

## ABSTRACT

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CCTV system has become a necessity nowadays. CCTV systems are divided into several types, including Simple CCTV System. Simple CCTV System is a CCTV system which has the fewest abilities compared to other CCTV systems. This led to the idea to create a simple webcam CCTV system that is built using embedded devices, which using a wireless router that has been modified using OpenWrt firmware, a Linux distribution specified for embedded devices. By utilizing the modification features on OpenWrt, can be built to have a webcam CCTV system that has some additional capabilities, such as voice communication using VoIP, so the webcam CCTV system can also serve as a voice communication as its supporting feature. By there are VoIP communication, the devices located around the webcam CCTV systems can communicate with each other. Simple webcam CCTV System also has other additional feature that makes it able to be monitoring from a long distance by using VPN on the wireless router which works as the main media of the webcam CCTV system. In the implementation, simple webcam CCTV system can be created using embedded devices. OpenWrt firmware can be implemented on an embedded device. VoIP and VPN can also be added to the webcam CCTV system using OpenWrt.

*Keywords:* OpenWrt, CCTV, embedded, VoIP, VPN