

## ABSTRACT

The growth of multi-storey building in an urban area which is used mostly for rent and business district, office and apartment, bring on new competition among building organizer. Consumer has many options of building to choose, they are more selective in choosing between comfort and safety or merely both. This is become a special attention for building organizer so they have to try to provide the best services for their consumer and prospective customer by applying appropriate technology to increase comfort and safety which mentioned as BAS (Building Automation System) .

Building Automation System referred to programming, computerizing electronic devices which are monitored, controlling and optimizing mechanic system, lighting system and controlling building subsystem like security and fire/safety. One example for BAS application in building security is Building Security System. CCTV (Circuit Close Television) is one of Building Security System supporting component. Nowadays, CCTV system has already been revolved in the market, and mostly has a same way in terms of how it works. Therefore a sophisticated improvement for existing CCTV technology is on the first line.

This final project purposes is to improve CCTV automation system by using BAS based on SCADA system. In SCADA system and automation design, the research begins with understanding CCTV existing system. The research continued with analyzing CCTV existing system and designing automation scenario and also SCADA system. By implementing automation and SCADA system design on CCTV it will greatly improves CCTV existing system.

From this final project, we can conclude that a better room monitoring system by using an integrated CCTV system has been successfully designed. In advantages, this system has a function for monitoring, supervising, even controlling and also data acquisition in real time. The system is also able to detect movement using sensor, move randomly, providing an alarm system and also abilities to automatically record the scene.

Keywords : CCTV, BAS (Building Automation System), HMI, PLC, SCADA (Supervisory Control and Data Acquisition), Automation