STUDENT DATABASE MANAGEMENT AND MONITORING (e -GOVERNANCE)

A PROJECT REPORT

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in partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

in

ELECTRICAL AND ELECTRONICS ENGINEERING

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

KUMARAGURU COLLEGE OF TECHNOLOGY

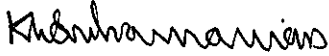### COIMBATORE - 641006

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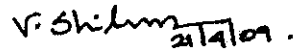### APRIL 2009

BONAFIDE CERTIFICATE

Certified that this project report entitled **"Student Database Management and Monitoring (e-Governance) "** is the bonafide work of

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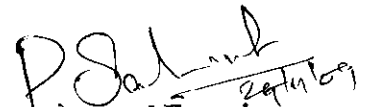
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ABSTRACT

This project is mainly for educational institutions. A website has been developed that contains the entire database of all the students of the department . The technique of live streaming of videos has been implemented to monitor the students. This project helps to maintain a time efficient database of the students. This system would save very much needed time for the teacher and also let them concentrate on their primary task of teaching without bothering about student management.

Capturing, maintaining and handling student information has always been a difficult task in a school environment, where teachers have the main responsibility of teaching. Because of the mode of information maintenance, other tasks of the academic staff are made more difficult.

Every now and then parents, supervisors or other teachers of a student might want the students behavior or academic performance record. In situations like this, the class teacher has to do a lot of informations gathering before he/she can respond to that query. Sometimes it takes few days, if a co-teacher of the student might be on leave.

Most informations related to a student is kept in a paper folder. There will be a separate folder for each student. Hence, with the current system, analyzing the student data is almost an impossible task. The percentage marks of all tests and exams have to be entered in spreadsheets for later use, by each teacher.

Practically maintaining these manual records is a tedious job. So to overcome all these problems , this project is developed. With the implementation of the system, considerable time is definitely saved in daily practices of teachers.

ACKNOWLEDGEMENT

The completion of this project can be attributed to the combined efforts made by us and contribution made in one form or the other by the individual we hereby acknowledge.

We would like to express our deep sense of gratitude and profound thanks to our project guide **Mrs. V. Sharmila Deve,** for her valuable ideas and guidance with constant encouragement and motivation, which triggered us in completing the project work successfully.

We are indebted to all Teaching and Non-Teaching Staff members of the Department of Electrical and Electronics Engineering and other departments for their timely help and valuable suggestions.

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CHAPTER 1

CHAPTER 1

1. INTRODUCTION

OBJECTIVE

To design a website that contains the entire database of all the students of the department and implement the technique of live streaming of videos to monitor the students. This project helps to maintain a time efficient database of the students. It reduces paper work. Any student record can be called swiftly. It helps to maintain a error free database.

WEB DESIGNING

Web design is the skill of designing presentations of content (usually hypertext or hypermedia) that is delivered to an end-user through the World Wide Web, by way of a Web browser or other Web-enabled software like Internet television clients, microblogging clients and RSS readers. The process of designing Web pages, may utilize multiple disciplines, such as animation, authoring, communication design, corporate identity, graphic design, human-computer interaction, information architecture, interaction design, marketing, photography, search engine optimization and typography.

Web pages and Web sites can be static pages, or can be programmed to be dynamic pages that automatically adapt content or visual appearance depending on a variety of factors, such as input from the end-user. A web site is a collection of information about a particular topic or subject. Designing a web site is defined as the arrangement and creation of web pages that in turn make up a web site. Once a web site is completed, it must be published or uploaded in order to be viewable to the public over the internet. This may be done using an FTP (File Transfer Protocol) client.

3 WEB HOSTING

A web hosting service is a type of Internet hosting service that allows individuals and organizations to provide their own website accessible via the World Wide Web. Web hosts are companies that provide space on a server they own for use by their clients as well as providing Internet connectivity, typically in a data center. The scope of hosting services varies widely. The most basic is web page and small-scale file hosting, where files can be uploaded via File Transfer Protocol (FTP) or a Web interface. The files are usually delivered to the Web "as is" or with little processing.

ADOBE PHOTOSHOP

Adobe Photoshop, or simply Photoshop, is a graphics editing program developed and lished by Adobe Systems. It is the current and primary market leader for commercial bitmap and ge manipulation, and is the flagship product of Adobe Systems.

ADOBE DREAMWEAVER

Adobe dreamweaver is the editor tool used for creating the webpages. It is a web development plication originally created by Macromedia, and is now developed by Adobe Systems. eamweaver allows users to preview websites in locally-installed web browsers. It also has site nagement tools, such as FTP and file transfer and synchronization features, the ability to find and lace lines of text or code by search terms and regular expressions across the entire site, and a nplating feature that allows single-source update of shared code and layout across entire sites thout server-side includes or scripting.

6 HTML

The definition of HTML is Hyper Text Markup Language.

- *Hyper Text* is the method by which you move around on the web — by clicking on special text called hyperlinks which bring you to the next page. The fact that it is *hyper* just means it is not linear — i.e. you can go to any place on the Internet whenever you want by clicking on links — there is no set order to do things in.
- *Markup* is what HTML tags do to the text inside them. They mark it as a certain type of text
- HTML is a *Language*, as it has code-words and syntax like any other language.

It provides a means to describe the structure of text-based information in a document—by denoting certain text as links, headings, paragraphs, lists, and so on—and to supplement that text with *interactive forms*, embedded *images*, and other objects. HTML is written in the form of tags, surrounded by angle brackets. HTML can also describe, to some degree, the appearance and semantics of a document, and can include embedded scripting language code (such as JavaScript) which can affect the behavior of Web browsers and other HTML processors.

e basic syntax is

```
tml>
ead>
itle>Hello HTML</title>
head>
ody>
>Hello World!!</p>
body>
html>
```

7 MY SQL

My SQL is a relational database management system which has more than 11 million
stallations. The program runs as a server providing multi-user access to a number of databases. My
QL is a fast, easy-to-use RDBMS used for databases on many Web sites. Operating speed is the
evelopers' main focus from the beginning. In the interest of speed, they made the decision to offer
wer features than their major competitors (for instance, Oracle and Sybase). However, even though
ly SQL is less full featured than its commercial competitors, it has all the features needed by the
irge majority of database developers. It's easier to install and use than its commercial competitors,
nd the difference in price is strongly in My SQL's favour. My SQL is developed, marketed, and
upported by My SQL AB, which is a Swedish company. The company licenses it two ways:

.7.1 SQL Server

SQL (Structured Query Language) ,which is a standard language understood by many
{DBMSs. The My SQL server understands SQL. The My SQL server interprets the SQL message
nd follows the instructions. The My SQL server is the manager of the database system. It handles
ll your database instructions. For instance, if you want to create a new database, you send a
nessage to the My SQL server that says "create a new database and call it new data.

The My SQL server then creates a subdirectory in its data directory, names the new subdirectory new data, and puts the necessary files with the required format into the new data subdirectory. In the same manner, to add data to that database, you send a message to the My SQL server, giving it the data and telling it where you want the data to be added.

8 PHP

PHP: Hyper Text Preprocessor.

PHP, a scripting language designed specifically for use on the Web, is your tool for creating dynamic Web pages. Rich in features that make Web design and programming easier, PHP is in use on over 13 million domains. Its popularity continues to grow, meaning that it must be fulfilling its function pretty well.

PHP originally stood for Personal Home Page. PHP is a scripting language originally designed for producing dynamic web pages. It has evolved to include a command line interface capability and can be used in standalone graphical applications. PHP is a widely-used general-purpose scripting language that is especially suited for web development and can be embedded into HTML. It generally runs on a web server, taking PHP code as its input and creating web pages as output. It can be deployed on most web servers and on almost every operating system and platform free of charge. PHP is installed on more than 20 million websites and 1 million web servers. PHP is a general-purpose scripting language that is especially suited for web development. PHP generally runs on a web server, taking PHP code as its input and creating web pages as output. It can also be used for command-line scripting and client-side GUI applications.

PHP can be deployed on most web servers, many operating systems and platforms, and can be used with many relational database management systems. It is available free of charge, and the PHP Group provides the complete source code for users to build, customize and extend for their own use. As with many scripting languages, PHP scripts are normally kept as human-readable source code, even on production web servers. In this case, PHP scripts will be compiled at runtime by the PHP engine, which increases their execution time. PHP scripts are able to be compiled before runtime using PHP compilers as with other programming languages such as C.

ADOBE FLEX

Flex is a free, open source framework for building highly interactive, expressive web plications that deploy consistently on all major browsers, desktops, and operating systems. It ovides a modern, standards-based language and programming model that supports common design tterns. MXML, a declarative XML-based language, is used to describe UI layout and behaviors, d ActionScript™ 3, a powerful object-oriented programming language, is used to create client gic. Flex also includes a rich component library with more than 100 proven, extensible UI mponents for creating rich Internet applications (RIAs), as well as an interactive Flex application bugger.

