

**Erratum: Empirical Estimation of Driver Perception Reaction Time (PRT) Based on Distance-Speed Relationship**

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*The address of one of the Authors in this paper was wrongly typesetted in the vol. 27 issue of the Journal of NAMP. The first page of the article is therefore reproduced as it ought to appear on page 413 (Vol. 27)*

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**Abstract**

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*This research work was carried out to estimate a value of perception reaction time (PRT) for single carriageway roads in Nigeria. This is against the background of the assertion in the literature that different values of PRT exist for different countries in the world, and can thus be established for Nigeria. Data was obtained in a manner considered more direct than previous ways in the literature, in order to reflect a situation that caters for greater number of factors that affect driver behaviour on the road. The data collected was used in developing models relating vehicular space or distance headway to speed (as a variable that affects driver's PRT) data collected on the single carriageway roads selected. Results obtained show that a significant relationship is definable between driver PRT and vehicular speed and distance headway characteristics on the highways. The range of values of PRT obtained is 1.22 to 1.38 seconds and the overall average is 1.30 seconds. While the average PRT value is within the range of values in the literature, as hypothesized for a high accident fatality setting and hence high travel speed setting, the value is on the lower scale of the PRT in the literature. The relatively low value of PRT obtained gives independent empirical credence to the upward review of stopping sight distance in the recently updated Highway Design Manual for Nigeria. Though the speed recorded here is in agreement with the recommendation of the new Highway Design Manual, it is here suggested that further works be done on roads in other areas of the country outside the areas selected for study in this work, to confirm or controvert the findings in this work regarding the perception-reaction time, which will serve as similar verification researches to provide more information for future updating of the Manual.*

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**1.0 Introduction**

One of the problems that face traffic and transportation engineers is accommodating the varying skills and perceptual abilities of the driver on a highway in the design of the highways. This could be due to the wide range of people's abilities to hear, see, evaluate, and react to stimuli. Studies have shown that these abilities may also vary in an individual under different conditions, such as influence of alcohol (or drugs), fatigue, and time of the day [1].

Under normal conditions, for instance, in a vehicle accident, it is usually needed to determine the available PRT for a particular driver before one can decide if that driver had the opportunity to avoid the accident. In some cases, an object appears so quickly that there is not enough time to avoid it. In other cases, a driver may be inattentive and not react to the object, even though there was ample time to avoid the accident. Therefore, it is important that perception reaction time selected for design purposes should, however, be large enough to include reaction times for most drivers using the highways. Recommendations made by the American Association of State Highway and Transportation Officials, AASHTO [2] stipulate 2.5 seconds for stopping sight distances, which is said to encompass the decision times for 90 per cent of drivers under most highway conditions. Sohn and Stepleman [3] stated that the major reaction time variable is dependent on the country where the reaction time took place.

In view of the aforementioned findings by various researchers and the fact that work in this area does not seem to have been done in Nigeria, there is the need to engage in research in the area. This work is, therefore intended to estimate perception reaction time on single carriageway roads in Nigeria. This work is done through developing a model relating vehicular space headway to speed (as a variable that affects driver's response time) data collected on some single carriageway roads in Nigeria.

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