



Connected & Automated Vehicles

The Benefits & Challenges

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Every 41 mins
someone is killed or
hospitalised



Connected & Automated Vehicles

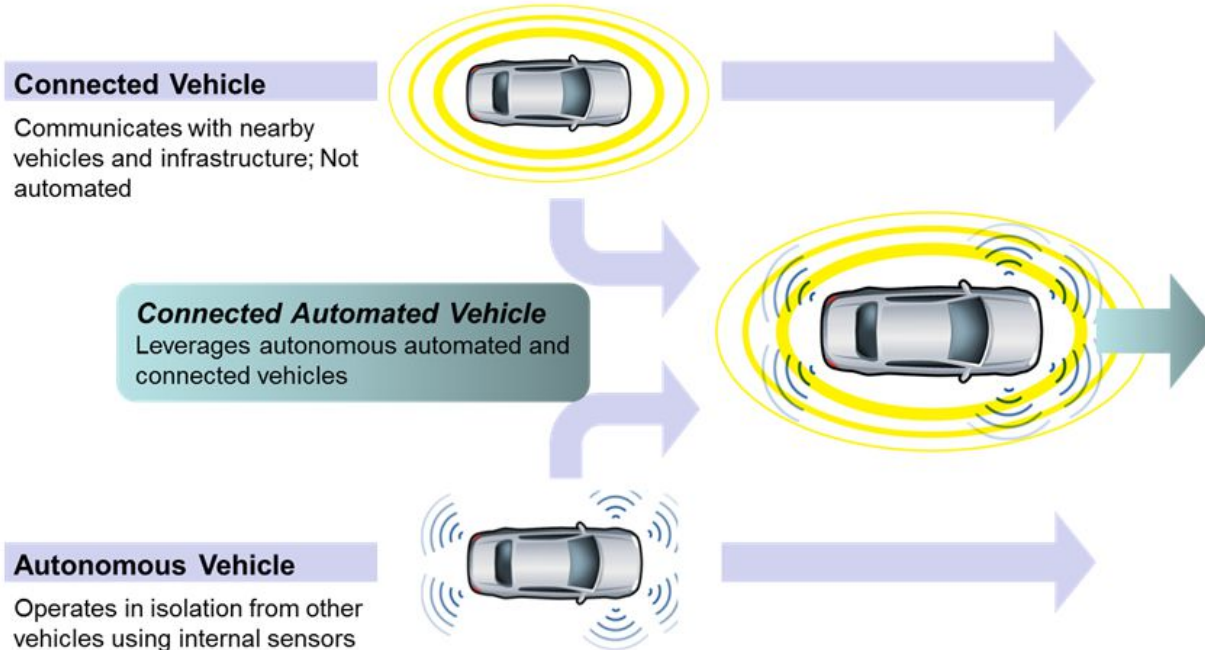


Why am I interested in CAVs?



Connected and Automated Vehicles

The path toward connected vehicles will ultimately lead to automated vehicles.



CAVs potential affect

25%



Phase 1 is complete and Phase 2 is underway

Phase 1

Establish a CITS testbed

58 heavy vehicles

3 traffic signals

Data collection system

Roadside transmission system





SAE J2735 Basic Safety Message (BSM)

| Item |
|-----------------------|
| Time |
| 3D Position |
| Position Accuracy |
| Speed |
| Heading |
| Steering Wheel Angle |
| Acceleration |
| Brake Status |
| Vehicle Size |
| Event Flags |
| Path History |
| Path Prediction |
| Other optional fields |

X 10 / second

Not included in every BSM

What have We
LEARNED?

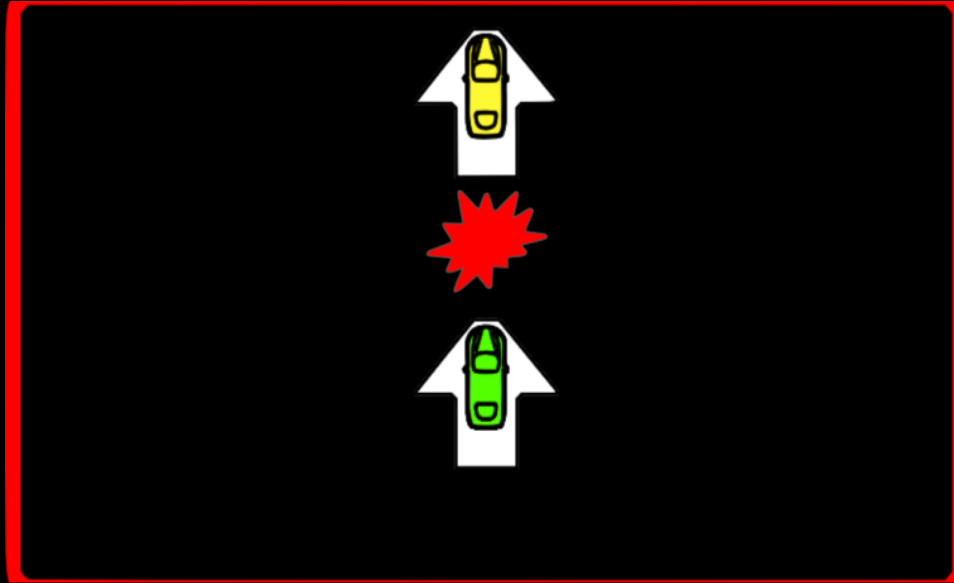
So far...



