TRUCK PLATOONING: POTENTIAL BENEFITS AND IMPACT ON BRDIGES

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Abstract

Automation of road vehicles is a major challenge. Heavy good vehicles are also concerned and the platooning concept, i.e. a short series of tucks traveling at short or very short spacing, is among the solutions to improve the efficiency of road freight transport and to reduce its environmental impacts. Platooning may significantly improve the road capacity and thus reduce the congestions and avoid expensive and energy and material consuming investments in new infrastructures. It may reduce the drag forces, improve the vehicle aerodynamics and thus reduce the GNG emissions and fuel consumption. But the most promising benefit could result of a better logistics planning and more productivity of the drivers. After a short literature review reporting the past studies and experiences, some perspectives about the development of platooning in the EU and the potential benefits will be proposed, with a special focus on the potential impact on bridges reliability and lifetime, and on bridge loading codes.

Keywords: Heavy Vehicles, Trucks, Platooning, Road Freight Transport, Bridges, Traffic Loads, Bridge Design Codes.