AUTONOMOUS VEHICLES: Current Legal Landscape and Challenges on the Horizon

I. Introduction

Advancements in connected autonomous vehicles ("CAV") and unmanned aerial vehicles ("UAV") (commonly known as drones) have accelerated to the forefront of, and reached new heights in, the burgeoning world of autonomous vehicle ("AV") technology. However, like most cutting-edge technologies, it will take some time for the law to catch up and address AV technology's vast reach in an array of industries. Thus, it is critical for industry leaders and stakeholders to stay apprised of the laws and regulations affecting AV technology to anticipate challenges on the horizon, gain insight into legal trends, and identify opportunities for growth.

II. CAV Landscape

Whether it's decreasing automobile accidents caused by human error, reducing congestion and pollution, or freeing up parking lots for additional housing or office space, CAV technology's rapid progression will continue to outpace the law.[1] Nevertheless, it is important to be aware of the current CAV landscape to strategically position oneself in the ever-changing field.

Arizona: Arizona has become a hotbed for CAV testing and operations because fully autonomous vehicles (*i.e.*, no backup driver) may operate on public roads, so long as they comply with all traffic and motor vehicle safety laws.[2] In 2018, Arizona established an Institute of Automated Mobility ("IAM") to foster collaboration between global companies, Arizona universities, and partners from private and public sectors.[3] The IAM provides facilities for testing and the development of guidelines and policies for safety platforms that are necessary for full implementation of CAV technology.[4] Understandably, industry leaders are particularly keen on conducting CAV operations in Arizona.

California: With its strong roots in emerging fields of technology, it's no surprise that California has CAV laws and currently has over 60 companies that hold permits to conduct self-driving tests on its roads.[5] In 2019, California authorized the testing and commercial use of light-duty autonomous

[1] https://www.mercurynews.com/2020/06/04/study-self-driving-cars-would-prevent-one-third-of-us-crashes/ ; https://www.scientificamerican.com/article/self-driving-cars-could-cut-greenhouse-gas-pollution/ ; https://fpdl.coss.fsu.edu/sites/g/files/imported/storage/original/application/abfcc477779d0bc0ea825c8011011939.pdf
[2] https://azgovernor.gov/sites/default/files/related-docs/eo2018-04_1.pdf
[3] https://azgovernor.gov/sites/default/files/eo_2018-09_iam_0.pdf?token=bmTM1RAS
[4] https://azgovernor.gov/sites/default/files/eo_2018-09_iam_0.pdf?token=bmTM1RAS
[5] https://www.ncsl.org/research/transportation/autonomous-vehicles-legislative-database.aspx ; https://www.dmv.ca.gov/portal/vehicle-industry-services/autonomous-vehicles/autonomous-vehicle-testing-permit-holders/

delivery vehicles on public roads, which could prove to be particularly useful during a global pandemic.[6] The Contra Costa Transportation Authority received a federal grant in 2019 to help fund a project aimed at providing shared on-demand, wheelchair accessible AV vehicles.[7] The potential for AV technology to provide jobs to millions of people with disabilities is discussed here. Although there are only a few companies that hold permits to conduct self-driving tests of *fully* autonomous vehicles, this landscape will surely change as States are racing towards a fully autonomous future.[8]

Michigan: Michigan — auto industry hub of the U.S. — enacted legislation as early as 2013, signaling its intent to be at the forefront of CAV innovation.[9] In 2016, Michigan enacted legislation that authorizes the creation of "mobility research centers," which are designed to aid in the construction, operation, or financing of facilities for testing autonomous vehicles.[10] Michigan also established a "council on future mobility" to provide recommendations for changes in state policy to the legislature and state agencies "to ensure that [Michigan] continues to be the world leader in autonomous, driverless, and connected vehicle technology."[11]

Virginia: Virginia has left CAV laws and regulations largely untouched — a conscious decision to encourage CAV innovation and testing.[12] Without regulatory roadblocks, Virginia is essentially a "blank slate" for CAV advancements.[13] The Virginia Tech Transportation Institute ("VTTI"), the State's premier AV research center, has received grants and awards to conduct extensive research concerning CAV technology.[14] VTTI boasts several in-depth research centers and has collaborated with the National Highway Traffic Safety Administration ("NHSTA") to release reports and studies on federal safety standards for autonomous vehicles, further cementing its place as an industry and policy influencer.[15]

