



I Rode in FHWA's Truck Platoon, and it was **AWESOME!** FHWA's Truck Platooning Project

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Presentation to the Freight Movement Task Force

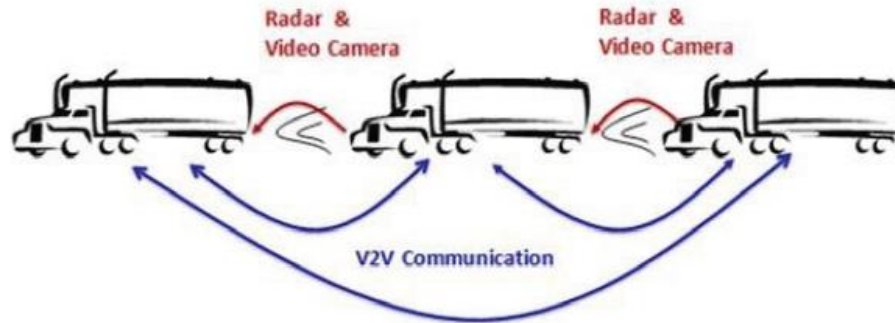
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Truck Platooning Testing by FHWA



What is Truck Platooning?

- Uses Cooperative Adaptive Cruise Control (CACC) to drive at shorter gaps than under conventional, manual driving
- CACC is an enhancement to Adaptive Cruise Control (ACC) technology that provides closer and more accurate control of the gap and speed differences between trucks
- Uses forward looking radar sensors and electronic actuation of engine and brakes of the conventional ACC system but adds 5.9 GHz Dedicated Short Range Communications (DSRC) Vehicle-to-Vehicle (V2V).
- The CACC system exchanges operational information between the trucks at 10 Hz and can adjust engine and brakes to maintain longitudinal control (speed/separation). Drivers are responsible for lateral control (steering and lane keeping).



What are the Benefits?

- Safety
- Energy savings
- Reduced emissions
- Improved congestion
- Reduced delivery time
- Higher driver retention, Reduced workload and fatigue
- Reduced operating costs
- Significant increase of capacity of a dedicated truck lane facility
- Benefits for goods movement to and from the major ports, long-haul cross-country routes

Reduced costs for goods movement and improved safety is important for sustaining business and fostering economic development and jobs!

Freight, so What?

- Freight movement on the nation's network is expected to grow 40 percent in the next 25 years and the value will double
- This will severely impact the transportation network, congestion reduction is necessary
- Fuel costs are the largest single component of a trucking fleet's cost per mile (CPM).
- Small improvements in efficiency have great payoffs in lowering CPM.
- Businesses in the U.S. lose approximately \$7 billion a year due to congestion.

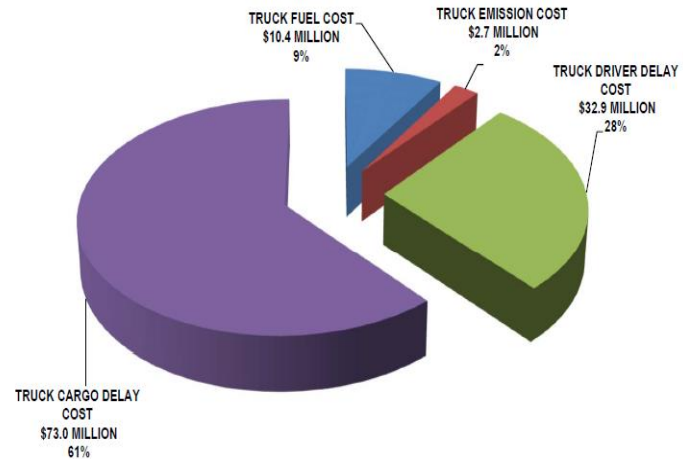
What are the Freight Benefits?

- Allows for optimized transport of freight by using roads more effectively, which helps in delivering goods faster and reducing traffic jams.
- Reduced workload on drivers translates to less driver fatigue and more attentive performance on the road.
- Improves the supply chain efficiencies and optimization of the highway transportation network

What are the Freight Benefits for Maryland?

- Maryland is a through state with significant truck traffic
- Platooning could support the Port of Baltimore and Maryland businesses by improving the efficiency of routes in and out of the state.
- We could use platooning around the port (TradePoint) to make drayage and back and forth to freight generators more efficient.
- Reduced congestion will improve traffic for all, improve the environment and costs of delay

2015 FREIGHT CONGESTION COSTS ON
MARYLAND'S FREEWAYS/EXPRESSWAYS (\$119 MILLION)



Will this be Commercialized?

- Truck Manufacturers and their suppliers are working to commercialize the system by late 2018. There is currently no federal regulatory barrier for commercialization and deployment of level 1 partially automated truck platooning.

