ABSTRACT

Technology is something that very useful to many people lives for the moment. All aspects of life can be use of technology in accordance with require fields, one of which is the controlling home. A home can be automated by the sound. To create such system is needed for the device that support voice processing and controlling home device.

In this final project, author has designed and implemented an automated lighting system using a sound-based microcontroller and Digital Signal Processing (DSP) TMS320C6455 type. This system uses two processor namely microcontrollers and Digital Signal Processor (DSP) TMS320C6455 type. The voice that we spend will filtered in accordance with the specification that we have already set when programming the TMS320C6455. Output of the TMS320C6455 a certain frequency to be received by the DTMF. DTMF will convert the incoming frequency to form a 4 bit binary logic. And this data has to be entered on the microcontroller. Input from microcontroller will active the relay to turn on or turn off the lights.

With this system, we turn on and turn off the light just by using sound. This system is made as simple as possible so easily used by everyone.

Key Words: Microcontroller ATMega8535, TMS320C6455, automatic lighting