



Newsletter November 2006

DRONACHARYA COLLEGE OF ENGINEERING

Special Edition by Department of Computer Science and Information Technology

From Editor's Desk :

The November issue of the Dronacharya News Letter aims at highlighting the academic activities and the projects developed by the students of the Department of Computer Science & Engineering and Information Technology. This Department has to its credit myriad merits in the University results during the bygone years and unprecedented achievements on the Placement front. Our stalwart students' vaulting ambition, unswerving determination and enviable inspiration and perspiration have made them reach their dream destinations. The dedicated HOD and Faculty have been sparing no pains to strengthen the list of achievers year after year.

We are passing through a phase when Computer Science and Information Technology are attaining unprecedented popularity and reaching unscalable heights. This non-stop development, the enviable evolution and glorious growth has been possible only by means of an eternal creative process in which the pathway and the destination are equally significant. Steps towards the target and the target itself have to be co-ordinative. This is how the unachievable is archived, the unattainable is attained. In a similar context Nobel Laureate Rabindranath Tagore succinctly states:

*"My pilgrimage is not at the end of the journey
My temples are there in both sides of my pathway."*

Like all creative things, the creation of computers happens to be a vibrant act of co-ordination between the human mind and the system it has created.



Editor
(Dr.R.C. Narula)

From HOD's Desk :

CSE & IT is one of the leading Departments in this campus providing highly technology-oriented programmes to meet today's needs of young minds, a Department with more than 35 highly qualified, experienced, dedicated teaching faculty to impart knowledge on various fields including recent technologies helping students to take on any problem related to Information Technology. Our efforts combined with the advantages of being one of the top most institutions in the NCR have enabled students to achieve their target of entering into big business houses. With the right mix of creative talents, use of innovative technologies and strong relationships with various industries, CSE & IT Department delivers quality methods of teaching that help students enhance their knowledge, understand the importance of being leaders in the area of their interest and provide them with an unbeatable edge to succeed in today's demanding work place and global market.

Their efforts never remain unrewarded. Our students have entered into big Business Houses like IBM, INFOSYS, HCLCOMNET, WIPRO to mention a few. A dedicated one-of-its-kind Institute helps our team gain expertise across various platforms including recent trends in the CSE & IT. In fact our faculty got an excellent opportunity to get trained in one of the latest MICROSOFT products .NET during the last Semester. This in turn enables us to keep pace with the growing needs of our students in this technology.



Head of the Department
(Dr S. Srinivasan)

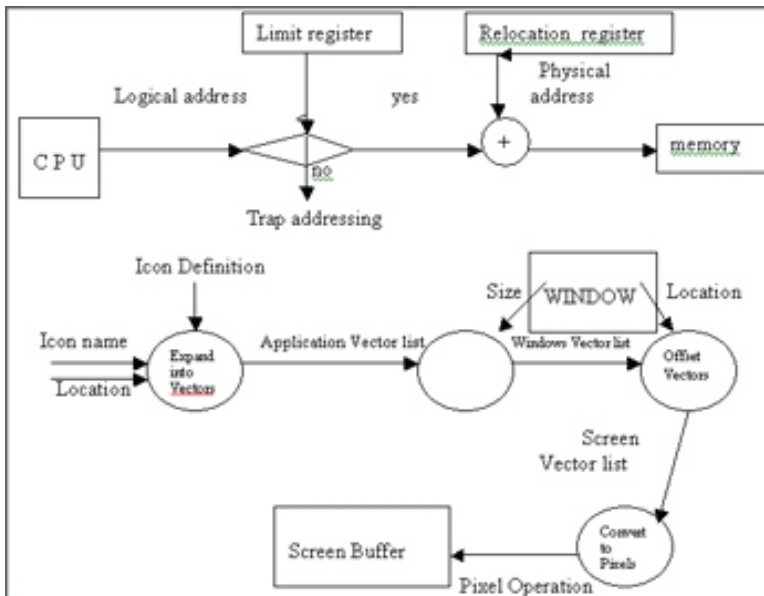
Live Projects Undertaken By Students:

CPU SCHEDULER SIMULATED FOR SOFT REAL TIME OPERATING SYSTEM :

The title of the Project is "CPU Scheduler Simulated for Soft Real Time Operating System" and has been done for the specific need of an Industry by name 'CSPL TELECOM PVT. LTD'. CPU Scheduling is the of determining which process will actually run when there are multiple processes, running simultaneously. It plays an important role in Real Time Operating System . The Real Time is often used as a central device in a dedicated applications like :

