MEMORANDUM

To: Oregon Task Force on Autonomous Vehicles
From: ODOT Staff
Date: July 25, 2018
Re: “Operator” Definitions: State-by State Comparison

Introduction

Defining “operator” for the purposes of automated vehicles came up in the Subcommittee on Law Enforcement and Crash Reporting and in the full Task Force meeting on July 12, 2018. The Task Force may need to consider if and how these terms need to be defined or amended to consider automated vehicles. Some states have modified existing definitions in their vehicle code. Other states have created new sections of code to specifically address automated vehicles and included definitions in those sections. One possible template for definitions comes from the Society of Automotive Engineers (SAE).

Scope

This memo includes examples from every state that has modified, added, or otherwise included definitions or clarifications about the terms “driver” or “operator” relating to automated vehicles.

Results

The table below shows which of states amended their existing statutes or codes and which states created new sections of statute or code to address automated vehicles. It also notes what operator/occupant specific terms a state defined or address and whether these terms matched with SAE definitions. After the table, the memo lists relevant SAE definitions and the language of the laws referenced in the table.
Nevada’s House Bill 69 modified the general vehicle code to include a definition of driver that would accommodate autonomous vehicles.

Nevada’s administrative code has a definition of operator that applies to the AV specific section of the code.

### Text of Definitions: SAE and State Comparison

#### SAE Definitions

The Society of Automotive Engineers (SAE) has created a list of definitions to foster consistency and clarity in discussions of automated vehicles. Those referring to drivers and other occupants of a vehicle are:

**DRIVER** - A user who performs in real-time part or all of the Dynamic Driving Task (DDT) and/or DDT fallback for a particular vehicle.

<table>
<thead>
<tr>
<th>State</th>
<th>Terms defined or addressed</th>
<th>Uses SAE driver definition</th>
<th>Amends existing definitions in vehicle code</th>
<th>Creates new section with AV-specific definitions</th>
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<tr>
<td>California</td>
<td>Driver, Autonomous Test Driver, Passenger, Operator</td>
<td></td>
<td></td>
<td>✔</td>
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<tr>
<td>Colorado</td>
<td>Human operator</td>
<td>similar</td>
<td>✔</td>
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<tr>
<td>Connecticut</td>
<td>Operator</td>
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<td>Florida</td>
<td>Operator</td>
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<td>Georgia</td>
<td>Operator</td>
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<td>✔</td>
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<td>Nevada</td>
<td>Driver, Operator</td>
<td>✔</td>
<td>✔ 1</td>
<td>✔ 2</td>
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<td>North Carolina</td>
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<td>Tennessee</td>
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<td>Texas</td>
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<td></td>
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<tr>
<td>Washington D.C.</td>
<td>Driver</td>
<td></td>
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</table>

1. Nevada’s House Bill 69 modified the general vehicle code to include a definition of driver that would accommodate autonomous vehicles.
2. Nevada’s administrative code has a definition of operator that applies to the AV specific section of the code.
NOTE: In a vehicle equipped with a driving automation system, a driver may assume or resume performance of part or all of the DDT from the driving automation system during a given trip.

(CONVENTIONAL) DRIVER - A driver who manually exercises in-vehicle braking, accelerating, steering, and transmission gear selection input devices in order to operate a vehicle.

NOTE: A conventional driver is assumed to be seated in what is normally referred to as “the driver’s seat” in automotive contexts, which is a unique seating position that makes in-vehicle input devices (steering wheel, brake and accelerator pedals, gear shift) accessible to a (human) driver.

REMOTE DRIVER - A driver who is not seated in a position to manually exercise in-vehicle braking, accelerating, steering, and transmission gear selection input devices (if any) but is able to operate the vehicle.

PASSENGER - A user in a vehicle who has no role in the operation of that vehicle.

NOTE: A passenger cannot be remote to the vehicle in which s/he is a passenger.

(DDT) FALLBACK-READY USER - The user of a vehicle equipped with an engaged level 3 ADS feature who is able to operate the vehicle and is receptive to ADS-issued requests to intervene and to evident DDT performance-relevant system failures in the vehicle compelling him or her to perform the DDT fallback.

NOTE 1: DDT performance by a level 3 ADS assumes that a DDT fallback-ready user is available to perform the DDT as required. There is no such assumption at levels 4 and 5.

NOTE 2: A DDT fallback-ready user who transitions to performing part or all of the DDT becomes a driver.

NOTE 3: A DDT fallback-ready user may be remote to the ADS-equipped vehicle for which s/he serves as the DDT fallback-ready user.

(ADS-EQUIPPED VEHICLE) DISPATCHER - A user(s) who verifies the operational readiness of the vehicle and ADS and engages or disengages the ADS.

NOTE 1: Unless the destination(s) is pre-programmed in the ADS, a dispatcher may also specify the destination(s).

NOTE 2: Only vehicles equipped with a level 4 or 5 ADS designed to operate a vehicle throughout a trip are potentially subject to being dispatched.