10 FLASH MEDIA SERVER

Adobe Flash Media Interactive Server 3.5 software offers a unique combination of owerful streaming with a flexible environment for creating and delivering rich, interactive, ultiway social media experiences to the broadest possible audience. It gives a superior video xperience, with new features such as Dynamic Streaming, DVR functionality, HTTP delivery ipport, and H.264 enhancements.

Keep your viewers longer with a better viewing experience, no matter what their connection peed. Dynamic Streaming, in support of multibitrate streaming, is a new quality-of-service ionitoring feature that allows you to detect any changes in your viewer's bandwidth and smoothly witch between streams during playback — helping to ensure a high-quality, uninterrupted stream.

.11 MEDIA STREAMING

Streams are a time-based flow of synchronized audio, video and/or data messages that flow rom client to server or from server to client. Streams uses a publish and subscribe model that implifies development of applications that uses streams. A published stream can be played in real ime or recorded and played later. Streaming media content delivery has become increasingly mportant due to wide-spread use of media content in many application areas such as education, nedical treatment and entertainment. Video-on-demand is one such important prospect in the area of nedia streaming.

Communication between people residing at remote locations has become very popular with advent of internet. More recently business and education has been promoted through the eways of internet. Visual contact is very important in both these domains and hence video aming and hence their efficient broadcasting has always been an area of concern. Quality of vice is now as important as the data itself in media delivery and the need for a jitter-free playback the media objects is rising. The system pays due concern to the above issues and hence an icient system to broadcast media objects is developed. The system unlike most media based olications deliver the requested media streams without acting to be a burden on the client system ources.

12 FLASH COMMUNICATION SERVER

Communication server is a platform for creating media rich applications in macromedia ish and for streaming video to flash clients. Flash communication server streams media object by a ocess called progressive download. That is , users can view the first part of stream while the maining part downloads.

Macromedia flash communication server is a development framework and a deployment vironment to write media based applications. The communication server uses the flash based real ne messaging protocol. This is a TCP/IP protocol designed for high-performance transmission of deo. The advantage of using a flash communication media is that it has an active internal proxy. he objects are cached and tunneled through a HTTP response for each request from a HTTP client. he web server delivers the flash client to flash player over HTTP. The flash client then uses the TMP to establish the connection and hence stream the media objects.

CHAPTER 2

2. SYSTEM STUDY AND ANALYSIS

The system analysis is concerned with analyzing systems with the view to make them more ctive either by modification or by substantial redesign.

The system analysis involves mainly in developing new information systems; this activity lves investigation of current systems, proposing possible new systems and evaluating them, gning in detail the new system that is agreed, implementing it, and maintaining it during its rational life.

Requirement analysis is used to analyze the knowledge about the existing system. After erstanding the limitation of the existing system and identification the of problems, alternate tem solutions are studied and recommendations are made about committing the resources uired to design the system. Various studies are done in order to get the information like how the a are processed within the organization, how data are searched for within the organization, how e the data that is used within the organization and what is the procedure for data retrieval and nsit.

EXISTING SYSTEM

- ➤ The existing system uses a manual system which involves paper work to maintain the student database.
- ➤ Security of information of the existing system is poor.
- ➤ Reports are manually prepared
- ➤ Calculating the number of hours attended by any student manually is a tedious task.

2 PROPOSED SYSTEM

The proposed system should be developed in such a way to overcome the problems faced iring the use of the existing system. This can be done using the latest technologies available today.

BLOCK DIAGRAM OF THE COMPLETE SYSTEM
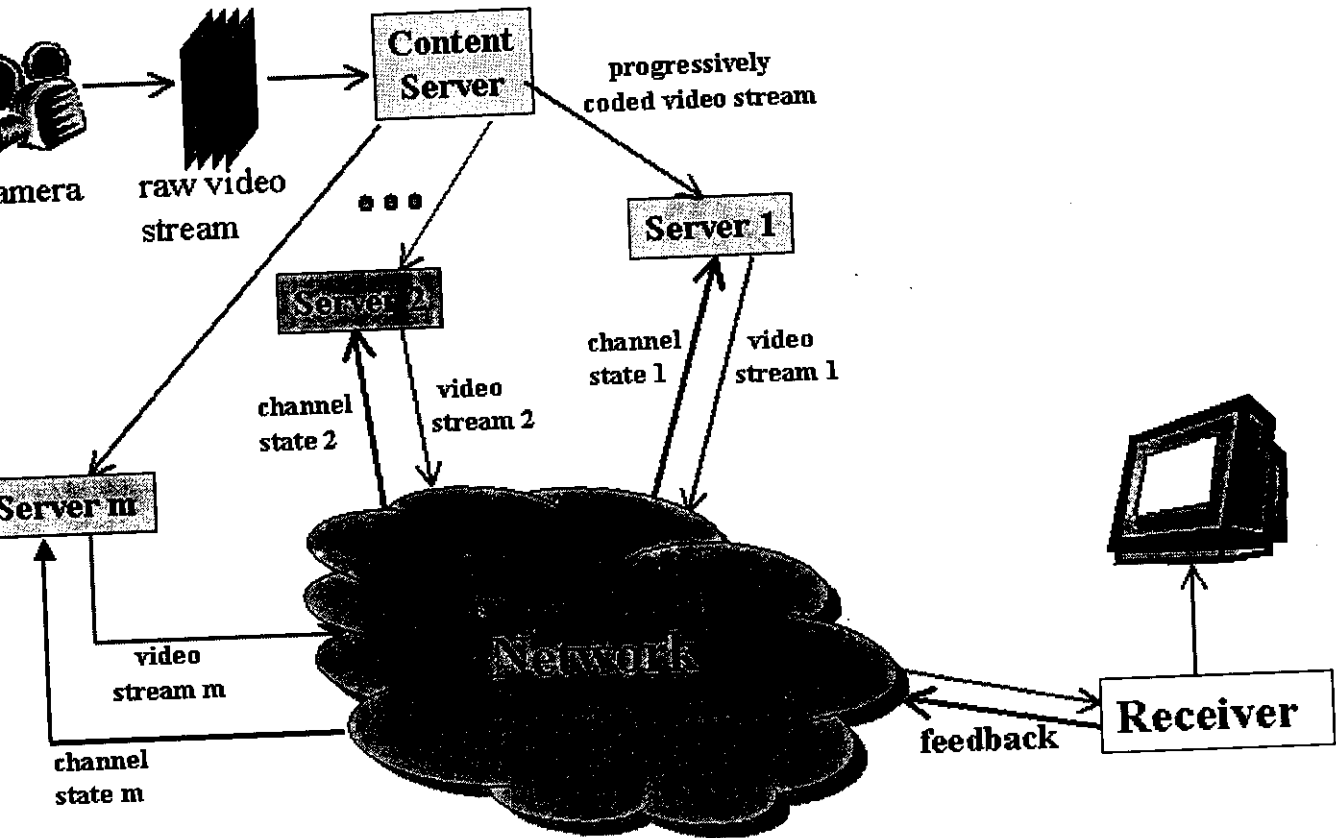
Fig 2.1 Block diagram of the complete system

The raw video from the web camera is sent to the server from which it is sent to the network and the progressively coded video is received by the receiver. The users can also retrieve the database of the students from the server. The channel states represented in the figure 2.3 refers to the input data (queries) from the user.

MAIN FEATURES OF THE PROPOSED SYSTEM

Faster access

> This system obviously has faster access than the manual system. Most of the processes are done automatically which increases the accessing speed.

More user-friendly

> The system developed is more user friendly, there is no need for the user to understand all the levels of process, rather he or she can just logon to the system and start working.

High level security

> High level of security is maintained for the application system. Only the administrator can modify the user properties. All tables in the database have been given attributes. This helps to note which user on which date has modified the records.

REQUIREMENTS OF THE NEW SYSTEM

The system has been designed in order to overcome the problems faced by the existing system and hence should possess the following features:

- Efficient, consistent and attractive entry screens
- Database with minimal redundancy
- Foolproof security measures
- Flexible and upgradable
- Attractive reports
- High level of security
- More user friendly
- High processing speed

2.6 ADVANTAGES OF THE SYSTEM

- The system can broadcast media objects in minimum memory and bandwidth conditions.
- The system uses universally accepted HTTP for transmission and is independent of the location and system configuration.
- Minimum buffering space is required at the client side to receive the streaming media.
- The system can be adjusted for performance based on the nature of network in which the application is running.
- The quality of media broadcast is varied based on bandwidth calculations and hence optimized delivery of media is made.
- This project eliminates paper work.
- Quick access is possible.
- Up to date information will be made available.
- Record maintenance becomes easier.
- The database is extendable.

