SINGAPORE 2019

26th ITS World Congress
21–25 October

Smart Mobility, Empowering Cities

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Last minute status update on multi-brand truck platooning

Transforming Freight Movements through ITS – Part II (SIS30)

Hossein Zakizadeh
VOLVO Group

Truck Platooning

- Truck platooning is defined as linking of two or more trucks in form of a convoy using automated driving assistance systems (ADAS) and connectivity solutions (V2V) between the vehicles.
- The vehicles in truck platooning maintain a close distance when they are connected for certain part of the journey on roadways.
- The rising regulation for emission reduction from transport sector, reduction in fuel consumption and improving the driving comfort are some of the driving factors for platooning.
- However, the competition between automated driving and platooning has created a mutual dependency.

Expected impacts

- Societal
  - CO2 emission
  - Road throughput
  - Traffic safety
- Business
  - Labour cost
  - Fuel cost saving
  - Market opportunities & Competetiveness

Main building blocks

- V2V Communication (ITS-G5, 802.11p)
- Adaptive Cruise Control (ACC)
- Human–Machine Interface (HMI)
- Forward Collision Avoidance and Mitigation System
- Lane Departure Warning (LDW)
- Blind Spot Warning (BSW)
- Global positioning system (GPS)
- Lane Keep Assist (LKA)
- Acceleration & Braking Controller
- Electronic Emergency Braking System (EEBS)

Ongoing Platooning projects

- Sweden4Platooning
  - National public funded project
  - Multi-branded platooning between Scania & Volvo vehicles
  - Field Operation Test by customer
- Ensamble
  - EU funded project
  - Multi brand platooning between all HV brands in Europe
  - Paving the way for adoption of multi-brand platooning in Europe
  - Align and work on standardization

Current results and outcome from the projects

- Validation of V2V specification and ongoing standradization (ETSI&ISO)
  - Vehicle behaviour – Basic technologies
- Identification and specification of Platooning types
  - Driver-Assistive Tuck Platooning (SAE L1)
  - Autonomous Truck Platooning (SAE L4)
- Validation of other impacts will be reported at the end of field operation tests in both projects


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