---

[6] https://www.dmv.ca.gov/portal/news-and-media/california-authorizes-light-duty-autonomous-delivery-vehicles/
[7] https://www.transportation.gov/briefing-room/us-secretary-transportation-announces-automated-driving-system-demonstration-grant
[8] https://www.dmv.ca.gov/portal/vehicle-industry-services/autonomous-vehicles/autonomous-vehicle-testing-permit-holders/
[9] https://www.legislature.mi.gov/documents/2013-2014/publicact/pdf/2013-PA-0231.pdf
[10] https://www.legislature.mi.gov/documents/2015-2016/publicact/pdf/2016-PA-0332.pdf
[11] https://www.legislature.mi.gov/documents/2015-2016/publicact/pdf/2016-PA-0332.pdf
[12] https://www.washingtonpost.com/local/trafficandcommuting/virginia-wants-to-steal-some-of-californias-driverless-thunder/2017/04/23/a4bc6b54-206c-11e7-a0a7-8b2a45e3dc84_story.html
[13] https://www.govtech.com/fs/Virginia-Lawmakers-Take-Hands-Off-Approach-on-Autonomous-Vehicles-to-Encourage-Innovation.html
[14] https://vtnews.vt.edu/articles/2020/03/031720-vtti-usdottruckgrant.html ; https://vtnews.vt.edu/articles/2019/09/090919-vtti-usdotawards.html
[15] https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/2019_apr_3_-_lsummers_sae_gi_ads_presentation-tag.pdf ; https://www.nhtsa.gov/DOT/NHTSA/NVS/Crash%20Avoidance/Technical%20Publications/2011/811452.pdf ; https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812642_naturalistic-study-of-level-2-driving-automation-functions.pdf

Federal Regulations and Guidance: In 2016, the NHTSA and the U.S. Department of Transportation ("DOT") issued the Federal Automated Vehicles Policy, a comprehensive plan to provide safety assurances and facilitate AV innovation. In January 2020, the NHTSA and DOT issued its fourth set of guidance plans concerning AV technology — Autonomous Vehicles 4.0 — to coordinate efforts across the federal government and provide guidance to federal agencies, the public, and innovators on the U.S. posture towards AV technology. The NHTSA is interested in providing flexible guidance that ebbs and flows with developing AV technology, but with safety as its top priority.[16]

In June 2020, the NHTSA announced its Automated Vehicle Transparency and Engagement for Safe Testing initiative ("AV TEST"), which will comprise public events across the U.S. as well as an online platform designed to share AV testing activities and safety-related information with the public — all in an effort "to improve transparency and safety in the development and testing of automated driving systems." Industry participants in the AV TEST may include developers, manufacturers, suppliers, operators, and AV testers. State and local level participants in the AV TEST may include departments of motor vehicles, departments of transportation, highway safety offices, and city governments.[17] With an eye towards transparency and efficiency, the AV TEST is another example of the NHTSA and DOT's efforts to make fully autonomous vehicles a not-so-distant reality.

III. UAV Landscape

UAVs, commonly known as drones, have been widely popular among consumers and hobbyists; however, more recently, the market for commercial drones is quickly expanding. For example, drones are capable of mitigating safety risks associated with engineering projects, aiding search and rescue missions, providing crucial COVID-19 - related deliveries, and could even perform artificial pollination when bees are scarce.[18] Much like CAV technology, drone technology poses unique challenges that cannot easily be cabined by uniform laws and regulations, which are often times outpaced by innovation. Although not exhaustive, here is a list of state and federal efforts to regulate UAV technology.

---

[16] https://www.transportation.gov/sites/dot.gov/files/2020-02/EnsuringAmericanLeadershipAVTech4.pdf; https://www.nhtsa.gov/technology-innovation/automated-vehicles-safety#nhtsa-action

[17] https://www.nhtsa.gov/press-releases/participants-automated-vehicle-transparency-and-engagement-for-safe-testing-initiative

[18] https://www.accenture.com/_acnmedia/pdf-24/accenture-drones-construction-service.pdf ; https://www.bbc.com/news/uk-scotland-highlands-islands-52821363 ; https://www.cnn.com/2020/05/28/tech/drones-covid-19-hospital/index.html ; https://www.sciencenews.org/article/bubble-blowing-drones-may-one-day-aid-artificial-pollination#:~:text=Flying%20machines%20could%20step%20in,%2C%20like%20bees%2C%20researchers%20say.

California: In California, where privacy rights are a top priority, it is a misdemeanor for a drone operator to invade another person's reasonable expectation of privacy.[19] California also prohibits drones from physically entering the airspace of another person, without permission, in order to capture an image or recording of that individual engaging in a private, personal or familial activity.[20] It is also a misdemeanor for drones to interfere with first responder activities during an emergency.[21] Because the FAA has maintained that proposed regulations to address privacy concerns are beyond the scope of its mission,[22] States (such as California) are left with the difficult task of promoting drone technology, while protecting an individual's right to privacy.

