

## ABSTRACT

The development of video technology in offering visualization services was not only limited by the distribution of television broadcast but it has larger range. The video technology gives different services, such as video security, video on demand, video streaming, video broadcast, Tv over IP, etc.

To *display* pictures from monitoring process which use some video input simultaneously, it needs a hardware that called video multiplexer (video mux). Mux is a device that could receive any kinds of video input (commonly live video input) from camera or CCTV then unite and *display* the input simultaneously (*split-screen* monitor).

In this final assignment will be build an application/ software which has the same function with video mux. This PC-based *split-screen* multi-video security with *motion detector* application could receive some *webcam* input and *display* them simultaneously. When the video capture a motion that exceed the definite threshold when the video will be recorded.

This application extremely influenced by the light existence in the monitoring room, the camera performance, and the motion extend from the object. This video security monitoring system works in the threshold value is 4, for monitoring distance 3-6 meters in front of the camera. The system performance toward the PC specification was shown with the amount of *frame* that being *displayed* every second. *Fps* point for fourth *webcams* that *display* simultaneously was 6 *fps* (*frame per second*) for the process without recording while for the process with recording was 5 *fps*.

***Keywords : Video security, Input live video, Motion detector, Split-screen***