogging software allows you to modify such as the author name, comment moderation process, and so on. However, you're not required to do any customization before you start publishing blog posts.

4. Step 4: Start blogging.

   Once you've completed steps 1-3, you're ready to join the blogosphere and start publishing content on your blog. There are many more ways you can customize your blog with plug-ins, feeds, blogrolls, and more, but these four easy steps are all you need to follow in order to start a

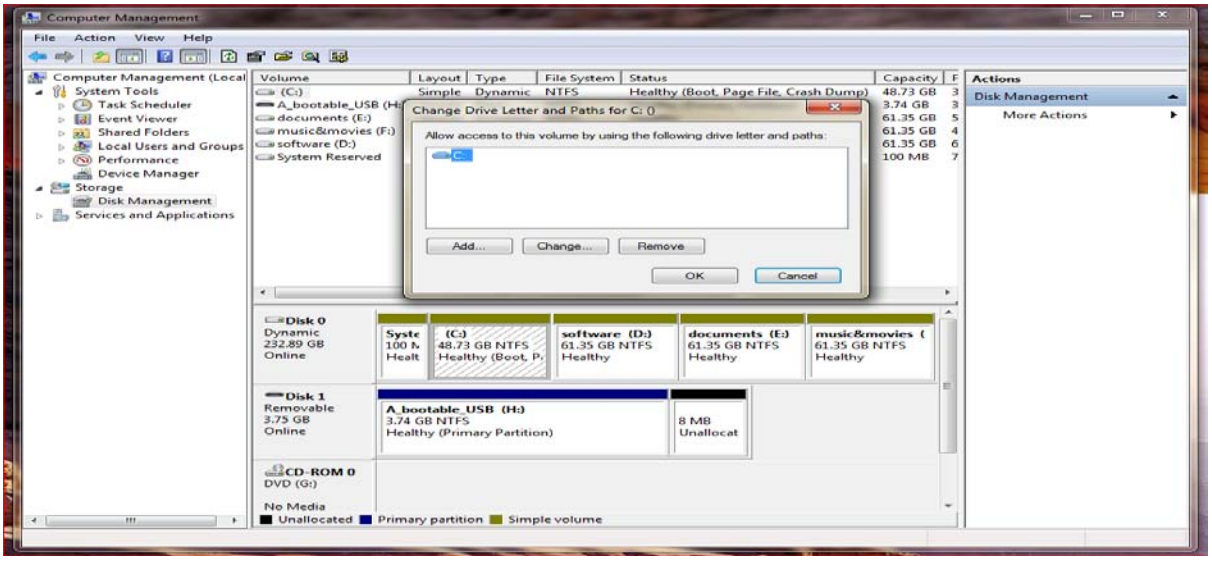
How to change the local disk drive

Author

Dhanapal
II BCA –C

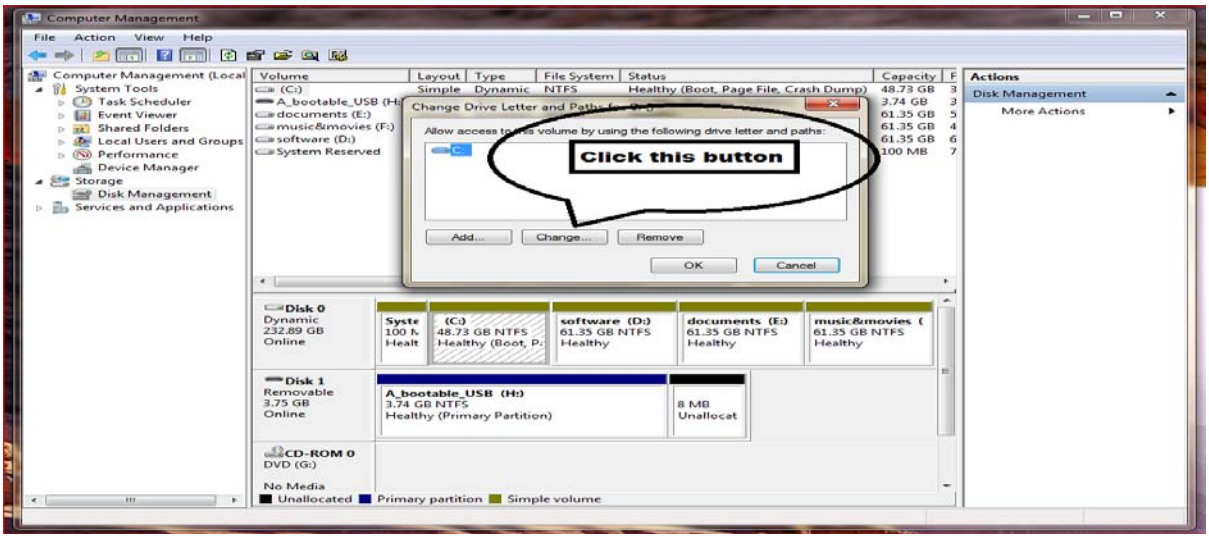
This article gives information about how to change the local disk drive