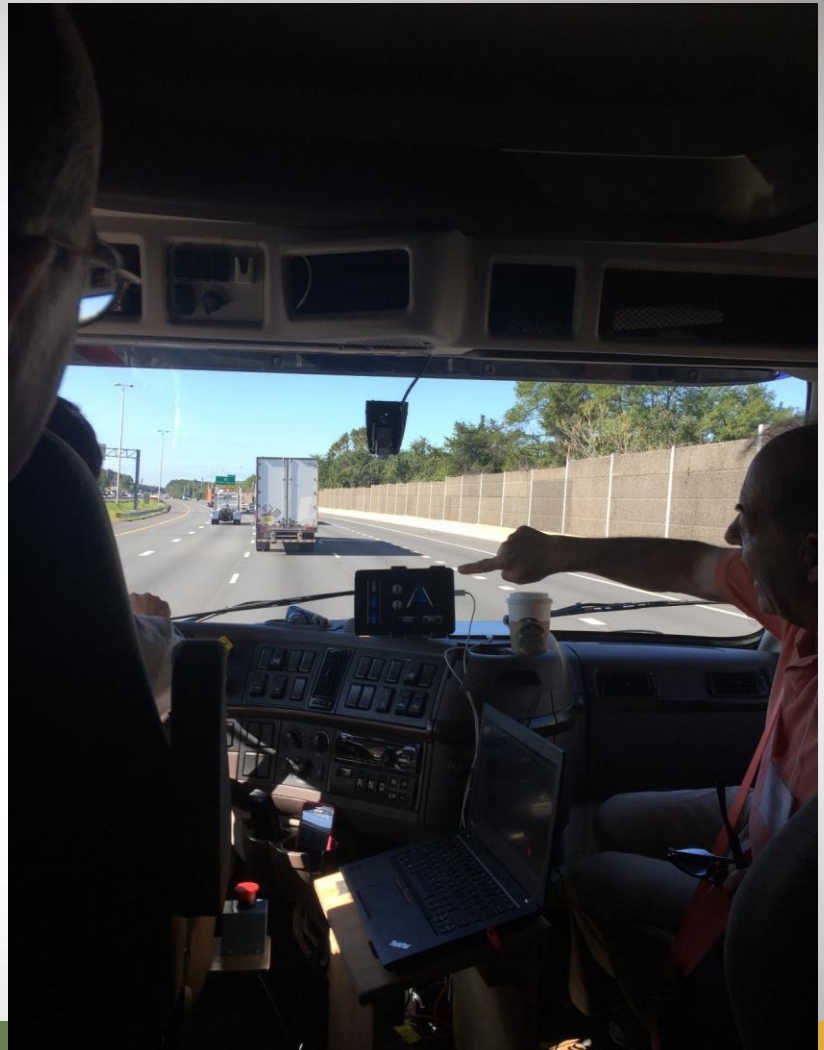
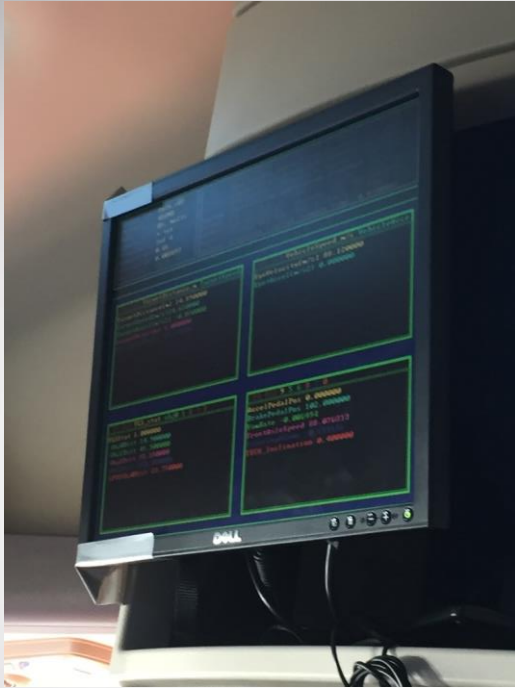
Who are the partners involved in the testing?

- FHWA
- California Department of Transportation
- University of California Berkeley Partners for Advanced Transportation Technology
- Volvo Group
- Gateway Cities Council of Governments
- Los Angeles Metro
- Cambridge Systematics
- FMCSA
- Virginia DOT
- Virginia DMV
- Virginia State Police
- Fairfax County Police
- Prince William County
- Fairfax County Park Authority

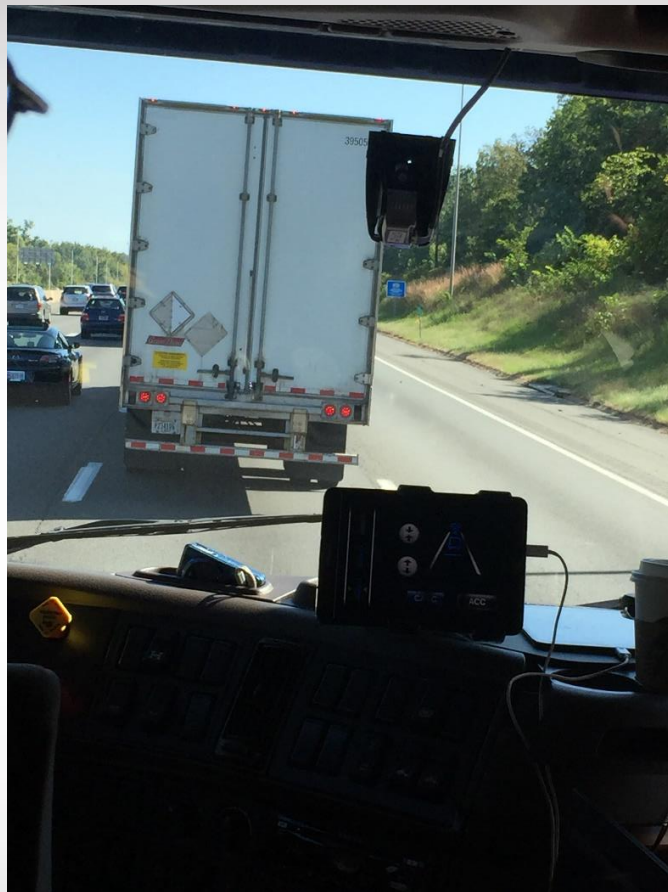
What was it Like? Thrilling!











What are the Opportunities in Maryland?

- I-95 Corridor
- Partnership with the Army Test and Evaluation Command and FHWA
- Freight Operations around the Port of Baltimore
- Potential Eastern Short trucking



Other Emerging Opportunities for MD?

- Data from V2V
- Partnerships with Aberdeen Proving Ground
- Urban deliveries
- Mobility