

Self-Driving Vehicles in the Park Bryant Walker Smith Center for Internet and Society Center for Automotive Research

cyberlaw.stanford.edu/about/people/bryant-walker-smith

# A robot by any other name

- Self-driving
- Driverless
- Automatic
- Automated
- Autonomous
- Autonomated

- Robotic

- Robotic

### - Unmanned



### Not your father's Oldsmobile

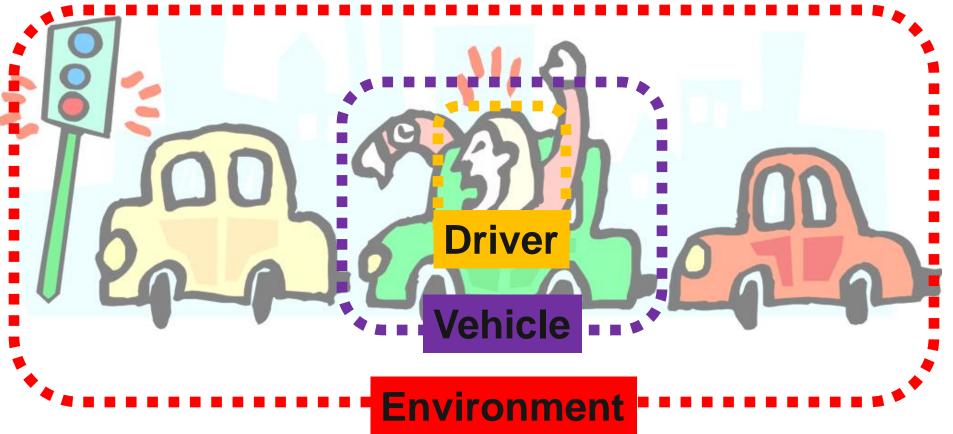
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#### Real-time sensing performed by the...

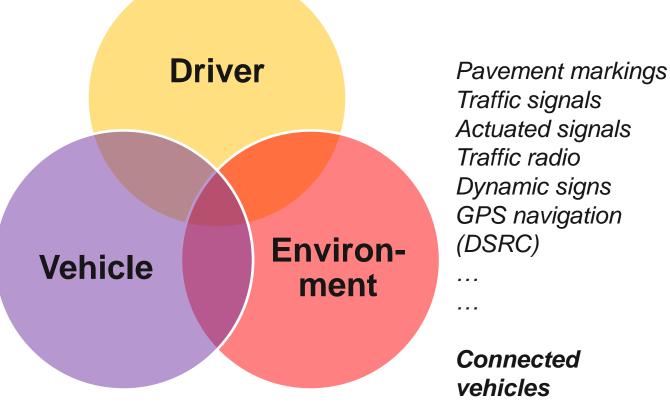


# Evolving and revolving

Antilock brakes Cruise control Stability control Park assist Adaptive CC Lanekeeping Obstacle detection

Fully automated vehicles

. . .