2.7 ADDED FEATURES

This website contains

- Department activities
- Attendance details of students
- Workshops, seminar events and others
- Placement information
- Educational links
- Faculty details
- Allows parents to post their queries

CHAPTER 3

3. PROGRAMMING ENVIRONMENT

HARDWARE REQUIREMENTS

The system can be implemented within a LAN or between remote systems. The following
dware components are required for efficient functioning of the developed system.

cessor   : 500 MHz or above.

M   : 256 MB or above for the server system.

              64 MB or above for the clients.

rd Disk   : 50 MB of available disk space.

               5 MB at client

ndwidth   : 100 MB

10 MB Ethernet card , if implemented at LAN

56k modem or a DSL connection for remote systems.

2 SOFTWARE REQUIREMENTS

2.1 Operating System

indows 98

indows XP

indows Vista

inux

Working Environment

Server End

Macromedia flash communication server 1.5

Macromedia flash media server 2

A web server preferably IIS

Browser with flash plug-in (common for both client and server)

Authoring environment:

Macromedia flash Mx Professional 2004.

.2 Tools

Adobe Dreamweaver

Adobe Photoshop

Wamp server

Adobe Flash Player

3.3 Speed Of Net

Min of 256 Kbps

3.4 Server Space

Min of 100GB for 10 users for video streaming

Min of 1GB for database

CHAPTER 4

4. DATABASE MANAGEMENT AND VIDEO STREAMING

A **Relational Database Management System (RDBMS)** is a Database Management ...m (DBMS) that is based on the relational model is introduced by E. F. Codd. Most popular ...nercial and open source databases currently in use are based on the relational model. A database ...agement system is a suite of software applications that together make it possible for people or ...nesses to store, modify, and extract information from a database.

RDBMS data is structured in database tables, fields and records. Each RDBMS table ...sists of database table rows. Each database table row consists of one or more database table ...ls. RDBMS store the data into collection of tables, which might be related by common fields ...abase table columns). RDBMS also provide relational operators to manipulate the data stored ...the database tables. Most RDBMS use SQL as database query language.

FLOW CHART OF THE SYSTEM

```
┌─────────────────────────────────┐
│          SOURCE  DATA           │
└─────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────┐
│            SCANNER              │
└─────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────┐
│           DATABASE              │
└─────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────┐
│      DATABASE  MANAGEMENT       │
└─────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────┐
│       RETRIEVAL  PROGRAM        │
└─────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────┐
│         USER INTERFACE          │
└─────────────────────────────────┘
```
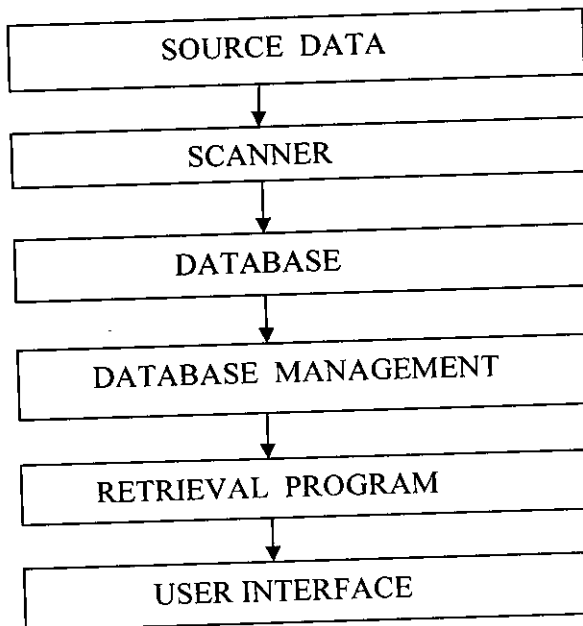
Fig 4.1 Flow chart of the system

STEP BY STEP STREAMING

Sending Streaming Videos To Server

. Record a high-quality video or audio file using web camera.

. Digitize this data by importing it to the computer and, if necessary, converting it with editing software.

. If you are creating a streaming video, you make the image size smaller (384*256) and reduce the frame rate (10 to 15 frames per second).

4. A codec on your computer compresses the file and encodes it to the right format.

5. Upload the file to a server

6. The server streams the file to users' computers.
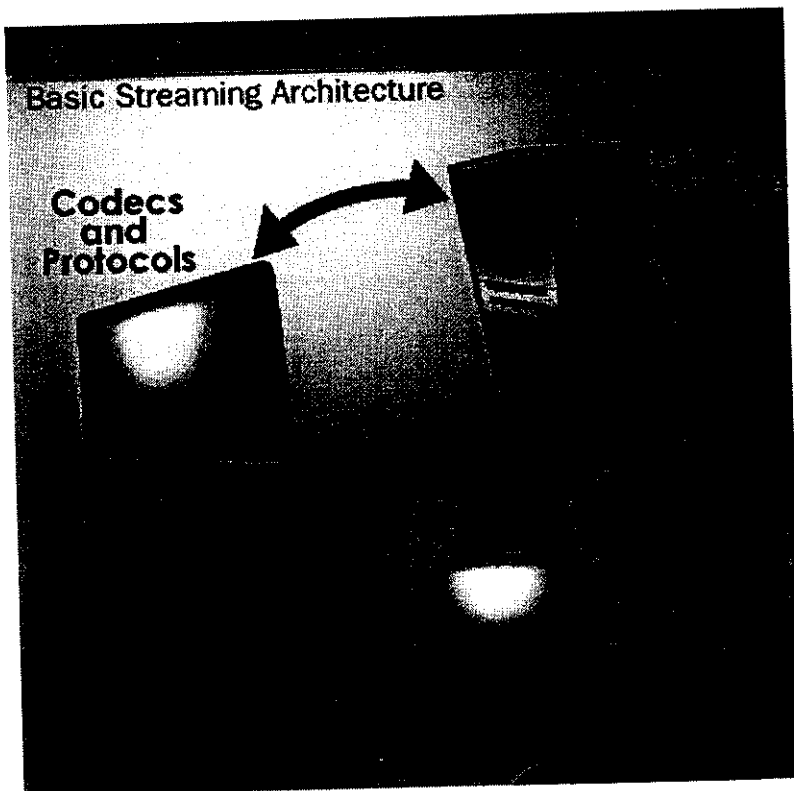
Fig 4.2   Pathway to send streaming videos

Receiving Streaming Videos From Server To User

. Using the Web browser, find a site that features streaming video or audio.

. Find the file to access, and click the image, link or embedded player with the mouse.

. The Web server hosting the Web page requests the file from the streaming server.

. The software on the streaming server breaks the file into pieces and sends them to users computer using real-time protocols.

. The browser plugin, standalone player or Flash application on the computer decodes and displays the data as it arrives.