Right click your Mycomputer Icon in desktop. Here in the screen you will see the manage option. Click this option. The Computer Management will be display in your screen

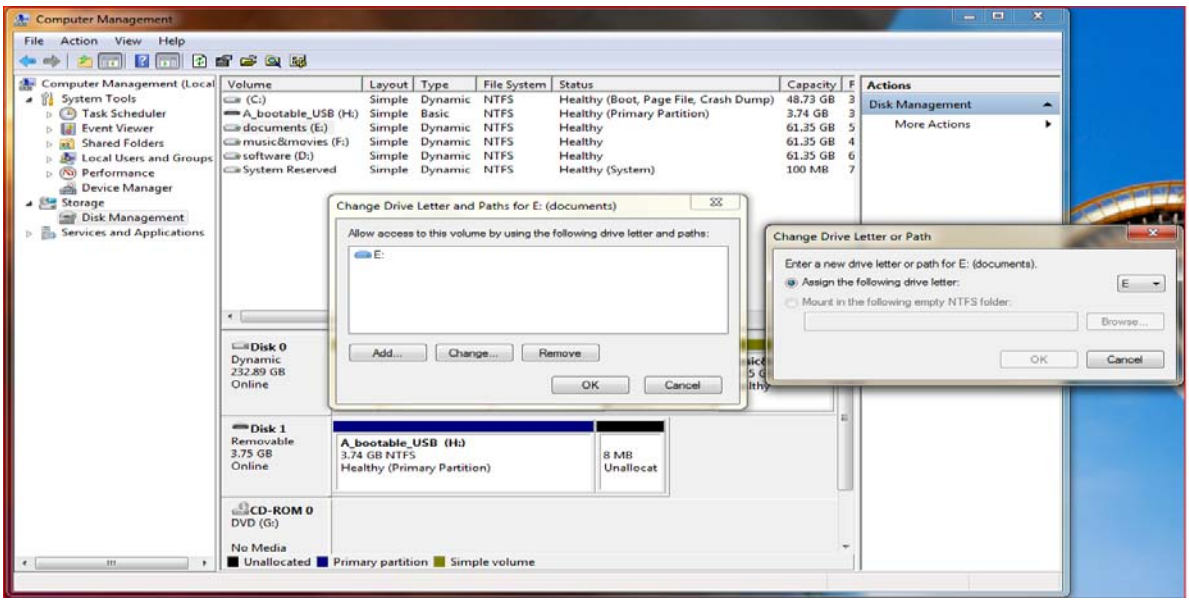


In this window you will see the option Disk Management and click this

You will get the details about your local drives. In this window right click the local disk which you wants to change the drive letter. You will see a menu. In this menu you can click Change drive letter and paths… option. You will get the window which is Change drive letter and paths for window



In this window click change option. You will get another window which is change drive letter or path



In this window select the drive letter in drop-down menu

And click ok. The specific drive's letter has been changed.

Fps Creator

Author

S.Siva Kumar
Final MCA

This article helps to know the tool which is used for creating action packed FPS(First Person Shooter Creation Software).

As its name implies this is a tool for creating action-packed FPS games with no programming or 3D modeling knowledge required.

Using an intuitive and visual Windows interface you literally paint your game world into the scene. A vast range of 3D elements are included allowing you to paint hallways, corridors, gantries, walls, doors, access tunnels, ceilings, lifts, transporters, stairs and more. Segments intelligently attach themselves to each other - paint two corridor pieces side-by-side and they'll snap together seamlessly. Switch to 3D mode and you drop in on your scene for pixel perfect placement of 3D entities. Place a light-switch on the wall and it'll intelligently control the dynamic lighting in the room.

