ABSTRACT

Air Conditioning (AC) is very important for car users. Users desperately need the facility to cool the relatively high temperatures inside the cabin while driving. The problem is when the user will use the car usually have to cool the AC for a relatively long time before using it to keep the temperature inside the car cabin decreased. In other cases when the cabin temperature is relatively hot, the user immediately turn on the air conditioner with a cold enough temperature, due to drastic temperature changes, resulting in the glass car breaks easily.

Therefore, Car Air Conditioner Controller Tool Based on Internet of Things (IoT) is a solution for car users who use it in daily activities. Users only need to use android based phones connected to the internet to turn on and off the air conditioner. In the other side, the user can set the desired temperature degree. All done from long distances. Making this tool using microcontroller, Android Studio software, Arduino IDE software, Web Server, and Firebase.

This tool is made car users can be more efficient of time. Because when you enter the car, the temperature inside the cabin is cold and there is no need to waiting for the temperature to decrease. This tool can also be controlled remotely with a note that the microcontroller and smartphone can be connected to the internet. From the results of the test, using an IoT-based Car Air Conditioning Controller obtained an efficiency of 122 seconds (2 minutes 2 seconds) compared to not using an IoT-based car air conditioning controller. Based on the results of the questionnaire using the calculation of the MOS value, the IoT-based AC control device gets a value of 3.88 which is categorized as C (Acceptable).

Keywords: *IoT, Microcontroller, Car AC, Android*