

## **ABSTRACT**

This communication system is carried out to maintain communication so that no one member is left behind, one way to communicate with fellow members, including using walkie talkies or cellular phones, it's just that the method is felt to be less efficient, other than that the use of both devices can be dangerous driver's safety when driving a platooning prototype truck.

In this research, visible light is used as a medium in communication between platooning trucks, where so far the light has only been used as lighting, but can be used as a medium for communication between vlc-based platooning truck vehicles. Visible Light Communication is a communication system using visible light as a carrier of information.

The output of this final project is the implementation of a proximity sensor on a convoy truck that is used to keep fellow convoy members for mutual communication between trucks in a convoy or group so that fellow trucks can communicate. Therefore the distance between the trucks must be maintained by using an ultrasonic sensor. This system can maintain the distance between prototype trucks as far as five and hundred cm which is scaled to one : five with a distance of fourteen m which is an effective distance on the prototype truck. To maintain the stability of the speed of the truck if the distance of the front and rear trucks is less than fifty cm, the rear truck will slow down so that it does not prioritize the truck in front, if it exceeds fifty cm, the rear truck will speed up the speed of the truck so that the platooning system can run within the range that we make on this system.

**Keywords: System, VLC, LED, Proximity sensor**