RELIABILITY STUDY OF BUS DRIVER TO AVOID ROAD ACCIDENT WITH SIMULATION APPROACH

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ABSTRACT

Traffic accident on the highway is an unpredictable event. Causes of accidents in general consist of three factors which are human, vehicle, and environment. Human factors (human error) has the highest contribution at 80%-90%. Behavior that made by the bus drivers will be modeled into a contextual model to differentiate distal and proximal factors in the effect on traffic accidents. Contextual model will be used as a reference to perform the simulation in order to obtain the dominant sequence which can cause accidents.

The method used in conducting this research is the observation through the deployment of a questionnaire given to bus drivers in PO MOEDAH. Obtained values by questionnaire will be used as inputs of simulation.

Results obtained from this study is the final variable that was developed into a simulation model is to ignore the speed limit to go with the flow of traffic, ignoring speed when it will overtake, overtaking a vehicle that runs slow, driving too close to the vehicle in front, one to predict the braking distance, one predict the distance to the vehicle in front when it will precede the vehicle, one predicts the speed of vehicles coming from opposite directions, go in the opposite lane, and through the intersection or the intersection at the time knowing that traffic lights will turn red.

Keywords : Human Errors, Simulation, Driver’s Behaviour.