CHAPTER 5

5. WEB PAGES

1 HOME PAGE
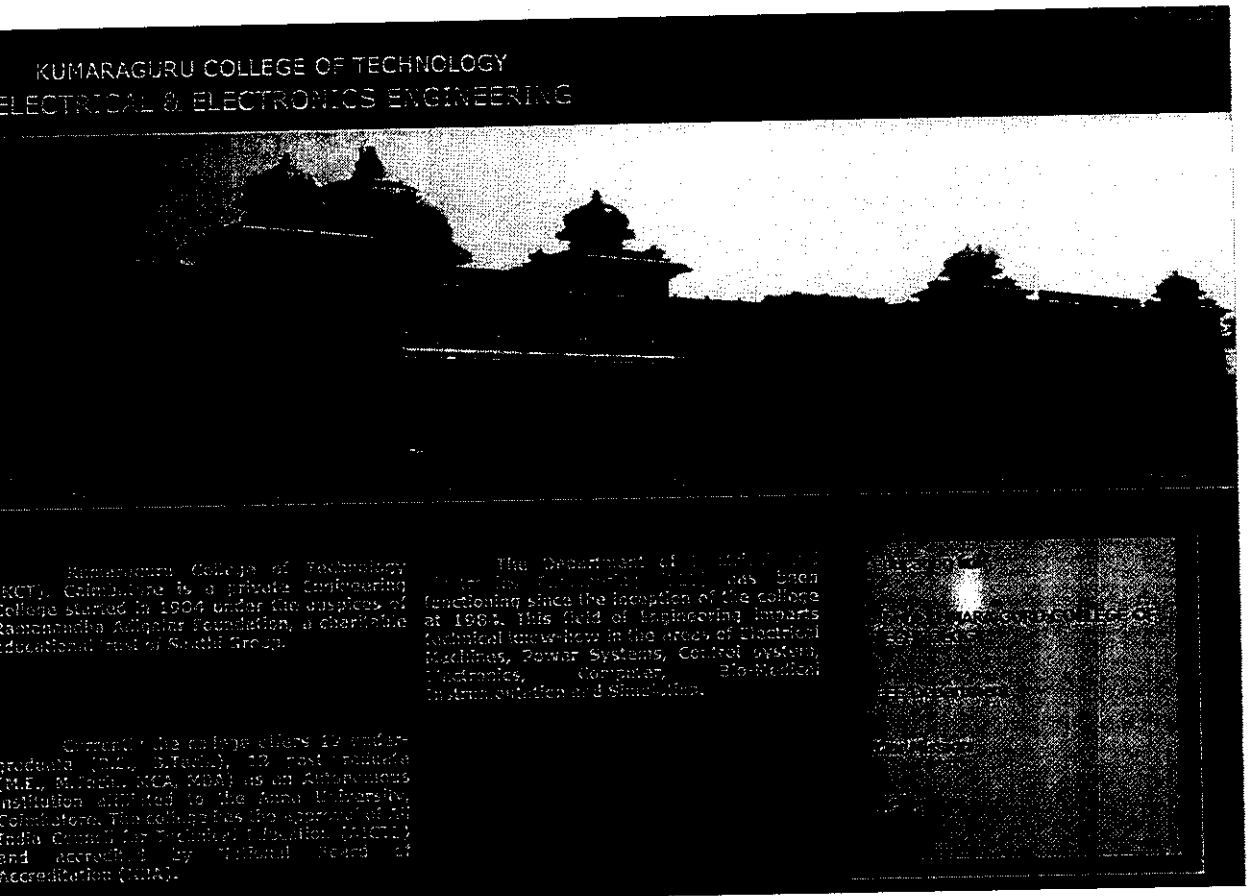
Fig.5.1 Home page

Description

This page (Fig 5.1.1) contains a brief introduction of the college along with the details of the electrical and electronics engineering department. This is the home page of the website and it also contains the latest news and events of the department. It contains links to educational sites and other useful web pages related to the department.

STUDENT DETAILS

Fig 5.2 Student details

Description

This page (Fig 5.2.1) is used to enroll the details of the student which would be saved and can be retrieved by the parents. The database contains the marks obtained by students in each semester, awards and achievements of students, extracurricular and cocurricular activities ,detailed attendance of students etc which can be retrieved by parents at any time.

LOGIN PAGE
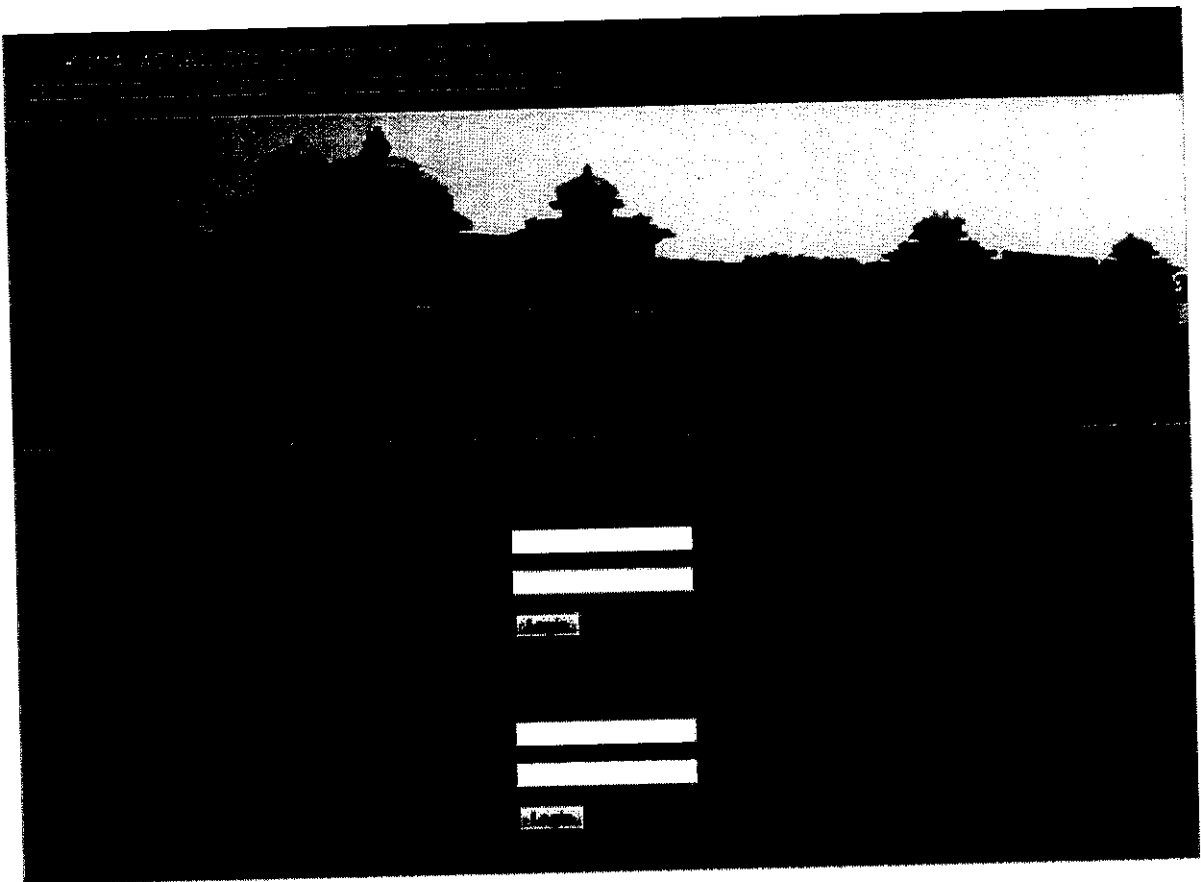
Fig 5.3 Login page

Description

The login page (Fig 5.3.1) comprises of separate login for administrator and parents. Parents will be given a individual username and password for their ward which will be mailed to them. arents can access their ward details by referring their individual username and password. The dmin login allows the administrator to manage entire website.

