

The third session of our autonomous vehicles discussion series took place on January 18, 2017 in our San Francisco office. "Autonomous Vehicle Algorithms: Paving the Way for Automotive Liability Changes?" examined important issues around the adoption of autonomous vehicles, such as how liability will be addressed by lawmakers, what liability laws could best incentivize the roll-out of such technology and how this technology could impact the insurance industry more generally.

While federal guidelines were released in 2016 and explicitly reference liability, the regulators were careful to point out that liability remains an issue that should be regulated at the state level. Seven states and the District of Columbia have enacted autonomous vehicle legislation, but less than half of those policies address insurance-related issues and fewer still touch on liability in the case of accidents. This will, however, be an essential question not just for manufacturers, insurers and lawmakers, but also the public at large as the future consumers of such technology.

Matthew Miller, partner in our Litigation Group, moderated our panel of speakers, which included: Director of the RAND Corporation Institute for Civil Justice and Justice Policy Program James M. Anderson; Chief Strategy Officer of AAA Northern California, Nevada & Utah Mike Hetke; Director and Associate General Counsel of Intel Corporation's Automated Driving Group and Transportation Solutions Division Michael Prince; and John Villasenor, professor of electrical engineering, public policy and management and visiting professor of law at UCLA, among other roles. Some of the main issues covered by our panel are summarized below.

Shift in Liability?

- The Department of Transportation (DOT) and the National Highway and Traffic Safety Administration (NHTSA) explicitly addressed liability issues in its September 2016 Federal Automated Vehicles Policy. The guidelines note that states remain responsible for determining liability rules for highly automated vehicles (HAVs) but should seek to develop consistent solutions that most effectively allocate liability to owners, operators, passengers and manufacturers, among others.
- The guidelines go on to advise that "rules and laws allocating tort liability could have a significant effect on both consumer acceptance of HAVs and their rate of deployment," recognizing that consumers are unlikely to be willing to bear the brunt of responsibility for decisions made by the HAV technology.
- As the shift occurs, however, the panel widely agreed that it was likely to be incremental. One law professor has described this as the "mushy middle of automation." Just as the roll-out of this technology will take place over time, this area of law will develop in order to keep pace. All panelists felt that our current tort and product liability systems can handle any slow transition of liability towards manufacturers and away from drivers as full autonomy becomes a reality.

- The panel also raised the fact that it will not just be human versus HAV manufacturer liability, but also between manufacturers and sub-suppliers, component part manufacturers and other wireless technology providers. Manufacturers throughout the supply chain will be concerned over liability, with indemnity agreements and hold harmless clauses likely to be used between parties.

Incentives and Cost-benefit Analysis

- Given these concerns, should regulators and legislators prioritize and shape automotive liability reform to financially incentivize for faster adoption of HAVs? If so, what might such incentives look like?
- Research issued by RAND considered whether design defect product liability could incorporate a cost-benefit analysis that also gave weight to the number of accidents avoided by HAVs. However, this then raised the question of whether it would leave the industry with partial immunity in cases of most accidents.
- Stepping back, the panel questions whether such reform was even necessary or whether the financial risk and reward for early movers in the industry was already sufficient that the race to autonomy will occur without any such reform. In other words, are any companies truly easing up on the spending pedal due to liability fears? The panel seemed to think it was not dissuading HAV manufacturers and suppliers from research and development, but it might slow down on the wider adoption of such technology by consumers.

What is the Future for Litigation in This Arena?

- The panel largely agreed that product liability laws were sufficiently advanced to assign liability for damages resulting from autonomous vehicle systems – whether based on negligence, manufacturing defect or breach of warranty. Current tort law is also argued to be sufficiently advanced for damages resulting from driver negligence (when, for example, the car is not in autonomous mode or a driver inappropriately reassumes control causing an accident).
- The panel raised the fact that in some states no-fault liability laws exist. As such, scenarios could depend on the severity of the accident itself. For example, minor accidents could be covered by drivers' insurance while for serious accidents (as defined by such states), manufacturers' insurance could generally be liable unless the car was in manual mode.
- Product liability claims could be pursued on the grounds of design defect theory, manufacturing theory or both, while negligence actions or breach of warranty action might also be claimed. Beyond the sellers and manufacturers of autonomous vehicles, litigants may also seek to file suit against and attribute fault to various federal and state agencies and local municipalities.