- ☑ System that control scientific experiments
- ☑ Medical imaging system
- ☑ Fuel injection systems
- ☑ Robots
- ☑ Control systems

The Objective of the project is to design and develop the software that simulates a working of CPU scheduler for a real time system. The following hardware and software is required for the applications :



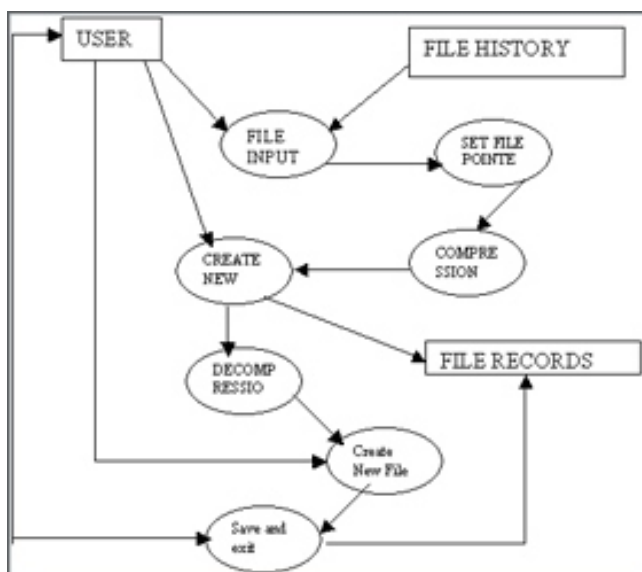
Entity-Relationship Diagram

- ☑ Microsoft Window 95 or later
- ☑ 80286 or higher processor
- ☑ Higher resolution VGA monitor
- ☑ 30 KB RAM
- ☑ 256 MB Hard disk space

Team Members
CSE/IT VIII Semester

1. Mr. Naveen Ropenia
2. Mr Manjit Singh

COMPRESSION UTILITY SYSTEM :



Data Flow Diagram

The project "COMPRESSION UTILITY SYSTEM" addresses DATA Compression and it helps at the time of storage and communication .A simple characterization of data compression is that it involves transforming a string of characters in some representation into a new string which contains the same informations but relatively very small size . There are two types of Data compressions and there are LOSSY Data compression and LOSSLESS data compression . The former is used for compressing sound, video, graphics or picture files and the later is used for actual text data .

Team Members
CSE/IT VIII Semester

1. Ms Jyoti Khanna
2. Ms Manju Pathak
3. Ms Divya Goel

FRAME GRABBER :

The title of the Project is "Frame Grabber" which is one part of a complete machine vision system. It plays a very important role. The frame grabber used is directly tied to the camera that it must interface to e.g. monochrome, color analog, digital etc. With analog frame grabbers, the goal is to acquire the image data from the camera and convert it to digital data with as little alteration to the image data as possible. Using the wrong frame grabbers can result in errors being introduced into this image data.

Industries require wide range security devices for smooth and trouble-free operations. Web cameras are accomplished with multiple system configurations and have large indoor and outdoor applications in diverse industries for safety and security concern. The different configured cameras available are fixed camera, bullet camera, infrared camera etc. with digital frame grabbers, the goal is to ensure that the digital image data from the camera is formatted properly prior to passing it on to the PC for processing.

APPLICATIONS OF FRAME GRABBER

- 3d Image Processing
- Machine Vision
- Molecular Biology: Gel Analysis
- Fluorescence Imaging
- Materials Science