VIDEO STREAMING
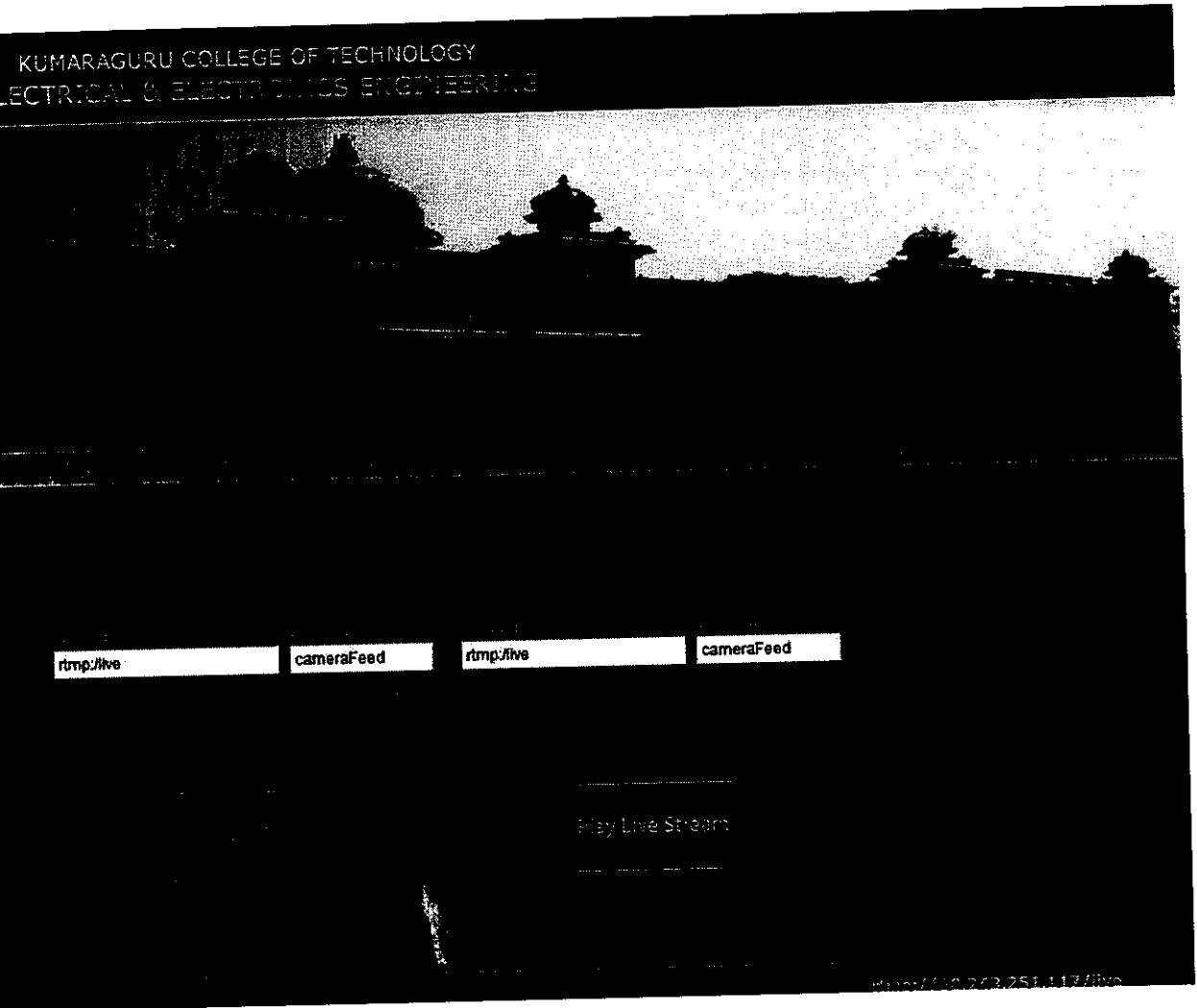
Fig 5.4 Video Streaming

Description

This page (Fig 5.4.1) contains the Adobe Flash Player in which the live video gets streamed via web camera. The windows will play the live stream coming from the Flash Media Server. The video will get delayed by a few seconds depending on the speed of the net.

QUERIES PAGE
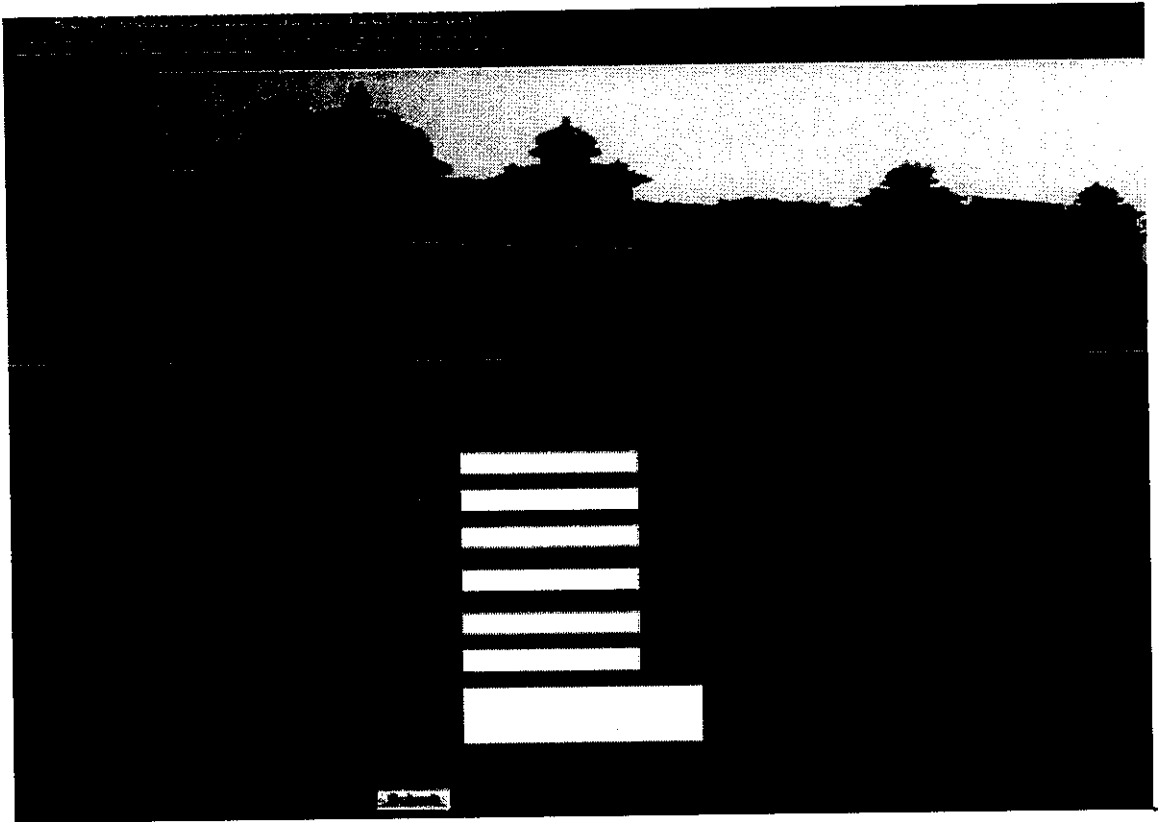
Fig 5.5   Queries page

Description

This page (Fig 5.5.1) allows parents to post their queries about the academic performance of their ward. The queries are forwarded to the admin email id which is monitored by a staff and reply is given to parents email id within few working days.

CHAPTER 6

6.FUTURE ENHANCEMENTS

1 PORTABLE WEB SERVICE

At present, a single system functions as both the communication server as well as the web rver. This is efficient in most cases and gives an improved performance compared to direct eaming options. The performance can be further increased if the flash communication server and e web server operate at different locations. By simply running the web server on one computer and e communication server on another , then the automatic port sensing behavior will succeed when it es 80 (RTMP or RTMP/HTTP). Naturally , this solution affords more processor power though ightly more difficult to configure and probably a bit more money.

This enhancement may be considered and implemented if the number of users and the umber of live streams are high. A single system might not withstand so many connections and thus ffects performance. By using two systems, the overhead on the server is reduced. This solution to igher connections after discussing the bandwidth constraints of the network using the number of sers, number of live streams, connection rate and other criteria.

2 STREAMING MEDIA IN SMARTPHONES

Media streaming is a growing area of development and many new technologies are being eveloped to complement the same. Media streaming in mobile phones has become the need of the our and researchers are trying to develop new algorithms to stream media into smart phones, PDA's nd other devices.

The system makes use of an existing facility to stream media objects to PDA and martphones. Most of the available range of smartphones these days supports HTTP transfer of data. The system implements HTTP tunneling of RTMP based packets and can be transferred to martphones with quite ease. Flash plug-in for PDAs is available for free and hence this

ideo conferencing application can be extended into the area of mobile phones.

New age networks such as Bluetooth, IR are also in vogue these days. The system can be tended for the use through these networks. A prototype can be designed and features concerning uetooth are then added to the prototype. The system already functions based on IP addresses of ents and hence broadcasting procedures remain the same. Because of different screen sizes and lor depths, a media object that's appropriate to a desktop computer might nit be appropriate to a)A. The media delivery network has to distinguish and adapt to different client devices. In cordance with the type of client device, networks will need to choose an appropriate version for reaming. To deal with the diversity of client browsing devices, proxy-enabled transcoding is nsidered as a solution. A proxy can cache the trasnscoded media objects and deliver them for a riety of future client references, which prevents repeated transcoding operations. Figure 6.2.1 iows the implementation of project through mobile phones.
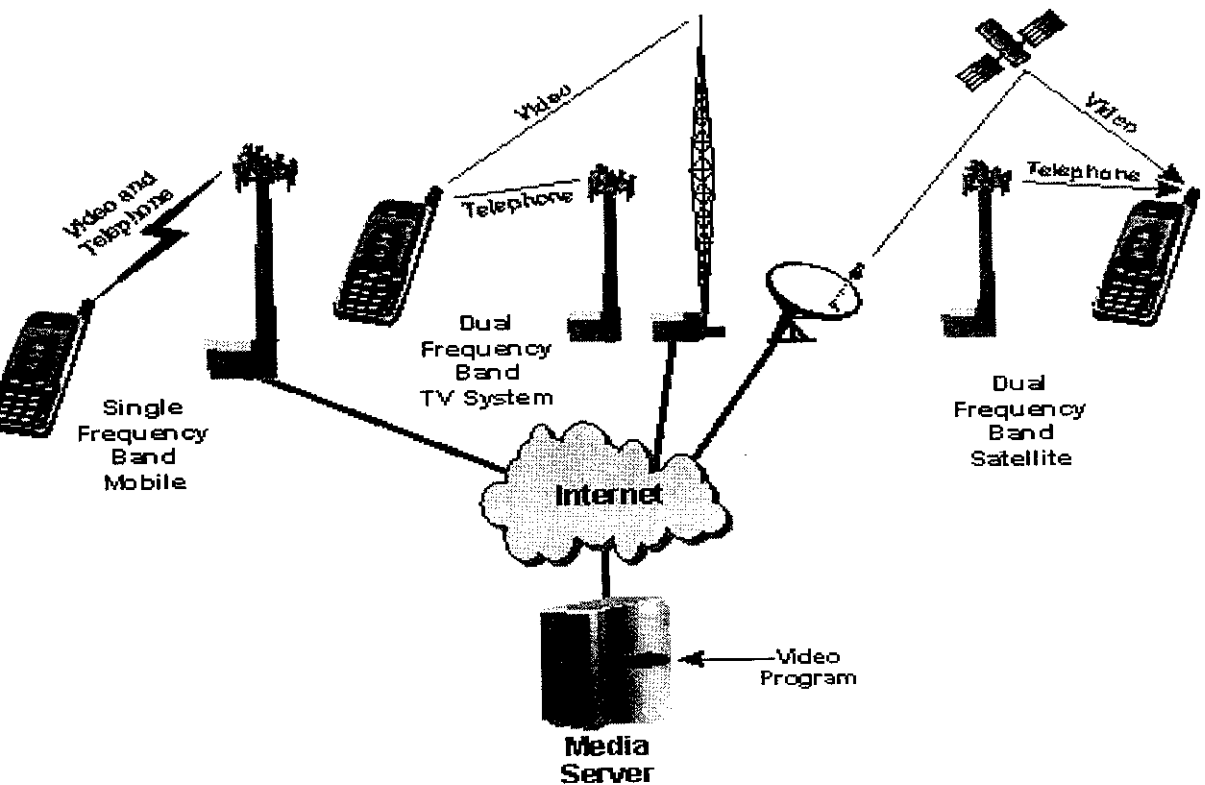
Fig.6.1. Streaming media in Smartphones