NOTE 3: Ensuring operational readiness includes such things as ensuring that conspicuity systems are clean and working, maintaining correct tire pressure and fluid levels, as well as ensuring that on-board diagnostic system checks for the vehicle and ADS indicate the absence of a DDT performance-relevant system failure.
California

California Administrative Code Title 13, Division 1, Chapter 1


“Autonomous vehicle test driver” means a natural person seated in the driver’s seat of an autonomous test vehicle, whether the vehicle is in autonomous mode or conventional mode, who possesses the proper class of license for the type of vehicle being driven or operated, and is capable of taking over active physical control of the vehicle at any time.

“Driver” means the natural person who is operating an autonomous vehicle when it is not operating in the autonomous mode.

“Passenger” means an occupant of a vehicle who has no role in the operation of that vehicle when the autonomous technology is engaged. A passenger may summon a vehicle or input a destination, but does not engage the technology, monitor the vehicle, or drive or operate the vehicle. A member of the public may ride as a passenger in an autonomous test vehicle if there are no fees charged to the passenger or compensation received by the manufacturer.

The full text of California’s autonomous vehicle rules can be found here:
https://www.dmv.ca.gov/portal/wcm/connect/a6ea01e0-072f-4f93-aa6c-e12b844443cc/DriverlessAV_Adopted_Regulatory_Text.pdf?MOD=AJPERES

California Senate Bill 1298 (2012)

SEC. 2.

Division 16.6 (commencing with Section 38750) is added to the Vehicle Code, to read:

DIVISION 16.6. Autonomous Vehicles

38750. (a) For purposes of this division, the following definitions apply:

(4) An “operator” of an autonomous vehicle is the person who is seated in the driver’s seat, or if there is no person in the driver’s seat, causes the autonomous technology to engage.

The full text of CA Senate Bill 1298 can be found here:
https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201120120SB1298

Colorado

Senate Bill 17-213 (2017)

SECTION 2. In Colorado Revised Statutes, 42-1-102, amend the introductory portion; and add (7.7), (27.8), and (43.3) as follows:

42-1-102. Definitions. As used in articles 1 to 4 of this TITLE 42, unless the context otherwise requires:
(43.3) “HUMAN OPERATOR” MEANS A NATURAL PERSON IN THE VEHICLE WITH IMMEDIATE ACCESS TO CONTROLS FOR STEERING, BRAKING, AND ACCELERATION.

The full text of Colorado Senate Bill 17-213 can be found here: https://leg.colorado.gov/sites/default/files/documents/2017A/bills/2017a_213_signed.pdf

Connecticut

Senate Bill 260, Public Act No. 17-69 (2017)

Section 1. (a) For the purposes of this section:

"Operator" means the person seated in the driver's seat of a fully autonomous vehicle

The full text of Connecticut Senate Bill 260 can be found here: https://www.cga.ct.gov/2017/ACT/pa/2017PA-00069-R00SB-00260-PA.htm

Florida

Florida Statute 316.85 (2018):

(2) For purposes of this chapter, unless the context otherwise requires, a person shall be deemed to be the operator of an autonomous vehicle operating in autonomous mode when the person causes the vehicle's autonomous technology to engage, regardless of whether the person is physically present in the vehicle while the vehicle is operating in autonomous mode.

The full text of Florida Statute 316.85 can be found here: http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&URL=0300-0399/0316/Sections/0316.85.html

Georgia

Senate Bill 219 (2017)

Title 40 of the Official Code of Georgia Annotated, relating to motor vehicles, is amended in Code Section 40-1-1, relating to definitions, by revising paragraphs (15.2), (15.3), (17.2), and (38) and adding new paragraphs as follows:

(38) 'Operator' means any person who drives or is in actual physical control of a motor vehicle or who causes a fully autonomous vehicle to move or travel with the automated driving system engaged.

The full text of Georgia Senate Bill 219 can be found here: http://www.legis.ga.gov/Legislation/20172018/170801.pdf

Michigan

Senate Bill 995 (2016)

Sec. 665.

(5) When engaged, an automated driving system allowing for operation without a human operator shall be considered the driver or operator of a vehicle for purposes of determining
conformance to any applicable traffic or motor vehicle laws and shall be deemed to satisfy electronically all physical acts required by a driver or operator of the vehicle.

Senate Bill 996 (2016)

Sec. 665b. (1) A motor vehicle manufacturer may participate in a SAVE project if it self-certifies to all of the following:

(4) When engaged, an automated driving system or any remote or expert-controlled assist activity shall be considered the driver or operator of the vehicle for purposes of determining conformance to any applicable traffic or motor vehicle laws and shall be deemed to satisfy electronically all physical acts required by a driver or operator of the vehicle.

The full text of Michigan Senate Bills 995 and 996 can be found here:

Nebraska


Section 1. For purposes of sections 1 to 11 of this act, the following definitions apply:

(3) Conventional human driver means a human person who manually exercises in-vehicle braking, accelerating, steering, and transmission gear selection input devices in order to operate a motor vehicle.