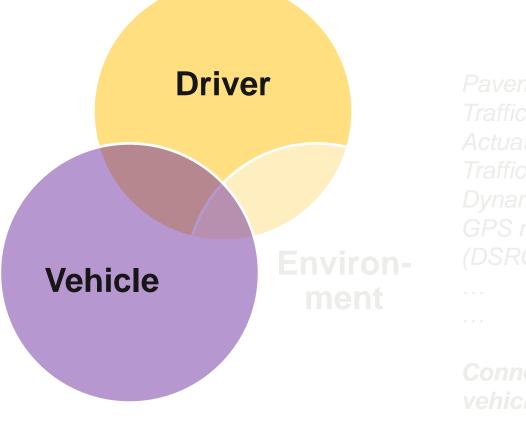
Connected and automated

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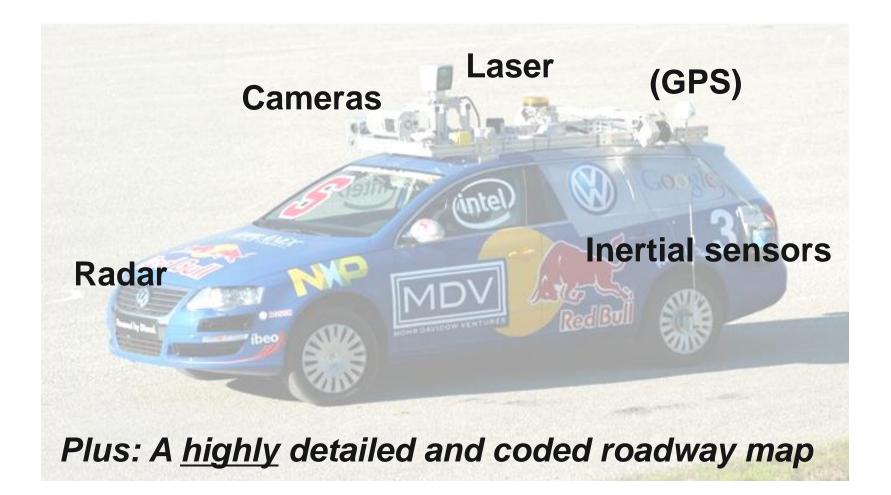
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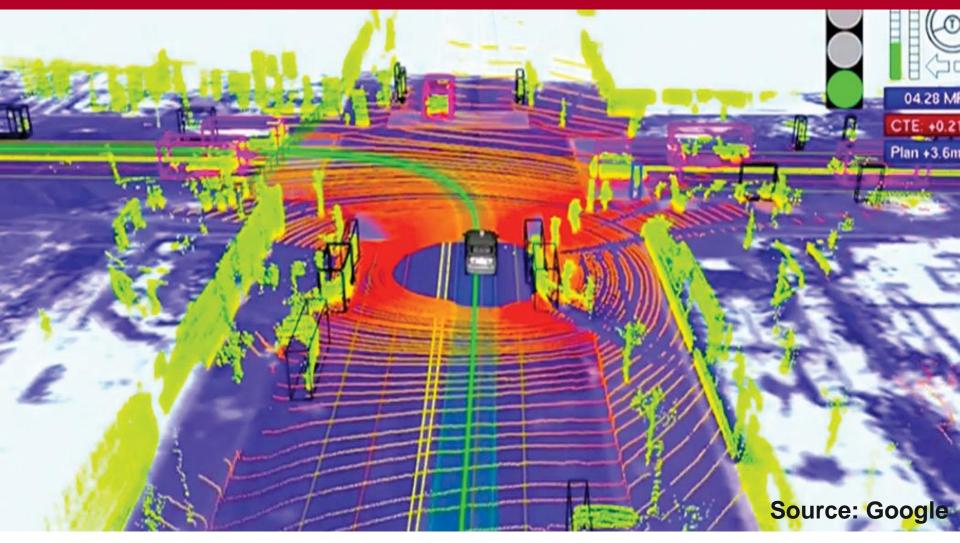
**Connected and automated** 



### Look Ma: No hands! But:



### A different kind of MAP-21



Bryant Walker Smith



# Generally speaking

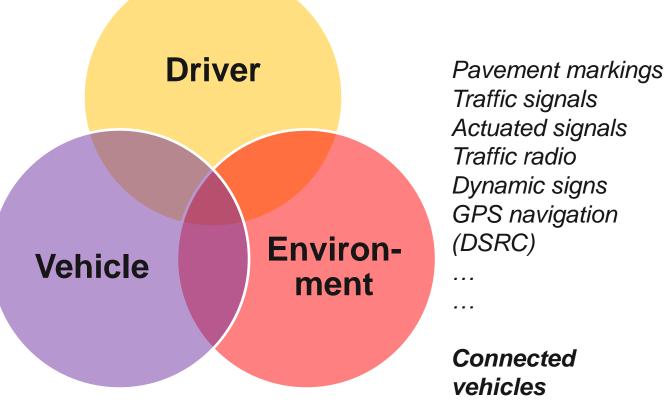
	Driver Assistance Systems (Production)	Highly Automated Vehicles (Research)
Examples	Numerous optional or standard packages	Many automakers, universities, Google
Radar/camera	Yes	Yes
Laser	No	Yes
Roadway map	No	Yes
V2V/V2I communication	No	No*

