

ABSTRACT

Busway is a solution proposed to solve traffic jam problem in Jakarta. Main reason for proposing such alternative is that traffic jam had already been the daily problem in Jakarta. Furthermore, with the increasing number of vehicle, it can be simply concluded that the problem of traffic jam won't go any better. We may expect to it getting worse and worse.

Moreover, the operational condition of busway can't be recognized yet in getting close to the original aim, let alone reach it. One reason makes this condition aroused. Many people tend to consider the path which is originally allocated for Busway's usage as their alternative route to avoid traffic jam. This only action later on resulted in the ineffectiveness of busway to play the role of solving traffic jam problem.

This paper, considering the current condition as described before, is expected to present a solution. Solution presented in this paper including designing and manufacturing portal gate for transjakarta service. (Transjakarta is the busway service of Jakarta). In order to detect this portal gate, Radio Frequency Identification (RFID) is deployed. Motor driver used to control the DC-motor-powered portal gate. ATMEGA8535 microprocessor is applied in calculating the data. If data from tag is read as same as data which had save in microcontroller, microcontroller control driver motor which will control DC electrical motor.

This paper generate a prototype gate will be opened if the bus pass the line. To the other cars the gates will be stay close. This gate are expected to solve the problems caused by indiscipline drivers.

Keyword : Bus transjakarta, Radio Frequency Identification (RFID), driver motor, tag RFID, reader RFID, Mikrokontroler ATMEGA8535, DC electrical motor.