The full text of Nebraska Legislative Bill 989 can be found here:

Nevada


Sec. 11.5. NRS 484A.080 is hereby amended to read as follows:

484A.080

1. Except as otherwise provided in subsection 2, “driver” means every person who drives or is in actual physical control of a vehicle.

2. If a vehicle is an autonomous vehicle, as defined in NRS 482A.030, and the automated driving system, as defined in NRS 482A.025, of the autonomous vehicle is engaged, “driver” means a person who causes the automated driving system of the autonomous vehicle to engage.

3. If a vehicle is a fully autonomous vehicle, as defined in section 2.5 of this act, and the automated driving system, as defined in NRS 482A.025, of the fully autonomous vehicle is engaged, “driver” does not include a natural person who causes the automated driving system of the fully autonomous vehicle to engage unless the natural person is the owner of the fully autonomous vehicle.
The full text of Nevada Assembly Bill 69 can be found here: 

Nevada Administrative Code Chapter 482A (2017) - Autonomous Vehicles

NAC 482A.020 Operators. (NRS 482A.100, 482A.200) For purposes of this chapter, unless the context otherwise requires, a person shall be deemed the operator of an autonomous vehicle which is operated in autonomous mode when the person causes the autonomous vehicle to engage, regardless of whether the person is physically present in the vehicle while it is engaged.

The full text of Chapter 482A of the Nevada Administrative Code (2017) can be found here: 
https://www.leg.state.nv.us/NAC/NAC-482A.html

North Carolina

HOUSE BILL 469 (2017)

SECTION 1. Chapter 20 of the General Statutes is amended by adding a new Article to read:

Article 18.

Regulation of Fully Autonomous Vehicles.

§ 20-400. Definitions. The following definitions apply in this Article:

(5) Operator. – For the purposes of this Article, is a person as defined in G.S. 20-4.01. An operator does not include an occupant within a fully autonomous vehicle performing solely strategic driving functions.

(G.S. 20-4.01 25: Operator. - A person in actual physical control of a vehicle which is in motion or which has the engine running. The terms "operator" and "driver" and their cognates are synonymous.)

The full text of North Carolina House Bill 469 can be found here: 

Tennessee

Senate Bill 151 (2017)

SECTION 2. Tennessee Code Annotated, Section 55-8-101, is amended by deleting subdivisions (17), (42), and (46), and substituting instead the following:

(17) "Driver" means:
(A) For purposes of a conventionally operated vehicle, every person who drives or is in actual physical control of a vehicle; and

(B) For purposes of an ADS-operated vehicle and when the context requires, the ADS when the ADS is engaged;

(42) "Operator" means:
(A) For purposes of a conventionally operated vehicle, every person, other than a chauffeur,
who drives or is in actual physical control of a motor vehicle upon a highway or who is exercising
control over or steering a vehicle being towed by a motor vehicle; and

(B) For purposes of an ADS-operated vehicle and when the context requires, the ADS when the
ADS is engaged

(46) "Person" means a natural person, firm, copartnership, association, corporation, or an
engaged ADS

SECTION 13. Tennessee Code Annotated, Section 55-12-102(10), is amended by deleting the
subdivision and substituting instead the following:

(10) "Operator" means:

(A) For purposes of a conventionally operated vehicle, every person who is in actual physical
control of a motor vehicle whether or not licensed as an operator or chauffeur under the laws of
this state; and

(B) For purposes of an ADS-operated vehicle, as defined by g 55-5a-102, and when the ADS is
engaged, the ADS;

The full text of Tennessee Senate Bill 151 can be found here:

Texas

Senate Bill 2205 (2017)

SECTION 1. Chapter 545, Transportation Code, is amended by adding Subchapter J to read as
follows:

SUBCHAPTER J. OPERATION OF AUTOMATED MOTOR VEHICLES

Sec. 545.451. DEFINITIONS. In this subchapter:

(4) "Human operator" means a natural person in an automated motor vehicle who controls the
entire dynamic driving task.

Sec. 545.453. OPERATOR OF AUTOMATED MOTOR VEHICLE.

(a) When an automated driving system installed on a motor vehicle is engaged:

(1) the owner of the automated driving system is considered the operator of the automated
motor vehicle solely for the purpose of assessing compliance with applicable traffic or motor
vehicle laws, regardless of whether the person is physically present in the vehicle while the
vehicle is operating; and

(2) the automated driving system is considered to be licensed to operate the vehicle.

(b) Notwithstanding any other law, a licensed human operator is not required to operate a
motor vehicle if an automated driving system installed on the vehicle is engaged.
The full text of Texas Senate Bill 2205 can be found here:
https://capitol.texas.gov/tlodocs/85R/billtext/pdf/SB02205F.pdf

**Washington D.C.**

D.C. Act 19-643 (2013)

BE IT ENACTED BY THE COUNCIL OF THE DISTRICT OF COLUMBIA, That this act may be cited as the "Autonomous Vehicle Act of 2012".

[*2] Sec. 2. Definitions.

For the purposes of this act, the term:

“Driver” means a human operator of a motor vehicle with a valid driver’s license.