



Use case for EU truck platooning

Quick analysis with aerial footage

Motive of the challenge

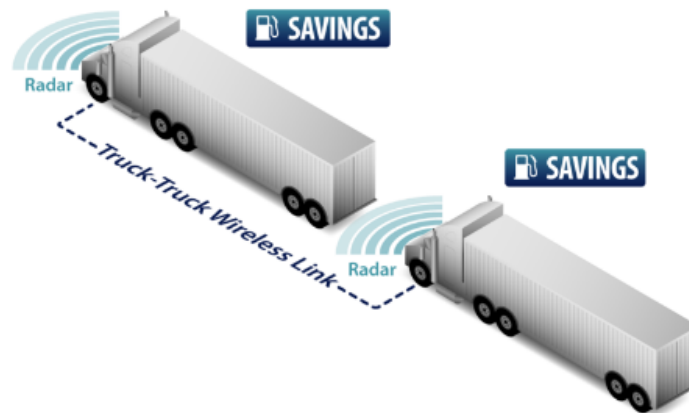


Demonstrate the technical possibilities autonomous truck platoons on public roads.

Principle

The trucks in the platoon follow the vehicle's movements of the front truck. Travel very close to each other. In theory, that offers advantages:

- Reduction of fuel use and CO2 emissions
- Trucks take less space
- Less drivers are needed



The setting



Realistic, no special measures were taken.

Not just technology was monitored, but also regulations, behavioral changes, acceptance and legal consequences.

Goal use case



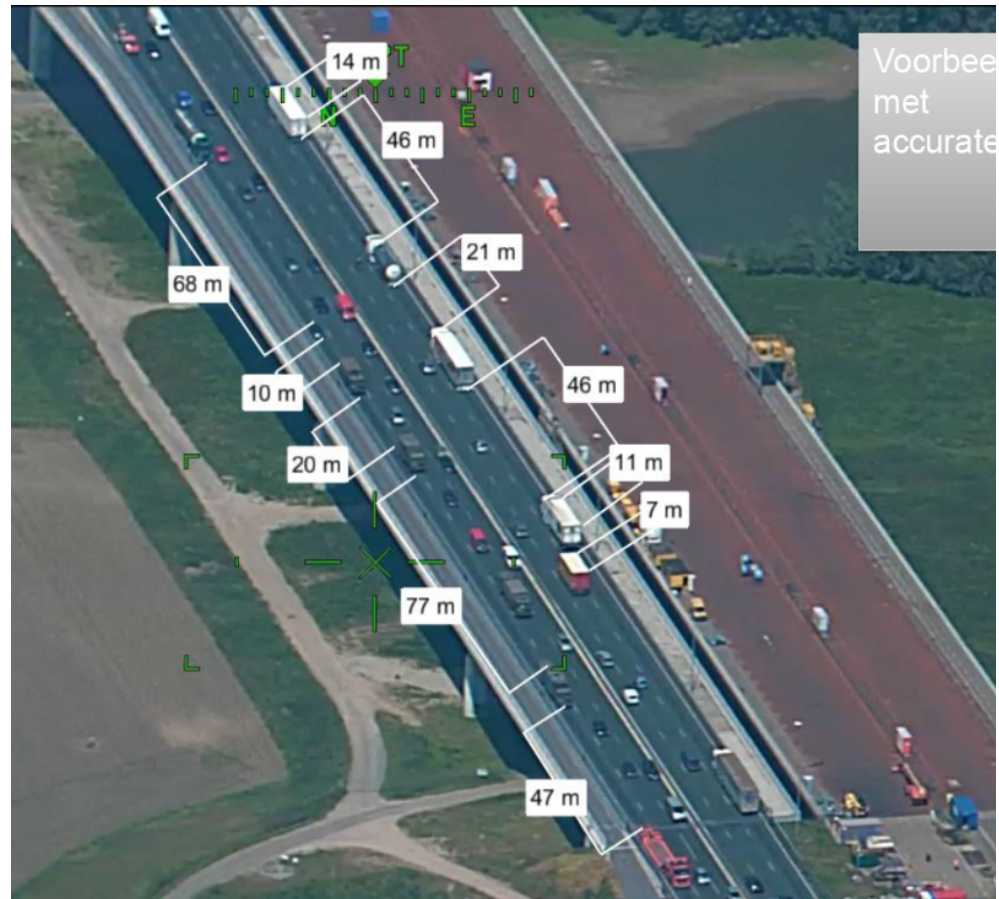
Give insight into truck platooning deployment for road managers and governments with aerial footage.

A Quick analysis

Reference footage was made, to emphasize points of attention.

The results:

- Passenger cars congestion when passing a regular group of trucks.
- Not the length between trucks but speed differences of the cars
- Merging of regular trucks take time (there is less consideration)



Results Platooning Challenge

Similar congestion moments as in reference footage for passenger cars when overtaking trucks

Merging goes more smoothly. The safety distances provide more consideration

Pre-sorting before road splitting's stand out. In one situation the trucks pre-sorted 1.6 km in advance

An aerial photograph of a multi-lane highway. Several large trucks are traveling in the same direction, closely spaced together in a platoon. The highway has multiple lanes in both directions, with a grassy median. In the background, there are some buildings, a parking lot, and a body of water.

Highlights Mercedes platoon
(convergentiepunten)

Recommendation

More emphasis on interaction and relationship between regular and autonomous traffic is needed.

Regarding the behavior:

What role do road authorities have, to ensure safety on its roads?

What desirable behavior can we impose on suppliers of automobile vehicles?

Should there be more accurate information about physical restrictions and real-time intensities ?