Key Features

* Create First Person Shooter games quickly and easily
* Use intelligent building blocks to create game levels
* No programming necessary
* Open design allows for endless possibilities
* Import your own media (sounds, 3D models, textures, shaders)
* One click and FPS Creator builds you a final stand alone exe file
* 3D Engine supporting Direct X9.0c

* Virtually every single aspect of the game is controlled via script files you can edit
* 90+ page manual, fully searchable and printer ready in PDF format

Hundreds of 3D Objects included

We appreciate that not everyone has the skill to create their own 3D content before starting to build a game - which is why FPS Creator comes with two theme packs: Sci-fi and World War 2.

There are over 300 segment building blocks included, over 500 entity objects (such as desk lamps, health packs, crates), 62 different fully animated enemies, 36 weapons and 66 different AI scripts to control them all.

The manual also includes guides on importing your own media to create prefabs, weapons, segments and entities. You don't have to use the 3D objects we have given you, adding your own is quick and easy. Changing the textures the models use is just as painless, so you could take one of the supplied barrel models and re-texture it to create any number of them all in your own style.

More Features

* Fully Windows based editing environment
* Complete Physics System under your control
* Internet and LAN Death Match style games supported
* Classic FPS game experience
* Create multi-level games (up to 50 levels)
* Visual Waypoint editing, enemies can follow multiple waypoints

* Built-in game optimisation profiler analyses frame rates, poly counts and more
* Easy editing of game element's settings
* Game elements include, weapons, ammo, enemies, picks ups, lifts, teleports, ladders, trigger points
* Game menu editing facilities
* Pick up weapons from dead enemies
* Optional Pixel shader support
* AI scripting language for total freedom to customise
* Set texture quality and effect levels
* Cube mapping effects
* Automatic 3D Universe construction
* PVS - Portal visibility system (for fast rendering of scenes)
* Automatic Light Mapping (quick and full)
* Small game files are easily swapped
* Map segments "click together" - you can literally draw your levels
* Dynamic and Static lights illuminate your game
* Animated decals for fire, smoke, water, blood splats, etc
* Keyboard short-cuts to most popular commands for fast development
* Players can hold up to 9 different weapons at once
* Guns include optional sniper zoom mode
* Crouch, Run, Lean left / right, Jump and full mouse-look available

Snapshots:

Computer History

Author

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

This article helps to know the information about history of computer

1939

David Packard and Bill Hewlett in their Palo Alto, California Garage

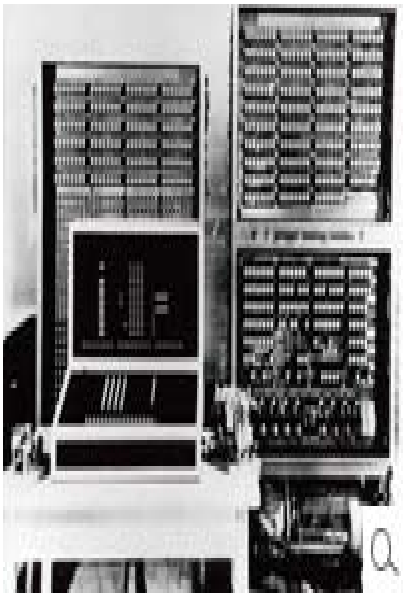
- Hewlett-Packard is Founded. David Packard and Bill Hewlett found Hewlett-Packard in a Palo Alto, California garage. Their first product was the HP 200A Audio Oscillator, which rapidly becomes a popular piece of test equipment for engineers. Walt Disney Pictures ordered eight of the 200B model to use as sound effects generators for the 1940 movie “Fantasia.”

1940

The Complex Number Calculator (CNC)

- The Complex Number Calculator (CNC) is completed. In 1939, Bell Telephone Laboratories completed this calculator, designed by researcher George Stibitz. In 1940, Stibitz demonstrated the CNC at an American Mathematical Society conference held at Dartmouth College. Stibitz stunned the group by performing calculations remotely on the CNC (located in New York City) using a Teletype connected via special telephone lines. This is considered to be the first demonstration of remote access computing.

