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The effective evaluation of truck safety for an alternative parallel South Africans PBS legislation

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ABSTRACT

The National Transport Commission have shown that implementation of Performance Based Standards (PBS) improves companies' productivities by minimizing the transportation costs. This in turn has a positive effect on the South African economy. The development of PBS in Australia was identified and developed in South Africa. Computational modelling plays an important role in evaluating a truck's performance and dynamics for PBS adherence. This is because computational modelling can be done quicker, safer, and cheaper than conducting physical evaluation tests. In order to effectively evaluate vehicle performance, it is necessary to use an effective software package. The following software packages were analysed in this study: ADAMS/View 2011, TruckSim 8.0, and Yaw/Roll. Although the National Transport Commission has found accurate agreement of results by software comparison, this research looks at the ease-of-use (user effort required), cost, output agreement and features (e.g. driver models, tyre models, integrators, etc.) of the different software. This will assist other vehicle dynamicists wanting to evaluate PBS designs.