- The fragmentation of state laws might impact litigation. A number of states, including California, employ a consumer expectation test – in other words, does the product’s safety fail to meet ordinary consumer expectations? Some judges could initially decide only to instruct jurors on the risk-benefit test, which enables the defendant to present evidence on the benefits of the design over other alternatives. Eventually, however, would judges in some jurisdictions return to the consumer expectation test in this area?
- Other questions raised concerned litigation strategies. For example, could defenses be made on the grounds of maintenance by HAV owners? Did the owner of the car’s maintenance affect the likelihood of the accident (such as in relation to tires) or did the owner modify the vehicle in a manner that affected the car’s HAV systems? Are road conditions dangerous to such an extent that they caused the accident (e.g., potholes or poor traffic lights/ infrastructure)?

Algorithms and Ethical Dilemmas

- Artificial Intelligence (AI) systems, based on inputs from sensors, maps and GPS systems, will decide which of two or more possible outcomes to choose from in given crash scenario.
- NHTSA said that decisions taken by such technology “will have ethical dimensions or implications.” They urge manufacturers to work closely with stakeholders to grapple with such “ethical judgments” in an intentional manner and be transparent with regulators and others in such decision-making scenarios.
- The panel was asked whether they believed such developments could really be transparent and whether knowledge-sharing with competitors was realistic. They concluded that, while it is unlikely that algorithms for such ethics-related issues would be shared among competitors, some manufacturers were open and encouraging of regulators to be involved in the formulation of such AI technology.
- The larger ethical and moral issues raised were whether society was ready to confront these types of dilemmas (such as “life versus life” scenarios) even while autonomous vehicles would be saving a large number of lives with their greater adoption.

How Will Insurers Respond?

- The insurance industry is braced for change given these liability issues, but how are insurers pivoting their business in order to stay profitable?
- Autonomous vehicles will have a significant impact on the insurance industry. With predictions that car crashes will be reduced by as much as 80% by 2035 because of autonomous vehicles, this technology could begin reducing personal insurance rates.
- A study by RAND suggests that manufacturing liability is likely to increase at the same rate that personal liability decreases. RAND, therefore, suggests that product liability could incorporate cost-benefit analysis to mitigate the cost to manufacturers of claims as well as a no-fault auto insurance system.
- Many insurers are seeking out new profit streams. In Asia Pacific, new insurance products are being examined that could redefine insurance premium burdens for carmakers, as well as car parts makers and technology companies, while insurers in the US are beginning to incorporate safety benefits from increasingly autonomous technology into its pricing calculations.
- The annual Global Insurance Market Opportunities report found that expectations are that “industry pure premiums” will drop 20% under their 2015 levels by 2035, even with moderate adoption of the technology. Those premiums could plunge by more than 40% if full adoption of autonomous vehicles takes place by 2050. It also forecasted that by 2020 global cyber premiums could reach US\$10 billion – a figure that currently represents the global directors’ and officers’ liability market.
- Meanwhile, the Insurance Information Institute has conjectured that the make, model and style of car may assume a greater importance in insurance underwriting as other criteria diminish in importance. This could make the brand of car and its perceived safety all the more important.
- Finally, the panelists noted that much of the technology development we are witnessing could result in people shifting their current notion of insuring things in one’s life to insuring the person’s life generally.

Our next session will focus on “Wireless Communications In Autonomous Driving: What It Is, Who Regulates It and Why We Care” and will take place on March 23, 2017, in our San Francisco office.