1941



The Zuse Z3 Computer

- Konrad Zuse finishes the Z3 computer. The Z3 was an early computer built by German engineer Konrad Zuse working in complete isolation from developments elsewhere. Using 2,300 relays, the Z3 used floating point binary arithmetic and had a 22-bit word length. The original Z3 was destroyed in a bombing raid of Berlin in late 1943. However, Zuse later supervised a reconstruction of the Z3 in the 1960s which is currently on display at the Deutsches Museum in Berlin.

1942

The Atanasoff-Berry Computer

- The Atanasoff-Berry Computer (ABC) is completed. Built at Iowa State College (now University), the ABC was designed and built by Professor John Vincent Atanasoff and graduate student Cliff Berry between 1939 and 1942. The ABC was at the center of a patent dispute relating to the invention of the computer, which was resolved in 1973 when it was shown that ENIAC co-designer John Mauchly had come to examine the ABC shortly after it became functional.

This result has been referred to as the "dis-invention of the computer." A full-scale reconstruction of the ABC was completed in 1997 and proved that the ABC machine functioned as Atanasoff had claimed.

Whirlwind installation at MIT

- Project Whirlwind begins. During World War II, the U.S. Navy approached the Massachusetts Institute of Technology (MIT) about building a flight simulator to train bomber crews. The team first built a large analog computer, but found it inaccurate and inflexible. After designers saw a demonstration of the ENIAC computer, they decided on building a digital computer. By the time the Whirlwind was completed in 1951, the Navy had lost interest in the project, though the U.S. Air Force would eventually support the project which would influence the design of the SAGE program.

Text effect in flash

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This article helps to learn some basic text effect in flash.

Steps to create this sinewave background effect:

- Open the new flash document and set the dimensions for your background.
- Create three layers in the layers panel name it as 'bg' layer, 'sine wave' layer and 'text' layer.
- Select the 1st frame in 'bg' layer, draw the background using rectangle tool, either is a gradient fill or solid fill.
- Select 1st frame in the 'sine wave' layer, draw the sine wave using the pen tool.
- Select 1st frame in the 'text' layer, import the image or write a text using text tool.
- Go to the 'sine wave' layer select a sine wave, and convert the sine wave in to a movie clip symbol
- Double click that movie clip symbol, press **F6** in the 10th frame, Then go to (Modify>>Transform>>Flip Vertical), then select any frame

between 1-10th frame, go to the Properties panel (**F3**) select shape from the tween.

- Go to scene1 copy the movie clip three times and arrange the move clip one after another, select the entire movie clip and convert all movie clip symbol in to single movie clip 'mc'. Now double click that 'mc' move clip and select all 'smc' movie clip then distribute all movie clips into different layers.
- Go to first layer, press **F6** (right click >>Insert Keyframe) in the 10 th frame, to move the 'smc', then go to frame between 1 -10, (right click>> Create Motion...) from popup menu. Do the same process in other 'smc' also.
- Save and test the movie press (Ctrl+Enter).

Effect 1: Hollow Text Effect

Steps to create this flash text effect:

- Select text tool and write whatever you want, make sure that text should be static text.
- Convert in to movie clip symbol, then go to symbol editing mode.
- Select that text and press Ctrl+B twice.
- Press **F6** (right click >> insert key Frame) then Select eraser tool, to write over the middle of that text.
- Do the same process for every frame till your text is ended.
- Save your work and press **Ctrl+Enter** to view your flash movie.

Effect 2: Fade-in Fade-out Text Effect

We can do this effect in both static and dynamic text.

- Select text tool and write whatever you want
- Convert into movie clip symbol “mc”.
- Go to Insert >> new symbol then create new graphic symbol “rec”.
- Make sure u r in “rec” editing mode, then draw rectangle 10x10px.
- Go to “mc” editing mode.
- Add new layer above the text layer, and then drag “rec” from the library.
- Press **F6** at **5th** frame then go to property panel, reduce that alpha value to 0 , then select any frame between 1 to 5, right click >> createmotiontween..
- Add next layer do that process 6 and 7, where that first tweening ended.
- Repeat the process till letter ended.
- Select all layers and apply the masking effect over that text.
- Save your work and press **Ctrl+Enter** to view your flash movie.