**KEEP
CALM
AND
GIVE AN
EXAMPLE**

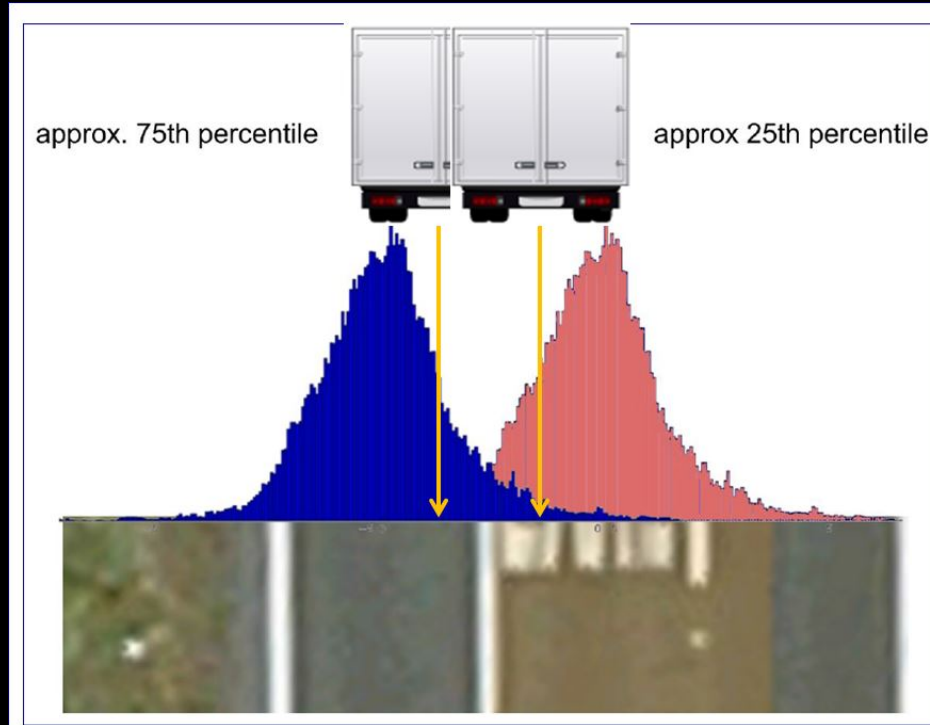
Driver Feedback on collision alerts

- Many drivers report regularly experiencing false forward-collision alerts.



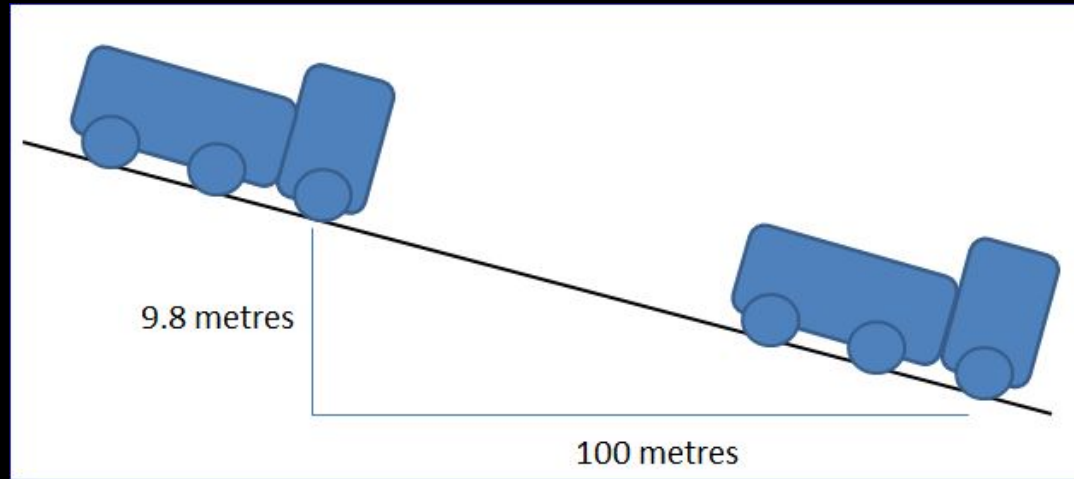
Why are drivers experiencing false collision alerts?

Imprecise lateral GPS positioning



Differences in elevation result in no collision alerts

- The system will not issue an alert if the difference in elevation is greater than 5 metres.
- The CITI area includes steep mountain passes with a grade of up to 9.8%. Vehicles travelling on these roads will not receive an alert.



Overall, participants recognise the benefits of CITI

“I think it’s a good idea, it just needs to be fine-tuned in the way that it’s fitted to the truck, and the way that it works”

“There are lots of benefits if the machine was accurate”

- Greater accuracy was seen to be needed, and a greater number of vehicles fitted.

Contact Details



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