Illinois: In 2015, Illinois created an Oversight Task Force, which considers the commercial and private uses of drones, privacy rights with respect to operating drones, and regulations for the safe operation of drones.[23] Under the Freedom from Drone Surveillance Act, law enforcement are permitted to use drones so long as they have a warrant, however, they are required to destroy all information gathered within 30 days of obtaining such information.[24]

New Jersey: New Jersey has established laws regarding certain drone usages. For example, owners of "critical infrastructures" can apply to the FAA to prohibit or restrict drone usage near such infrastructures and local governments are forbidden from regulating drones in any manner that conflicts with state law.[25] Additionally, New Jersey delineates the varying "degrees" of crimes that can be committed when operating a drone that endangers the life or property of another.[26]

North Carolina: Since 2014, North Carolina has enacted legislation governing the recreational, governmental, and commercial use of drones.[27] Drones may be used for "emergency management" activities such as preliminary damage assessment, area reconnaissance, hazard risk management, incident command, and floodplain mapping.[28] In 2019, the North Carolina Department of Transportation ("NCDOT") was given green light to deliver medical products via drones.[29] The

[19] https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB1129
[20] https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160AB856
[21] http://www.leginfo.ca.gov/pub/15-16/bill/asm/ab_1651-1700/ab_1680_bill_20160929_chaptered.pdf
[22] https://www.federalregister.gov/documents/2019/02/13/2019-00732/operation-of-small-unmanned-aircraft-systems-over-people
[23] https://www.ilga.gov/legislation/fulltext.asp?DocName=&SessionId=88&GA=99&DocTypeId=SB&DocNum=44&GAID=13&LegID=83435&SpecSess=&Session=
[24] https://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=3520&ChapterID=54
[25] https://www.njleg.state.nj.us/2016/Bills/S3500/3370_R1.PDF
[26] https://www.njleg.state.nj.us/2016/Bills/S3500/3370_R1.PDF
[27] https://www.ncleg.gov/BillLookup/2013/s744
[28] https://www.ncleg.net/Sessions/2017/Bills/House/PDF/H337v4.pdf
[29] https://www.washingtonpost.com/transportation/2019/10/01/faa-approves-ups-use-drones-deliver-medical-supplies/

NCDOT plans to leverage its experience with UAV technology to deliver medical supplies and food (and possibly personal protective equipment) during the COVID-19 pandemic.[30]

Federal Aviation Administration ("FAA"): The FAA regulates recreational and commercial drone usage.[31] Currently, there are over 1.5 million recreational and commercial drones that are registered with the FAA.[32] When operated, recreational drones must comply with the "visual line of sight" rule, cannot fly higher than 400 feet above the ground, and are prohibited from interfering with manned aircrafts.[33] To be eligible to fly commercial drones, an operator must be at least 16 years old, obtain a Remote Pilot Certificate, and pass the Aeronautical Knowledge Test.[34]

In December 2019, the FAA proposed a Remote ID system, which would require drone operators to transmit their location data via the internet.[35] The purpose of the Remote ID system would be to provide "additional situational awareness to manned and unmanned aircraft," and to allow agencies to monitor compliance with current rules and regulations concerning drones.[36] The FAA received more than 53,000 public comments concerning the proposed Remote ID system, which contained a mix of reviews, support, and concern from both commercial and recreational drone users.[37] A further discussion on the public comments can be found here.

Regulating AV technology is inherently challenging; due to its rapid integration into various industries—coupled with the abundance of AV testing, increased market opportunities, and associated risks—laws and regulations are constantly changing. Nevertheless, industry leaders and stakeholders should remain proactive and steadfast in understanding the current AV landscape to anticipate industry challenges and leverage potential growth opportunities.

[30] https://www.ncdot.gov/news/press-releases/Pages/2020/2020-04-22-ncdot-drones-covid-19.aspx
[31] https://www.faa.gov/regulations_policies/faa_regulations/
[32] https://www.faa.gov/uas/resources/by_the_numbers/
[33] https://www.faa.gov/uas/recreational_fliers/
[34] https://www.faa.gov/uas/commercial_operators/
[35] https://www.faa.gov/uas/research_development/remote_id/
[36] https://www.federalregister.gov/documents/2019/12/31/2019-28100/remote-identification-of-unmanned-aircraft-systems
[37] https://www.auvsi.org/sites/default/files/AUVSI%20Remote%20ID%20Comments%20Final.pdf ; https://www.aviationtoday.com/2020/05/14/faa-targets-2021-launch-first-public-drone-remote-id-service/ ; https://www.usatoday.com/story/news/nation/2020/03/05/drone-rules-faa-camera-license-plane-helicopter-crash-terrorism/4783041002/

For more information, **please contact:** (Click on photo to link to bio.)

Andrew J. Wu
1.415.275.8551
awu@rshc-law.com
San Francisco

Shalem A. Massey
1.949.359.5510
smassey@rshc-law.com
Irvine / Los Angeles

Jeffrey W. Gordon
1.312.471.8763
jgordon@rshc-law.com
Chicago

Jennifer Steeve
1.949.359.5515
jsteeve@rshc-law.com
Irvine / Los Angeles