Session on ITS and Eco-Driving

Summary of the ITF Roundtable on Truck Automation and Platooning (with FMCSA)

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International Transport Forum

Expert Workshop on Decarbonising Road Freight, 28-29 June 2018
Background

• Various on-board safety systems for commercial vehicles
• More innovative ITS-based solutions are being tested, including
  ▪ Stability control
  ▪ Lane departure warning
  ▪ Driver drowsiness monitoring
• Current research involves studying
  ▪ Collision avoidance effectiveness of wireless communication of safety information between heavy vehicles and light vehicles
  ▪ Cost effective after-market stability control systems for both tractor and trailer-only systems
  ▪ Identification of trailer characteristics from within the tractor in a cost-effective and reliable manner
• US proposal to realign the RT to cover platooning and full automation of heavy goods vehicles (HGV) on motorways
Key Issues

• What specific technologies for automation exist, covering different platooning (two or more vehicles) concepts and full automation?

• What are specific implications of the range of technology options on infrastructure requirements and human factors?

• In what way can such a system interact with manually operated passengers cars and manually operated HGV not part of scheme?

• How can the potential wider societal and economic benefits be locked in, without risking other additional negative effects?

• How do these systems need to be regulated in order to allow safe operation; should this be driven by industry or governments?

• What are the policy implications; how are liability, security and privacy concerns being addressed?
Roundtable Overview

• Chair: Peter Sweatman, CAVita Partners
• Location: US DOT Conference Centre, Washington D.C.
• Date: 5-6 January 2017

• Discussion Papers:

4. Christopher Poe, Texas A&M Transportation Institute, “Commerce-Ready Infrastructure and Urban Environment”
Key Insights

- Many technologies to enter the market in the short term represent only incremental change, they assist rather than replace drivers.
- Regulations rely on presence of driver engaged in the driving task, flexible to incorporate with limited modification, not disruptive.
- Increasing automation likely to require high V2X data connectivity, funding key issue, need to specify roles of public/private sector.
- SAE level 3 allows driver to monitor rather than drive, but as it still continues to require human driver, not severely disruptive.
- Business case for industry is based on relaxing driver regulations due to reduced workload, revision relies on government oversight.
- SAE level 4 automation completely substituting driver in a specific ODD, such as highway pilot technology, will be disruptive.
- Very data-rich space with high data connectivity likely to emerge, enabling novel data-driven regulatory approaches.
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