CHAPTER 7

7.APPLICATIONS

1 e-LEARNING

The term e-Learning is used to refer to new ways of thinking about e-learning inspired by
the emergence of WEB. From an e-Learning perspective, conventional e-learning systems were
based on instructional packets that were delivered to students using Internet technologies. The role
of the student consisted in learning from the readings and preparing assignments. Assignments were
evaluated by the teacher. In contrast, the new e-learning places increased emphasis on social learning
and use of social softwares such as blogs, wikis, podcasts and virtual world which has recently
become one of the virtual classroom environments used in colleges and universities. Additionally,
mobile assisted language learning (MALL) is a term used to describe the use of handheld computers
or cell phones to assist in language learning.

e-Learning can provide for major benefits for the organizations and individuals involved.

1.1 Reducing Environmental Impact

e-Learning allows people to avoid travel, thus reducing the overall carbon output. The fact
that it takes place in a virtual environment also allows some reduction of paper usage. With virtual
notes instead of paper notes and online assessments instead of paper assessments, eLearning is a
more environmentally friendly solution.

1.2 Quality Education, Made Affordable

The fact that instructors of the highest calibre can share their knowledge across borders
allows students to attend courses across physical, political, and economic boundaries. Recognized
experts have the opportunity of making information available internationally, to anyone interested at
minimum costs. This can drastically reduce the costs of higher education, making it much more
affordable and accessible to the masses. An internet connection, a computer, and a projector would
allow an entire classroom in a third world university to benefit from the knowledge of an opinion
leader.

In many contexts, eLearning is self-paced and the learning sessions are available 24x7.
arners are not bound to a specific day/time to physically attend classes. They can also pause
rning sessions at their convenience.
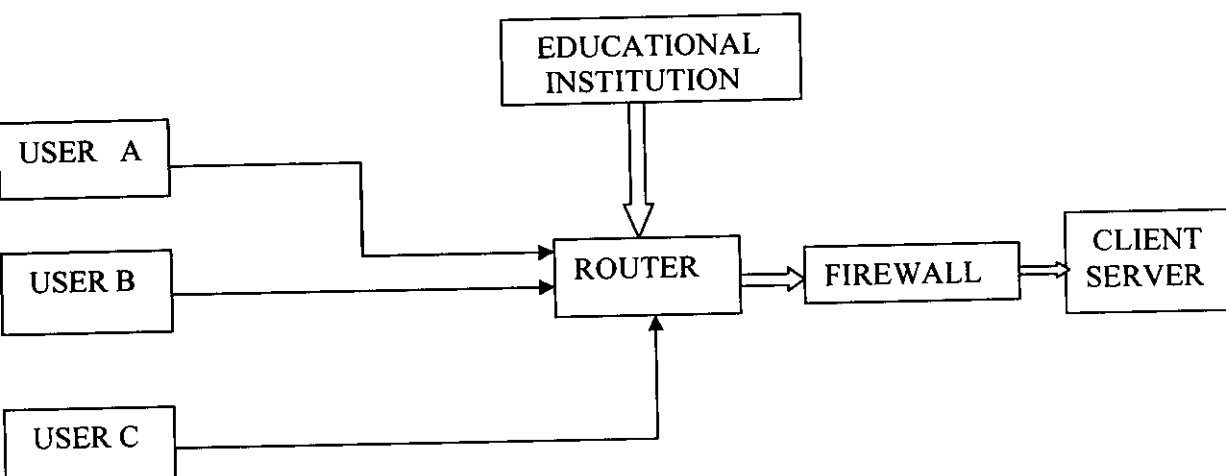
Fig.7.1 e-learning

.2 TELEMEDICINE

Telemedicine is a rapidly developing application of clinical medicine where medical
nformation is transferred via Internet or other networks for the purpose of consulting, and
ometimes remote medical procedures or examinations..Telemedicine may be as simple as two
iealth professionals discussing a case over the telephone, or as complex as using satellite technology
and video-conferencing equipment to conduct a real-time consultation between medical specialists in
wo different countries. Telemedicine generally refers to the use of communications and information
echnologies for the delivery of clinical care.

Care at a distance is an old practice which was often conducted via post; there has been a
g and successful history of in absentia health care, which - thanks to modern communication
hnology - has metamorphosed into what we know as modern telemedicine.

VIDEO SURVEILLANCE:

The word surveillance in French means, "watch from above". This is exactly the outlook
t is required for a distributed monitoring of remote locations, to get visual information from
entral or any geographical place. CCTV (Closed Circuit Tele Vision) became very popular and
rted offering collection surveillance by analog cameras connected in closed network via
axial cables to multiplexing controllers, monitor TVs and video recorders. Video was stored
an analog signal on magnetic tape. Magnetic tapes had many operational problems, like
nstant tape changing, cumbersome information retrieval and very limited remote access. it became
asible to also begin storing and using video in digital form, and its integration with IP
chnologies began to emerge.
he purpose for IP/Digital surveillance is to provide constant real-time operational
formation, such as high-quality digital images, in order to maintain security and intrusion
tection at the monitored locations.

3.1 Internet Protocol

IP technology over Ethernet infrastructure, combined with digital video, resolved the
perational and technological limitations faced in traditional analog CCTV systems. In addition,
is affordable and cost-effective for mass and customized deployments. The concept of video
ollection and monitoring remained the same, but it made possible the use of IP and Ethernet
ansport to carry excellent video quality and to be securely extended to any distance and managed
om anywhere.
Video over IP application consists of the following five main building blocks:
. Remote digital IP cameras or analog cameras with an attached digital encoder
. Archive video servers for digital recording
. Monitor stations (viewers)
. IP/Ethernet infrastructure

The application level enables flexibilities like remotely control cameras, easy export of images, connecting to archived information for reviewing based on a simple date/time entry and integration with other intelligent/pattern recognition systems.
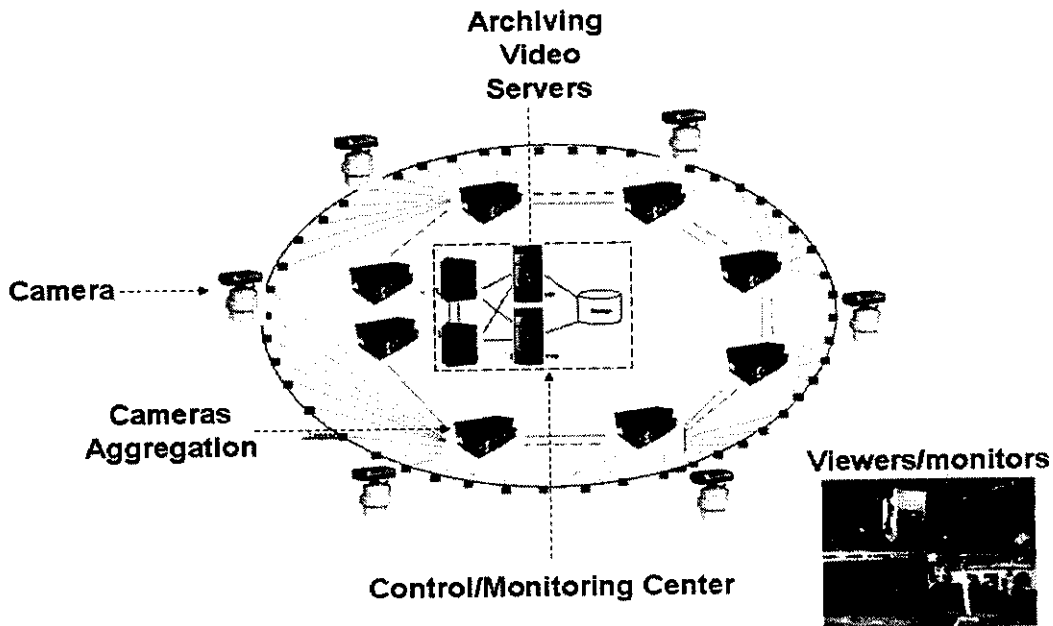
Fig.7.2 Video surveillance

The evolution in video monitoring and IP technologies created possibilities of high quality pictures with lower bandwidth consumption. High quality for surveillance means that transported pictures that are monitored by viewers display sharp crystal clear visualization of what is going on at any given location. In fact, the fundamentals of such concept is the well known MPEG digital standard.

