Real-time Video Surveillance System
Part I (Video) Code: (BZ1a-07)

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**Introduction**

A closed-circuit television (CCTV) is often used for surveillance in places like banks, casinos and airports. Technological advancement especially in the software field has enabled video monitoring in all sorts of circumstances and in a low-cost, user-friendly, sophisticated and high-quality real-time manner. With such advanced video surveillance systems, we can effectively prevent security and safety problems like burglaries, child abuse and fire accidents from taking place at home, the office or laboratory.

In this project, the real-time video surveillance system is the software that works on computers connected to a network, and controls the registered server for surveillance monitoring. That means a place can be monitored when the user has installed the system.

We have used the two platforms for implementing a complete surveillance system, H.263 codec and H.323 codec.

**System Block Diagram**

![System Block Diagram](image)
Methodology

There are five stages in the project:
(1) Video Capturing
(2) The Video Codec Standards
(3) Network Transmission
(4) Graphical User Interface
(5) Synchronization

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Table: Software Implementation

Figure 1-2: Illustrates the brief flow of synchronization of video and audio
Results

Implementation of H.263

The image below shows our initial client interface. On the menu bar, “System” stood for exit function; “View” for enabling or disabling remote screen; “Audio” for adjusting volume; “Video” for rejecting incoming video signals; and “Help” for more information on the application version. The alarm list was also used to display the motion detection when the button was pressed.

![Initial Client Interface](image_url)

Figure 1-3: Initial Client Interface

Implementation of H.323

Figure 1-4 (TOP): Connection List after connecting to different sites

Figure 1-5 (RIGHT): Multi- and full screen Display in Remote Window