

Breakout Session 3: Enabling Technologies for Automated Vehicles

- **Summary of Key Findings and Lessons Learned**

- **Broad array of current topics**
 - Positioning and Localization
 - Cybersecurity
 - Digital Infrastructure (double session)
 - Sensing and Perception
 - On-Board Computational Technologies
 - Cellular/5G vs 802.11p-based Communications
- **...but there could have been more**
 - Two tracks?
 - Synergism: the “I” talking with the “V” good, but sometimes the perspectives, technologies and lexicon are different, e.g., HDMaps means different things to different stakeholders (vehicle industry, governments, global regions)



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• Summary of Key Findings and Lessons Learned (Cont'd)

- Technology tutorials, e.g.,
 - Advances in crowdsourced localization techniques
 - Emerging lightweight cryptographic techniques
 - Different approaches to HD maps – from all angles (vehicle industry suppliers, industry standards, government initiatives, road striping inventiveness) and all flavors (resolution, latency)
 - AI/Neural Networks: philosophies *and* implementation
 - Exposition of DSRC and Cellular/5G ‘debate’
- What did we miss?
 - Government orientation, given that the “I” is primarily owned and operated by them
 - End-to-end approach: technologies at back office
 - Forward looking research – focus was on contemporary work, not more ‘forward leaning’ research
 - Focus on expert discussion on gaps

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Recommended Action Items

- Multiple tracks to satisfy disparate stakeholders and disciplines
- Need to consider different mix / new items
 - Radar
 - Mmw
 - More research voices
- Keep up the good work, Executive Committee: a big room and comfy chairs for this breakout is a good thing. After all, the Silicon Valley and technology types need a place to go and creature comforts.