Effect 3: Masking Text Effect

This tutorial helps to learn how text masks over the movie clip.

- Select text tool, and write some text.
- Then go to insert create graphic symbol "**gr**".
- Make sure still you are in "**gr**".
- Draw rectangle, then go to scene1.
- Insert movie clip symbol "**mc**", and then drag "**gr**" from library.
- Press F6 (**right click >> insert key Frame**) at 15th frame, then select free transform tool, to enlarge "**gr**" horizontally. Select any frame between 1 to 15, **right click >> createmotiontween.**
- Do that same process, free transformation of "**gr**" may what effect you want that is, it may left to right or right to left.
- Go to scene 1, drag "**mc**" from library, and make sure "**mc**" is underneath of text layer.
- Select the text layer and then apply the masking effect.
- Save your work and press **Ctrl+Enter** to view your flash movie.

Effect 4: Bouncing Text with Shadow Effect

This tutorial teaches you to create shadow for text and how to make the text into an up and down animation.

- Insert new movie clip symbol "mc".
- Select text tool then write any text what you want.

- Copy that text, and insert new layer name as “shadow” then paste it, go to **modify** >> **transform** >> **flip vertical**, then drag that text under the original text, change the color in to gray.
- Select the text and press Ctrl+B, similarly do the same process in shadow text also.
- Select frame between 1-10 then press **F6** or (**right click** >> **insert key Frame**) on both layers.
- Then change the position of each text at each frame.
- Go to scene 1 drag “mc” from library.
- Save your work and press (Ctrl+Enter).

Sensing 3D image

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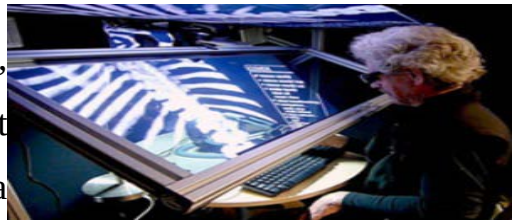
This article helps to know about the latest technology that can sense 3D image



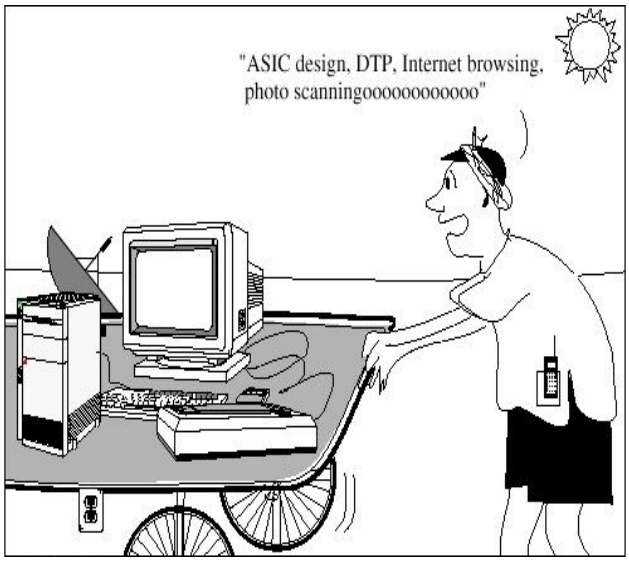
Researchers from the **University of California**, San Diego, are currently working on their latest invention that allows users to feel the object in a **3D projection**.

The project is entitled **Heads-Up Virtual Reality (HUVR)**. With the technology involved it would be possible to simulate the feeling of reaching out to a 3D projection of a photograph, touching and feeling it.

The main component of the invention is a **special touch sensor** that is used to emit feedback to the hand of the user, manipulating it so the user could actually feel the 3D object in the projection, informs Calit2.

It is worth mentioning that such technology is quiet expensive, which is why researchers from the University of California are also working on making it more accessible.

So far the project **focuses on professional applications**, being developed, for example, for doctors who wish to "physically" **manipulate an MRI scan**.



RECENT TRENDS IN DATA ANALYSIS

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Abstract

The data analysis is very important in the sense it gives very valuable information of finding the required data for many applications. In the present paper the data mining, data warehouse, KDD and other important relations of database are discussed. Finding information in the database using various algorithms and their descriptions are presented.

