# 802.11b-Based Home Security System

**Project Code:** LCT1-06

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**Introduction**

Nowadays, the wireless technology has become more mature, the price of the wireless equipped electronic products like PDA, mobile phone are become lower and lower. However, the price of the monitoring system can still cost up to thousands of dollars and many small companies and individual users may not be able to afford it. One of the reasons is that the monitoring system in the market provides a lot of features and most of them are too advanced for small companies and home users. Due to this, our group has decided to make a cheap, small and user friendly wireless monitoring system to support the different users.

**Aim and Objectives**

The aim of the project is to build a monitoring server in a wireless system, which can provide an updated image of the monitoring target, so that the users can keep track of it everywhere by PDA or any computers that can access to the Internet.

The system will be built on the Linux-based embedded system. The system consists of two parts. They are server side and client side. The server side mainly responsible for continuous capturing image and provide a web server for the user interface. The client side is mainly responsible for the interaction between the server and the user.

**Features**

- 2 frames per second
- Support more than 5 users access the web simultaneously
- Email and SMS triggering system
- Motion detection
- Real time monitoring
- User authentication
- Image recording
- Support Dynamic Domain Name Services
System block diagram
Results and Conclusion

The system has been successfully developed in the development board. The web server and the webcam driver have been compiled to use in the embedded Linux. The performance of the system is satisfactory. The system no longer "halt" when capturing image and a well-structured user management system has been built. The frame rate can achieve two images per second. In order to make the system become more users friendly, Dynamic Domain Name Services has also been included in the system. Therefore, the user can access the monitoring system easily by the domain name without remember the long Internet Protocol Address. The users can monitor their homes any time using the browser, the email triggering system and SMS triggering system. They can really enjoy their long vacation without worrying about the security of their homes.