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Automatic Blind-Zone Elimination Mirror (ABEM)

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Automatic Blind-Zone Elimination Mirror (ABEM)

ECET-491 Senior Design Project Report

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December 7, 2007

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ABSTRACT

The Project “***Automatic Blind-zone Elimination Mirror (ABEM)***” was design to use in pick-up truck/mini van with trailer. This report examines the alternative way of using the automatic angle adjustment of the side view mirrors that allow the driver to see the rear end of the trailer when the vehicle is back parking. The design project resolves and eliminates the rear end blind-zone areas of the trailer.

ABEM system consists of one rotary position request sensor, two position feedback sensors and one control unit with integrated user interface. Rotary position request sensor is mounted on the hitch where the required data is obtained and sent to the control unit. The two position feedback sensors are mounted inside the mirror assembly and send position data to control unit. The control unit processes the received data from position request and position feedback sensors and adjusts the side view mirror’s angle by moving mirror’s motors. ABEM system enables the user to control both automatic control mode and the manual control mode at a different time. In the automotive environment, the ABEM provides a better solution by integrating the new technology with safety aspect.

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