Introduction

Data analysis deals with the discovery of hidden knowledge, unexpected patterns and new rules from large databases. It is currently regarded as the key element of a much more elaborate process called Knowledge discovery in databases (KDD), which is closely linked to another important development –data warehousing.

Data mining

Most organizations have large databases that contain a wealth of potentially accessible information the unbridled growth of data will inevitably lead to a situation in which it is increasingly difficult to assess the desire information. In data mining enormous quantities of debris have to be removed before diamonds or gold can be found.

Data warehouse

To assist in making the right choices for organization it is essential to be able to research the past and identify relevant trends. These informations are stored in very large database. This is called as data warehouse. It contains vast amount of data which can mean billions of records. Smaller local data warehouses are called datamarts.

Knowledge discovery in databases

It consists of six phases

- Data selections
- Cleaning
- Enrichment
- Coding
- Data mining
- Reporting

Data selection is the selection of operational data from the publishers invoice system and contains information about people who have subscribed to a magazine.

Cleaning is the de-duplication of records. Some clients will be represented by several records or negligence or typing errors, movements of clients from one place to another.

Enrichment is the adding of information such as date of birth, income, amount of credit, individual own a car or house etc.

Coding is the process of using simple SQL operations to perform the more creative transformations of the data. By this time, the information in our database is much too detailed to be used as input for pattern recognition algorithms.

Data mining is effected using query tools, statistical techniques, visualization, online analytical processing (OLAP), case-based learning (k-nearest neighbor), Decision trees, Association rules, neural networks and genetic algorithms.

Reporting can be done with report writer or graphical tool to make the results of the process accessible.

MINING FREQUENT ITEMSETS: EFFICIENT HASHING AND TREE-BASED APPROACH

A more efficient algorithm for mining complete frequent itemsets from traditional database is required. The efficient hashing technique for generating smaller candidate sets for large 2-itemsets at an earlier stage of iterations and built a tree structure which in turn used to extract the frequent itemsets.

In general algorithms construct a candidate set of large itemsets based on some heuristics, and then discover the subset that indeed contains large itemsets. In this process the cost of processing will be higher. Much iteration is carried out to find the correct required database.

In Apriori algorithm, each iteration requires one pass over the database. In AprioriTid algorithms instead of scanning the database after the first pass, the transaction ID and candidate large k-itemsets present in each transaction are generated in each iteration. A hybrid of these two algorithms is extended for better performance. There are two main strategies for mining frequent itemsets: the candidate generation-and-test approach and the pattern growth approach. Apriori and its several variations belong to the first approach, while FP-growth and H-mine are examples of the second.

In the case of Apriori algorithm the database is accessed as many times as the size of the maximal frequent itemset is. This problem is partly overcome by algorithms based on pattern growth.

The FP-growth (Frequent Pattern-growth) algorithm differs basically from the level-wise algorithms, that use a "candidate generate and test" approach. It does not use candidates at all, but compresses the database into the memory in a form of a so-called FP-tree using a pruning technique. The patterns are discovered using a recursive pattern growth method by creating and processing conditional FP-trees.

Efficient hashing and tree based algorithm is used for mining complete frequent itemsets directly from the database. By using EHT algorithm, a significantly smallest C_2 (set of candidate 2-itemsets) is achieved, so that the cost spent for determining L_2 (set of large 2-itemsets) from C_2 by scanning and whole database and testing each transaction against a hash tree built by C_2 is reduced. Also instead of storing all the 2-subsets in the hash table, the hash function used identifies only the efficient 2-subsets which are needed for generating the next candidate itemset C_3(set of candidate 3-itemsets) and stores in the hash table. These set of candidate 2-itemsets are used to build the prefix tree in main memory which then mines directly this structure. Mining of FP tree structure is done recursively by building conditions trees that are of the same order of magnitude in number as the frequent patterns, but mining the EHT structure is done recursively by

building conditional trees that are of less order of magnitude in number as the frequent patterns.

Apriori Algorithm

During the first scan the items in the transactions are counted and the infrequent ones are discarded. In this way the frequent 1-itemsets are found. From these frequent items two candidates are generated by creating all the combinatinon of them. During the second database scan the support of the 2-candidates are counted. After a database reading the counters of the candidates are checked whether they are over the minimum support threshold. If a value of a counter exceeds the threshold, the candidate belonging to it becomes frequent, otherwise it is filtered out. The 3-candidates are generated from the frequent 2-itemsets. Like this analysis is carried out and required information is found out.