MPEG is an international standard that defines the compression technique of analog video signals with very high-resolution quality. MPEG performs the streaming feeds from remote cameras into digital streams. The use of MPEG video codecs permits the usage of a compression that reduces the bandwidth required to transport the video and control signals, and

offers a more cost-effective solution of bandwidth transport. The MPEG digital streams
erface with the IP network and transmit the streams to the archiving servers at the
nitoring/control center for logging and database manipulation. At the control center, the
nitoring stations (viewers) can select any camera remotely and control its monitoring
ibutes, or access archived data for inspection of historical recorded events.

GOVERNMENT (LIVE POLLING)

The election commission organises the general elections which takes place in several
fferent places at a same time. By using the live video streaming the Election Commision can
onitor the polling at different places at a particular time .Consider that there are elections for a
w government. Using this live video streaming , a political party can make a virtual conference
tween their several agencies situated in the entire country. They can react to situations, view
ages and clips in cinema mode and share their opinions or their disagreements, in real time. This
ay they can establish the wining strategies for the party, making instant comments on the
ared slides and videos on their streaming based application.

5 ARCHITECTURE

A communication tool is needed for the Real Estate Broker or Construction Engineer to
ommunicate with the perspective buyers or builders. Having a live video streaming, they will be
ole to show the client a slide show with images of the property and the architect's plans. They can
lso share live videos of how the structure is being built up and choose options in a catalog. This
ay the client can post, in real time, his opinions and his demands using this streaming based
pplication. He can also make notes to mark upon the images showing his point of view. All of these
ems being done instantly, using live streaming, saving time and money.

Fig 7.3 Live weather forecast

A News channel wants to use on its website a weather player. This is easy now that they have ur streaming based advantage. They can share with the viewers live videos from around the world. n this way, the users can see immediately the weather from different areas on the globe. This would e of great use during the time of natural calamities. This would ensure fast and speedy recovery of he affected areas.

Fig 7.4 Religious festivals

Several important holy places in the world use the Internet. They need a tool to attract the young generation towards the religious path. Now that they have live streaming based delivery method which they can do that with by adding educational videos and eloquent images. Using live streaming based features, the children can share their feelings about religion and everything that it signifies. Important religious ceremonies can be broadcasted live to the pilgrimages who can view it live using the live streaming application.

Fig 7.5 Sports

The organizers of a sporting event, like the Olympic Games, need to transmit daily messages from the Olympic Games competitors to their fans. Using live streaming based software application, they can share the live happening of the events and receive in real time questions. The users can also post compliments for the best athletes or for the best teams. This would enable live telecasting of the Olympic Games to the millions of sporting fans round the world.

CHAPTER 8

8.CONCLUSION

This project provides a time efficient database management. It also enables the parents to monitor their ward periodically. Attendance details, test and exam marks are brought to the parents knowledge regularly. It is completely a secure project as the parents are allowed to access only their ward's details. The data can be altered only by the administrator and hence the data entry is accurate and confidential.

This project is currently a single point transmission system. By creating a multipoint transmission system, e-learning, video conferencing and online education can be implemented. This project is now used, only to monitor the students. In practice, it can also be used for surveillance purposes.

REFERENCES

BOOKS

Tim Berners-Lee, "Information Management", Osborne McGraw-Hill, first edition, 1996.

Robin Schumacher, Arjen Lentz-"MySQL AB", Tata McGraw-Hill, third edition, 2006.

Raymond, Eric-"IETF and the RFC Standards Process", IDG books Worldwide, third edition, 2002.

URLS

- www.w3schools.com
- www.adobeflashmediaserver.com
- www.php.net/download-docs.php
- www.mediatutorial.com
- www.howstuffworks.com
- www.wikipedia.com

APPENDIX A

HTML CODING

HOME PAGE SOURCE CODE

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>Untitled Document</title>
<link href="kct.css" rel="stylesheet" type="text/css" />
<style type="text/css">
<!--
a:link {
        text-decoration: none;
}

a:visited {
        text-decoration: none;
}

a:hover {
        text-decoration: unterline;
}

a:active {
        text-decoration: none;
}

body {
        background-image: url(backrounds.jpg);
}
-->
</style>
```

ead>

ody>
ble width="950" border="0" align="center" cellpadding="0" cellspacing="0">
tr>
<td><table border="0" cellpadding="0" cellspacing="0">
  <tr>
    <td width="456"></td>
    <td width="494" align="right" valign="top" bgcolor="#000000" class="enquiry"><a
ef="login.html">Admin Login</td>
  </tr>
  <tr>
    <td height="258" colspan="2" align="left" valign="top"><table width="950" border="0"
llspacing="0" cellpadding="0">
      <tr>
        <td width="950" height="258" align="left" valign="top" background="building-
jpg"> </td>
      </tr>
    </table></td>
  </tr>
  <tr>
    <td colspan="2"><table width="100%" border="0" cellspacing="0" cellpadding="0">
      <tr>
        <td width="950" height="28" bgcolor="#a1afd0"><img src="inbutton.jpg" width="950"
eight="27" border="0" usemap="#Map" />
          <map name="Map" id="Map2">
            <area shape="rect" coords="43,8,87,24" href="index.php" target="_self" />
            <area shape="rect" coords="172,6,235,24" href="About_us.html" target="_self" />
            <area shape="rect" coords="345,5,413,23" href="Students.php" target="_self" />
            <area shape="rect" coords="518,7,570,22" href="Faculty.html" target="_self" />
            <area shape="rect" coords="673,6,787,24" href="camera.html" target="_self" />

```
        <area shape="rect" coords="871,7,927,23" href="Queries.html" target="_self" />
      </map>
    </td>
  </tr>
</table></td>
</tr>
<tr>
  <td colspan="2"><table width="100%" border="0" cellspacing="0" cellpadding="0">
    <tr>
      <td class="kctbackround"><table width="100%" border="0" cellspacing="0"
llpadding="0">
        <tr>
          <td width="638" align="left" valign="top" class="kct"><br />
            <table width="98%" border="0" align="center" cellpadding="0" cellspacing="0">
              <tr>
                <td> </td>
                <td> </td>
                <td> </td>
              </tr>
              <tr>
                <td align="left" valign="top"
ass="kctinner">          
umaraguru College of Technology (KCT), Coimbatore is a private Engineering College started in
984 under the auspices of Ramanandha Adigalar Foundation, a charitable educational trust of
akthi Group.</td>
                <td> </td>
                <td align="left" valign="top"
lass="kctinner">           
he Department of <span class="kctinner1">Electrical and Electronics Engineering (EEE)</span>
as been functioning since the inception of the college at 1984. This field of Engineering imparts
```

hnical know-how in the areas of Electrical Machines, Power Systems, Control system,

ectronics, Computer, Bio-Medical Instrumentation and Simulation.</td>

         </tr>

         <tr>

          <td> </td>

          <td> </td>

          <td> </td>

         </tr>

         <tr>

          <td width="50%"><div align="justify"

ass="kctinner">

urrently the college offers 12 under-graduate (B.E., B.Tech.), 13 post-graduate (M.E., M.Tech.,

CA, MBA) as an Autonomous institution affiliated to the Anna University, Coimbatore. The

ollege has the approval of All India Council for Technical Education (AICTE) and accredited by

ational Board of Accreditation (NBA).</div></td>

             <td width="2%"> </td>

             <td width="48%"> </td>

         </tr>

        </table>

</td>

       <td align="left" valign="top" class="newsevents"><marquee onMouseOver="this.stop()"

nMouseOut="this.start()"

       scrollamount="2" scrolldelay="1" direction="up" width="221"

       height="200">

a href="news.php#21">project

a href="news.php#22">project

a href="news.php#20">project review for final years

a href="news.php#19">project review for final years

a href="news.php#18">education link

a href="news.php#12">About KUMARA GURU COLLEGE OF TECHNOLOGY