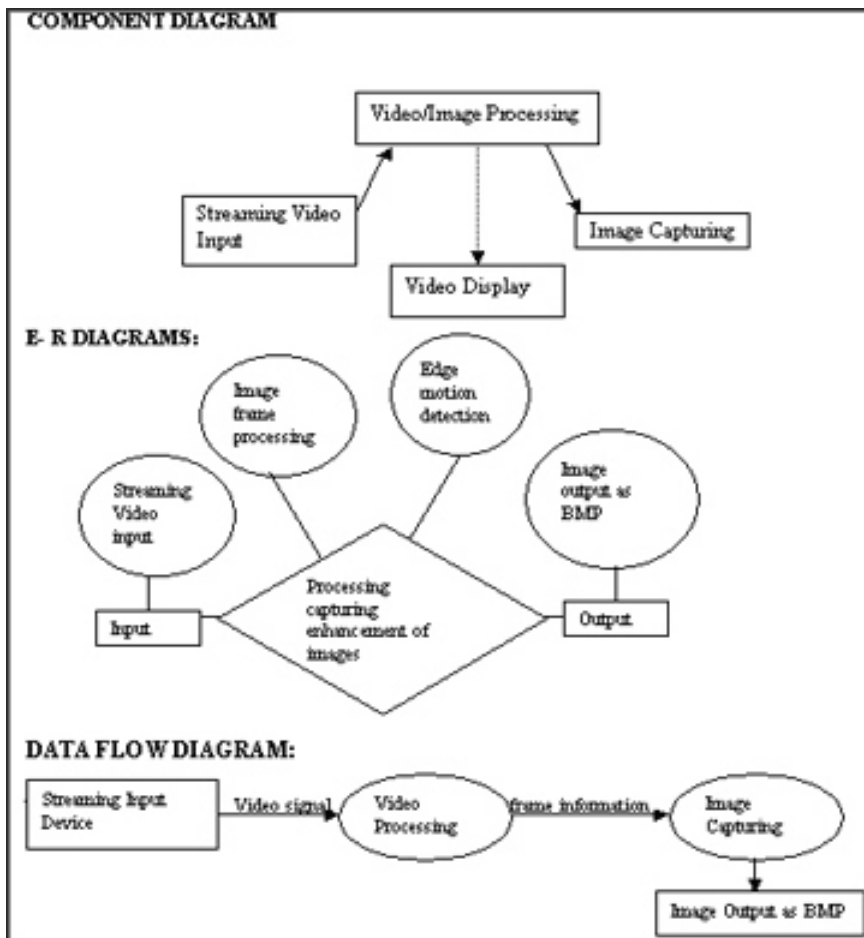
The following hardware and software is required for the applications

Hardware:

- Processor : Intel 80386 or above
- RAM : minimum 32 MB
- HDD : minimum 1.5 GB
- Streaming video input device : Web Cam/ T.V. tuner card

Software:

- Operating System : Windows 98/NT/XP/2000
- Visual Studio 6.0
- Video input device drivers



Team Members

CSE/IT VIII Semester

1. Shikha Sachdeva
2. Pooja Bajaj
3. Tamanna Rana
4. Deepali Pal

REMOTE ADMINISTRATOR :

The "Remote Administrator" is an HTML application module and involves usage of scripts that can be seen by the user so that he can modify it appropriately according to his needs.

It can give all possible information about the system - local or remote. Using comma as delimiter extract information of as many systems as required. Queries are based on WQL, (WMI Query Language), which is similar to SQL in syntax, to extract information using an object of the moniker winmgmts(Windows management). The application can be easily called by a Visual C or .NET application.

Hardware/Software Specification

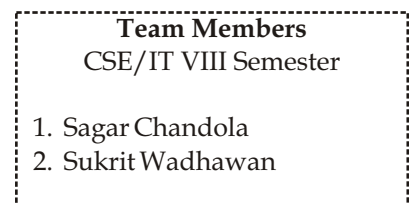
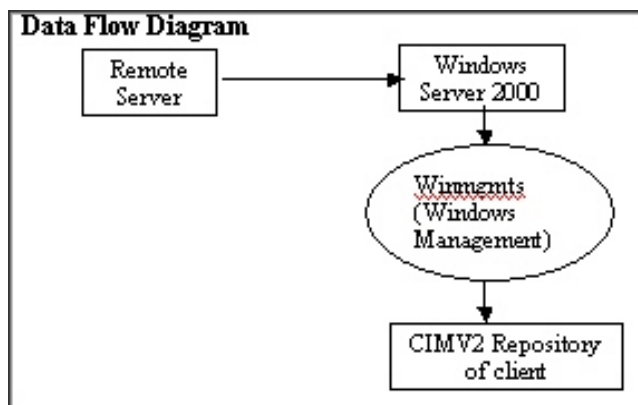
Hardware :

Ordinary LAN based network, with windows based clients and server.

- ☑ Client: Requires 128 MB RAM, Pentium 2 processor or higher, monitor, keyboard, mouse, 10 GB Hard Disk.
- ☑ Server: Requires 128 MB RAM, Pentium 2 processor or higher, monitor, keyboard, mouse, 10 GB Hard Disk.