FP growth algorithm

FP growth (Frequent Pattern growth) algorithm is a two phase method. It reads the database only twice and stores the database in a form of a tree in the main memory. During the first database scan the number of occurrences of each item is determined and the infrequent ones are discarded. Then the frequent items are ordered descending their support. During the second database scan the transactions are read and the frequent items of them are inserted into a so-called FP-tree structure. In this way the database is pruned and is compressed into the memory. The aim of using FP-tree is to store the transactions in such a way that discovering the patterns can be achieved efficiently.

Efficient hashing and tree-based approach.

The proposed algorithm uses a hash technique to filter out unnecessary itemsets for next candidate itemset generation and also reduces the size of the database as a minimum for the next large itemsets generation.

The EHT algorithm is faster and the memory requirement of the novel method does not depend on the number of transactions.

A NOVEL ALGORITHM FOR MINING FREQUENT ITEM-SETS FROM LARGE DATABASE(5)

Partition algorithm

The partition algorithm is based on the observation that the frequent sets are normally very few in number compared to the set of all itemsets. As the result, if the set of transactions are partitioned into smaller segments such that each segment can be accommodated in the main memory, then the set of frequent sets of each of these partitions can be computed. Therefore this way of finding the frequent sets by partitioning the database may improve the performance of finding large itemsets in several ways:

- By taking advantage of the large itemset property, this is that a large itemset must be large in at least one of the partitions. This idea help to design algorithms more efficiently than those based on looking at the entire database.
- Partitioning algorithms may be able to adapt better to limited main memory. Each partition can be created such that it fits in to main memory. In addition it would be expected that the number of itemsets to be counted per partition would be smaller than those needed for the entire database.
- By using partitioning, cluster based and / or distribute algorithms can be easily created, where each partitioning could be handled by a separate machine.
- Incremental generation of association rules may be easier to perform by treating the current state of the database as one partition and treating the new entries as a second partition.

In order to achieve all the above advantages of partitioning the transaction database, the partition algorithm works as follows:

The partition algorithm uses two scans of the database to discover all frequent sets. In one scan, it generates a set of all potential frequent itemsets by scanning the database. This set is a superset of all frequent itemsets, i.e. it may contain false positives, but no false negatives are reported. During the second scan, counters for each of these itemsets are setup and their actual support is measured in one scan of the database.

The time taken for candidate generation is less when the frequent itemsets and in partition. Infrequent itemsets have large time to access.

PERFORMANCE EVALUATION OF MEMORY MAPPED FILES WITH DATA MINING ALGORITHMS.

A memory mapping of a file is a special file access technique that is widely supported in popular operating systems such as unix and windows xp. It is reported that the mapping of a large file into the memory (address space) can significantly enhance the I/O performance. There is a significant performance difference between accessing a cache disk record through disk service call (fread) and accessing a memory record with (mmap()). Disk service requests require a context switch from user to supervisory mode, even if the data is in the cache, memory access calls do not. Such context switches are relatively expensive operations: for example reading a byte from a file by using fread() incur upto three I/O operations such as: (1) Removing a cache block to accommodate new disk block. (2)Reading this disk block into the buffer cache. (3)Copying the same block into the process address space from buffer.

If the removed cache block is dirty, it needs another I/O to update dirty block to disk. However in the memory mapping, entire file is mapped into the process address space such that the file is treated as an extension of virtual address space of the process. Here, when we need a byte from the mapped file, the block (Having the byte) is directly copied to memory. Only if , the process is not having enough frames then one of the frames is released to accommodate this new block. Hence, we may need at the worst two I/O operations. When the removed block is dirty, it needs another I/O to update dirty frame to disk. Additionally the program code is smaller with file mapping, because the file is accessed through a pointer, like random access memory and no file system calls need to be used.

DATA WAREHOUSE SCHEMA DESIGN

The data warehouse is built by gathering shared data from information sources and integrating them into one personalized deposit according to decision makers needs. Basically, the schema of a data warehouse lies on two kinds of elements: facts and dimensions. Facts are used to memorize measures about situations or events. Dimensions are used to analyze these measures, particularly through aggregation operations such as counting, summation, average, maximum and minimum. The schema of the data

warehouse is graphically represented through a graph called data warehouse graph (DWG).