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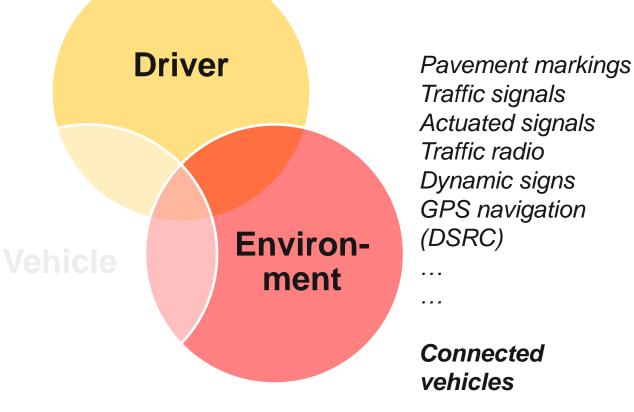
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Connected and automated

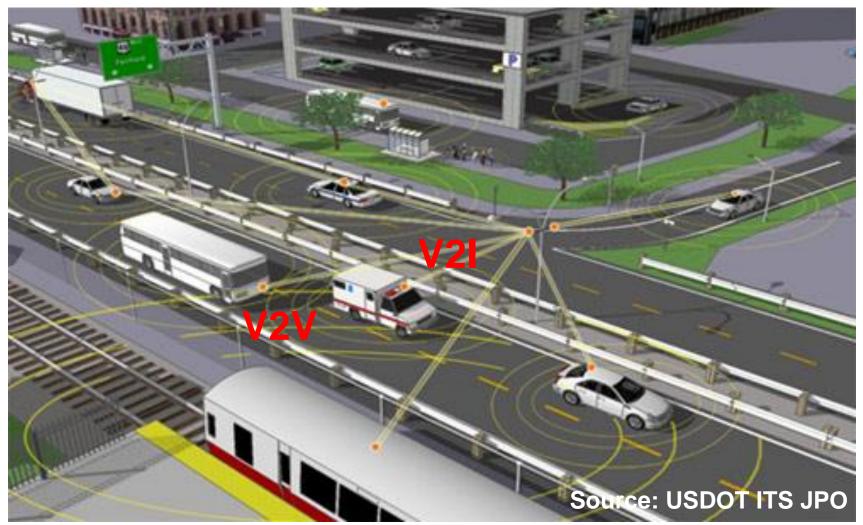
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Connected and fully automated

### You talkin' to me?





# Dedicated to DSRC?

- FCC allocated the 5.850-5.925 GHz band for ITS-specific "dedicated short-range communications" in the United States
- Potential uses: Look-ahead warnings, collision avoidance, signal prioritization, toll payment, traffic information, platoons....
- NHTSA decision on next steps for vehicle communication is (over?)due in 2013



# What's law got to do with it?

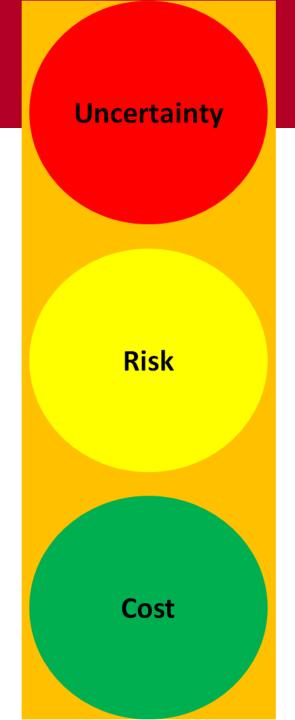
### Regulation

- Legality, standards, licensing, rules of the road
- Compensation
  - Liability, reputation, insurance
- Information
  - Data, privacy, security, IP
- Preparation
  - Socioeconomics



### Questions!

- Uncertainty about:
  - Technology
  - Deployment
  - Law
  - Effects
  - Responsibility



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