Software:

- ☑ Notepad.
- ☑ Visual Studio 6 or Visual Studio .Net (both optional).
- ☑ Internet Explorer.
- ☑ MS Office.
- ☑ Windows XP, Windows 2000 Professional, Windows NT Workstation, Windows ME, or Windows 98, script enabled (For Client).
- ☑ Windows Server 2003, Windows 2000 Server, or Windows NT Server, logged in as an administrator, as these are system administrative scripts (For Server).
- ☑ Perl, Python (Both optional).



Student's Viewpoint About The Department :

"A good education is not so much which prepares a man to succeed in the world as one which enables him to sustain a failure."

Dronacharya College Of Engineering is a visionary organization quality higher education since day one. Created with the intention of raising human ware excellence, it desires to go ahead of its agenda to constantly raise the benchmark. It is all set to spread a new wave of educational achievement and excellence by letting education replace an empty mind with an open one.

At Dronacharya Group of Institutes, which has eminent educationists, professionals and a dedicated and experienced faculty, the courses are designed in such a way that they will be useful for all ranks of students - beginners, average and advanced. Over here earnest endeavors are made to crystallize the fundamentals, sharpen the analytical skills and ensure the desired end results. Our distinctive Institute aims at and succeeds in providing both. Within a short span of time, DCE has created a name for itself. It enables the students to work with team spirit and cooperate with each other, so as to turn them into worthy citizens of the country.



Monika (6024)

Dronacharya College of Engineering is entrusted with a sacred mission to bring up and groom the students, train them up in such a way that wherever they go they uphold lofty traditions of the family and the college they represent. It has been accomplishing this noble task for the last 9 years and its achievement in the field of education is commendable.

The Computer Department has made a remarkable achievement with a mission to design perfect learners. The Department helps in converging the energies of all the students and ignite their minds. Faculty members create an environment where curiosity and thinking among students become their assets. The Department arranged on-campus summer training for students to learn .NET which helped students to gain knowledge. Ours is a unique Institute in that sense since no other college provides students with such an opportunity. The training was provided by the Appin Institute in the college premises which made it really comfortable for the students. Not only this, the charges were so affordable that almost all the students became part of this training. The faculty members also became a part of the training and helped the students to gain knowledge more efficiently and at a higher pace.

After being a part of this training, I learned .NET and got all my concepts cleared thus became so confident that I am building a project "address book with Feedback and Attendance Computation" for the college. An address book or a name and address book (NAB) is a book or a collection of data storing contact details (For example: address, telephone number, e-mail address, fax number, mobile phone number). Most such systems store the details in alphabetical order of people's names, although in paper-based address books entries can easily end up out of order as the owner inserts details of more individuals or as people move. This project also provides teachers with a facility of easy computation of attendance of all the students. The students can also give their feedback so that the positive points are made stronger and the weaker points can be worked upon.

All the credit for my efforts goes to the Computer Department which has been leading, directing, inspiring, respecting and alluring the students to make their own contributions to the world and hence spreading a message:

*"Life ends when you stop dreaming,
Dreams end when you stop hoping,
Hope ends when you stop planning,
So plan hope and dream. "*



Monisha (6025)

Software Projects Being Developed By The Students For The College :

Automating a manual process for an institution involves great challenges such as keeping up-to the standards of manual process along with providing better flexibility in operation and creating reports which otherwise are very time consuming and may be inaccurate. As a final year student I have taken up the task of making a 'Scheduler' for the college which aims at creating bus schedules and time tables based on resources available in the organization as per requirements. While designing a project of such scale to enable the user to effectively use it requires a lot of detailing and assumption. The project is being developed to help the administration to effectively utilize minimum resources in the most efficient way with the provided constraints. Such as while designing a bus schedule at times a more efficient route building is missed because of human error, while software program will just have a predefined algorithm to find the shortest and most cost effective route. Special cases are easily handled by entering specific information through a simple form. The Transport Incharge need not worry about the underlying procedures and it makes his work simpler by just providing specific needs for a particular event.

The time table scheduler was Bill Gate's first project. And this is one reason why we all were inspired to develop one for the college. It has the similar underlying principle as the bus scheduler, the major challenge in developing software is providing maximum amount of flexibility in the design, the user should have the freedom of giving user-specific constraints. This aims at reducing the manual efforts involved, providing an error free time table for specific days and lectures to be held.



**Avni Das
(I.T. Final Year)**