Facts modeling

A fact is used to record measures or states concerning an event or a situation. Measures and states can be analyzed through different criteria organized in dimensions. The fact attributes can be analyzed through aggregate operations by using the three dimensions. Since each of the three references points to a root in a dimension, this fact type is well formed. Each fact attribute can be analyzed along each of the referenced dimensions. Analysis is achieved through the computing of aggregate functions on the values of this attribute. There may be no fact attribute. In this case a fact records the occurrence of an event or a situation. In such cases, analysis consists in counting occurrences satisfying a certain number of conditions.

Dimensions modeling

The different criteria which are needed to conduct analysis along a dimension are introduced through members. A member is a specific attribute or a group of attributes taking its or their values on a well defined domain. For example, the dimension Time can include members such as Day, Month, Year… Analyzing a fact attribute A along a member M means that we are interested in computing aggregate functions on the values of A for any grouping defined by the values of M.

Unified model

A model is proposed which unifies the notion of fact and dimension member. This model can describe various data warehouse structures. It extends existing models for sharing dimensions and for representing relationships between facts. It allows for different entries in a dimension corresponding to different granularities. A dimension can also have several roots corresponding to different views and uses. It is possible to apprehend the concept of facts of fact which is very frequently encountered in the real world. Based on this model, the schema of the data warehouse is graphically represented through DWG. Thanks to the DWG, we define the notion of well formed data warehouse structures which guarantees desirable properties.

HYBRID OPERATOR IN OLAP(ONLINE ANALYSIS PROCESSING) DATA CUBES.

Data warehouses provided several solutions to the management of huge amount of data. In fact, a data warehouse is an analysis oriented structure that stores a large collection of subject-oriented, integrated, time variant and non-volatile data. Data analysis applications look for unusual patterns in data. They summarize data values, extract statistical information and then contrast one category with another. The warehousing process starts by extracting, transforming and loading data from heterogeneous sources. Some kind of models, such as the star schema and the snow-flaked schema, are designed in order to prepare integrated data to analysis using the on-line analyical processing technology. These models support decision making tasks by exploring multidimensional data views, commonly called data cubes.

CUBE generalizes aggregates and GROUP BY, so all the technology for computing those results also applies to computing the core of the cube. The main techniques are:

- To minimize data movement and consequent processing cost, compute aggregates at the lowest possible system level.
- If possible, use arrays or hashing to organize the aggregation columns in memory, storing one aggregate value for each array or hash entry.
- If the aggregation values are large strings, it may be wise to keep a hashed symbol table that maps each string to an integer so that the aggregate values are small. When a new value appears, it is assigned a new integer. With this organization, the values become dense and the aggregates can be stored as an N-dimensional array.
- If the number of aggregates is too large to fit in memory, use sorting or hybrid hashing to organize the data by value and then aggregate with a sequential scan of the sorted data.
- If the source data spans many disks or nodes, use parallelism to aggregate each partition and then coalesce these aggregates.

The hybrid operator can be enhanced in several possible ways. It is used as an evaluation tool to measure the quality of generated aggregates and to extend it in order to treat as well numerical as complex data cubes.

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KSRCAS TIMES

Department of Computer Science
Extension Activity to School students

Department of CS : The Department of Computer Science and Applications has started a Extension Activity for Government school students on “COMPUTATIONAL INTELLIGENCE” for the students of Government Boys Higher Secondary School, Tiruchengode, from 1.08.10 onwards. The duration of this course is 50 hours and it will be conducted on every Sundays from 10 A.M to 4 P.M.

Happenings

"Knowledge Is Power"

K.S.RANGASAMY COLLEGE OF ARTS AND SCIENCE

DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS

Innovative Seminar on

"Data Structure"

By

Dr.Sairam,
SASTRA University,
Tanjore.

Venue: A.C Gallery Hall
Time: 9:00 am – 5:00 pm
Date: 12th August 2010
Organized By
Department of Computer Science and Applications
Audience: II B.Sc(CS) Students

We welcome your valuable comments, suggestions & articles to
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