

## ABSTRACT

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*Transportation is one of the important needs for the community. This Final Project aims to design and assemble a short distance personal transportation tool in the form of longboard electric and the remote control. So this tool can be one of alternative transportation that is pollution-free and educative. To control the speed of the longboard electric, wireless remote control is used with data communications from the bluetooth module is planted. Remote control in the form of android-based smartphone applications. There are two important systems that are assembled on this Final Project, namely the drive system and the control system. The drive system in question is assembled some electronic components, mechanical and microcontroller, ie DC motor, ESC motor driver, motor mount, lithium polymer battery, arduino, bluetooth module, timing belt, timing pulley and one longboard unit. The control system in the form of android applications on smartphone that communicate as a client via bluetooth connection. This application serves to adjust the speed and brake of the drive system. From the test results obtained that this portable transportation can go up to 30 km/h with a maximum user weight that can be borne 70 kg and the distance of control up to 105 meters.*

*Keywords: Longboard, Motor DC, Bluetooth Module, Android, Arduino*