The Road to Automated Driving: bridging the auto and tech cultures

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Connected Car

- Connecting with many things, in and out of the car
- New modalities being added all the time
Automated/Autonomous

= Cooperative Automated Driving
Divestiture: 1984
Digital Telephony Wave

Amplitude

Time

Analog Signal Carrying Modulated Data

PCM Encoded Signal
Riding the wave
The bigger wave

Packet switching and statistical multiplexing
Networks
Early signs

FTP

TCP/IP
Parallels

• Incumbent disrupted by fundamentally changing how we use the technology
• (D)ARPA backing, heavy academic interest
• Incumbent an anchor of US economy, an institution
• Challenger coming from Silicon Valley
• Lots and lots of HYPE
• Benefits go beyond the obvious
Benefits of Automated Driving

- Quality of life for elderly, parents, disabled
- Change transportation labor
- Save time
- Help environment
- Change business and usage of vehicles
- Change vehicle itself
Differences

- Driving is safety-of-life
- Vehicles are heavily regulated
  - Both of these pose significant barriers to entry
- Car companies are catching the wave
Lessons

• Auto industry:
  – Don’t rest on laurels
  – Disruption CAN happen
  – Catch the wave to survive

• Tech community:
  – Don’t believe all the hype
    • But, believe some of it.
  – Auto folks know a few things too
  – Watch out for bubbles

• Both sides: Partner to thrive
Takeaway

- Solve big problems
  - Don’t just think about them
  - Don’t expect to do it alone
  - But, don’t wait for someone else to do it.
Questions?

Thank You