```
href="news.php#13">EEE Department</a><br /><br /><br />
href="news.php#14">Our Mission</a><br /><br /><br />
href="news.php#15">Hello</a><br /><br /><br />
href="news.php#9">About KUMARA GURU COLLEGE OF TECHNOLOGY</a><br /><br
br />
l></marquee></td>
      </tr>
    </table></td>
   </tr>
  </table></td>
 </tr>
 <tr>
  <td colspan="2"> </td>
  </tr>
 </table></td>
</tr>
table>

map name="Map" id="Map"><area shape="rect" coords="81,8,149,21" href="About_us.html"
rget="_self" />
area shape="rect" coords="258,6,324,24" href="Students.php" target="_self" />
area shape="rect" coords="426,5,481,23" href="Faculty.html" target="_self" />
area shape="rect" coords="583,6,698,22" href="Camera_Features.html" target="_self" />
area shape="rect" coords="782,7,835,23" href="Queries.html" target="_self" />
/map></body>
/html>
```

BROADCASTING SOURCE CODE

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Live Streaming</title>
<link href="kct.css" rel="stylesheet" type="text/css" />
<script src="Scripts/AC_RunActiveContent.js" type="text/javascript"></script>
<style type="text/css">
<!--
a:link {
        text-decoration: none;


a:visited {
        text-decoration: none;


a:hover {
        text-decoration: none;


a:active {
        text-decoration: none;


body {
        background-image: url(backrounds.jpg);


.dnavigation{
        font-family:Verdana, Arial, Helvetica, sans-serif;
        font-size:14px;
```

```
        color:#000000;
        }
dnavigation a{
        color:#000000;
        }
dnavigation a:hover{
        text-decoration:underline;
        color:#990000;
        }
ate {
        font-family: Verdana, Arial, Helvetica, sans-serif;
        font-size: 14px;
        font-weight: bold;
        color: #990000;
        padding-right: 10px;


>
/style>
/head>

body>
table width="950" border="0" align="center" cellpadding="0" cellspacing="0">
<tr>
  <td><table border="0" cellpadding="0" cellspacing="0">
    <tr>
      <td width="456"><img src="Top-1.png" width="456" height="82" /></td>
      <td width="494" bgcolor="#000000"> </td>
    </tr>
    <tr>
      <td height="258" colspan="2" align="left" valign="top"><table width="950" border="0"
ellspacing="0" cellpadding="0">
```

```
  <tr>
    <td width="950" height="258" align="left" valign="top" background="building-
pg"> </td>
  </tr>
</table></td>
  </tr>
<tr>
  <td colspan="2"><table width="100%" border="0" cellspacing="0" cellpadding="0">
    <tr>
      <td width="155" height="28" align="center" valign="middle" bgcolor="#a1afd0"
ass="adnavigation"><a href="ad_home.php">Home</a></td>
      <td width="202" align="center" valign="middle" bgcolor="#a1afd0"
ass="adnavigation"><a href="ad_changepassword.php">Change Password</a></td>
      <td width="225" align="center" valign="middle" bgcolor="#a1afd0"
lass="adnavigation"><a href="add_student.php">Add Student</a></td>
      <td width="251" align="center" valign="middle" bgcolor="#a1afd0"
lass="adnavigation"><a href="list_classes.php">List Classes</a></td>
      <td width="117" align="center" valign="middle" bgcolor="#a1afd0"
lass="adnavigation"><a href="/kct/ad_broadcast.php?doLogout=true">Logout</a></td>
    </tr>
  </table></td>
  </tr>
<tr>
  <td colspan="2"><table width="100%" border="0" cellspacing="0" cellpadding="0">
    <tr>
      <td height="19" align="left" valign="top" class="kct"><table width="100%" border="0"
:ellspacing="0" cellpadding="0">
        <tr align="right">
          <td height="19" valign="top" class="kctbackround"><span class="date">2009 March 31,
Tue</span></td>
        </tr>
```

```html
        <tr>
          <td height="19" align="left" valign="top" class="kctbackround"><table width="90%"
 der="0" align="center" cellpadding="0" cellspacing="0">
              <tr>
                <td align="left" valign="top"> </td>
                <td align="center" valign="middle" class="kctinner1"> </td>
                <td align="left" valign="top"> </td>
              </tr>
              <tr>
                <td align="left" valign="top"> </td>
                <td rowspan="13" align="left" valign="top" class="kctinner1"><script
 pe="text/javascript">
 C_FL_RunContent(
 odebase','http://download.macromedia.com/pub/shockwave/cabs/flash/swflash.cab#version=9,0,28,
 'width','640','height','377','src','LiveSample','quality','high','pluginspage','http://www.adobe.com/sh
 ckwave/download/download.cgi?P1_Prod_Version=ShockwaveFlash','movie','LiveSample' ); //end
 C code
 /script><noscript><object classid="clsid:D27CDB6E-AE6D-11cf-96B8-444553540000"
 odebase="http://download.macromedia.com/pub/shockwave/cabs/flash/swflash.cab#version=9,0,28
 )" width="640" height="377">
 <param name="movie" value="LiveSample.swf" />
 <param name="quality" value="high" />
 <embed src="LiveSample.swf" quality="high"
 luginspage="http://www.adobe.com/shockwave/download/download.cgi?P1_Prod_Version=Shock
 vaveFlash" type="application/x-shockwave-flash" width="640" height="377"></embed>
 </object></noscript>
 tmp://60.243.251.117/live</td>
                <td align="left" valign="top"> </td>
              </tr>
              <tr>
                <td align="left" valign="top"> </td>
```

```html
     <td align="left" valign="top"> </td>
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   <tr>
    <td align="left" valign="top"> </td>
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          <td align="left" valign="top"> </td>
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        </table></td>
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    </table>
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    </tr>
  </table></td>
  </tr>
 <tr>
  <td colspan="2"> </td>
  </tr>
 </table></td>
</tr>
```

PENDIX B

P CODING:

naging username and password:

```php
hp
sion_start();
ername = $_POST['Admin_Username'];
ss = $_POST['Admin_Password'];
uire_once('connect.php');
="ad_home.php";
="login.html?error= Invalid Login";
sql_select_db($database,$kct);
ql=mysql_query("SELECT  *  FROM  admin  WHERE  `username`='$username'  AND
assword`='$pass'") or die(mysql_error());
cho "SELECT * FROM `admin` WHERE `username`='$username' AND `password`='$pass'";
ow_rsinfo=mysql_fetch_assoc($sql);
qlnumrows=mysql_num_rows($sql);
ype = $row_rsinfo['type'];
_SESSION['MM_User']=$user;
_SESSION['MM_Pass']=$pass;
_SESSION['MM_UserGroup'] = $type;
($sqlnumrows==0)

/echo "false";
eader("Location: ". $iv);

f($sqlnumrows!=0)

/echo "true";
header("Location: ". $v);
```

endence maintanence:

```php
ıp
ire_once('connect.php');
ect_q=mysql_query("SELECT * FROM student WHERE dept='$_POST[dept]' AND
='$_POST[year]'");
v_rsuers=mysql_fetch_assoc($select_q);
alrows=mysql_num_rows($select_q);
ho $totalrows;


    $enum_temp = $row_rsuers['enum'];
    if ( $_POST[$enum_temp] != '' ) {
            $insert = "INSERT INTO attendence (enum,date,present,year,department) VALUES
POST[$enum_temp]', '$_POST[date]', 'Present', '$_POST[year]', '$_POST[dept]')";

    }
    else {
            $temp = $row_rsuers['enum'];
            $insert = "INSERT INTO attendence (enum,date,present,year,department) VALUES
emp', '$_POST[date]', 'Absent', '$_POST[year]', '$_POST[dept]')";

    }
    $result=mysql_query($insert);


vhile($row_rsuers=mysql_fetch_assoc($select_q));
insert)


l = "list_classes.php";
der("Location: ". $url);
```

in management:

```
p
on_start();
rname = $_POST['Admin_Username'];
s = $_POST['Admin_Password'];
ire_once('connect.php');
"ad_home.php";
="login.html?error= Invalid Login";
ql_select_db($database,$kct);
=mysql_query("SELECT    *    FROM    admin    WHERE    `username`='$username'    AND
ssword`='$pass'") or die(mysql_error());
ho "SELECT * FROM `admin` WHERE `username`='$username' AND `password`='$pass'";
w_rsinfo=mysql_fetch_assoc($sql);
lnumrows=mysql_num_rows($sql);
pe = $row_rsinfo['type'];
SESSION['MM_User']=$user;
SESSION['MM_Pass']=$pass;
SESSION['MM_UserGroup'] = $type;
ssqlnumrows==0)

cho "false";
ader("Location: ". $iv);


$sqlnumrows!=0)


ader("Location: ". $v);
```