

INTERACTIVE VIDEO STREAMING - AN AID TO RURAL MEDICAL SYSTEM

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Introduction

“GPRS Video Streaming” is an internet browser application developed with the main intention to view the live events taking place at a sight wherever the webcam will be focusing, through a GPRS enabled mobile. It gives the user high quality images with general packet radio service (GPRS). The communication with web will not be expensive. Anyone can access this with just a mobile from remote location. This package uses a user friendly graphical user interface (GUI) so that the people can use it with utmost ease. In this specific application, surgeon or any person can view live video of a surgical operation from remote place.

Objective

- To provide real-time images (Videos) of surgical operation to remotely located specialist on his GPRS enabled cell phone through Video Streaming, automatically when the operation begins at OT.
- To provide an “interactive options” to the remotely located user may it be a (specialist or student) and to accept or decline the incoming video images.
- To provide an option for the user to take snapshots while watching the video and also to record the video for future viewing.

Working Methodology

The system consists of two modules. Server side and the client side. The two sides are connected through the internet.

Server Side Module:

When the power is switched ON it implies that an operation has begun so the voltage sensor senses this voltage change on the line and sends a signal to the microcontroller. The microcontroller immediately digitizes the received signal and sends it to the server system through the parallel port interface. When the server senses the signal at the parallel port, a server running in the system sends an alert message to the client in the form of SMS. On receiving an acceptance from the Client, the server system switches ON the web cam placed over head the operating bed. The web cam continuously captures the real time images of the operation and sends it over the Internet and GPRS to the Client.

Client Side:

Client side module is implemented in Core JAVA and J2ME. This will allow user:

- To view the live video from remote location.

- To take the snapshots or record video through web cam connecting to server through connection established in J2ME application and servlets.

Conclusion

The project is designed to come to the aid of rural people who are deprived of the privileges of expert surgeons and specialist.

This system finds an application in home security where the owner gets the image of the visitor even in the absence of the owner at his residence.

The future enhancement of this system can transmit voice along with the video which could prove beneficial to students to view and listen to the seminars and talks that are being presented at any place.