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STATE OF OREGON
LEGISLATIVE COUNSEL COMMITTEE

June 15, 2017

Representative A. Richard Vial
900 Court Street NE H484
Salem OR 97301

Re: Automated vehicles

Dear Representative Vial:

You have asked for a legal opinion regarding whether legislation is necessary to authorize the operation of automated motor vehicles in Oregon. Specifically, you have asked:

1. Does Oregon law currently allow passenger and commercial SAE Level 3 vehicles to operate on Oregon highways since SAE Level 3 automation requires a human driver for fallback performance of the driving tasks? If not, is legislation required to deploy Level 3 automated vehicles on Oregon roadways?
2. Is legislation required to allow SAE Level 4 and Level 5 vehicles to operate autonomously, without a human driver, on Oregon roadways?

Short Answer

1. It is likely that Oregon's current motor vehicle laws do not prohibit operation of both passenger and commercial SAE Level 3 vehicles on Oregon highways provided that the human driver in the vehicle has a valid driving privileges.

2. It is not clear whether Oregon's motor vehicle laws permit SAE Level 4 or Level 5 vehicles to operate without a human driver on Oregon roadways. Oregon's motor vehicle laws contemplate a human driver in the vehicle while operating the vehicle. As discussed more fully below, several Oregon statutes simply do not make sense when applied to fully automated motor vehicles. Accordingly, we believe legislation is required to authorize SAE Level 4 or Level 5 vehicles to operate on Oregon highways without a licensed human driver in the vehicle.

Discussion

Whether SAE Level 3 to Level 5 vehicles may be permissibly operated on Oregon highways is a difficult question to answer, primarily because the Oregon Vehicle Code contemplates a human driver in the vehicle while operating the vehicle. Accordingly, it is necessary to first identify the various SAE automated vehicle levels and to determine who a "driver" is under Oregon law.

1. What are the levels of automation?

SAE International (formerly the Society of Automotive Engineers) defines six levels of motor vehicle driving automation, spanning from no automation (Level 0) to full automation (Level 5).¹ Level 0 to Level 2 require a human driver to monitor the driving environment.² Although Level 1 and 2 vehicles may be equipped with advanced driver assistance systems such as reactive cruise control or lane correction, the expectation is that the human driver will still perform all of the remaining aspects of the dynamic driving tasks (e.g. steering, braking, accelerating, monitoring the roadway, responding to events, determining destinations, etc.). Level 3 to Level 5 vehicles are designed to allow or require that an automated driving system monitor the driving environment.³ In Level 3 vehicles, a human driver must still be in the vehicle to take over the dynamic driving tasks at the request of the automated driving system.⁴ Level 4 and Level 5 vehicles both perform all dynamic driving tasks without the need for a human driver to be present in the vehicle.⁵

2. Motor vehicles, including automated vehicles, may not be operated on Oregon highways without driving privileges.

To operate a motor vehicle on Oregon highways, a person must be granted driving privileges from the state in the form of a license, driver permit, endorsement or statutory grant of driving privileges.⁶ A person who is not an Oregon resident may also be granted driving privileges if the person holds a current out-of-state license.⁷

The terms "drive" and "driver" are not defined in Oregon's statutes; instead, the statutes refer to the "operation" of a motor vehicle.⁸ "Operation" of a motor vehicle is defined to mean "any operation, towing, pushing, movement or otherwise propelling" of a motor vehicle.⁹ Courts have defined "driver" in intoxicated driving cases to be the person whose "acts constitute the operation, movement or propulsion" of the vehicle.¹⁰

Neither the Legislative Assembly nor the Department of Transportation (ODOT) nor the courts have addressed how to determine who is operating an automated vehicle; however, we believe a court would likely apply an analysis like that used in intoxicated driving cases to the operation of Level 4 or Level 5 automated motor vehicles. Under that analysis, the person whose acts result in the "operation, movement or propulsion" of the automated vehicle would likely be considered the operator of the motor vehicle. Therefore, since Oregon law requires that a person operating a motor vehicle on Oregon's highways be either licensed or granted driving

¹ SAE International, *Automated Driving* https://www.sae.org/misc/books/automated_driving.pdf (visited June 14, 2017).

² *Id.*

³ *Id.*

⁴ *Id.*

⁵ *Id.*

⁶ ORS 807.010 (1) ("A person commits the offense of operating a vehicle without driving privileges if the person operates a motor vehicle upon a highway or premises open to the public in this state and the person does not have an appropriate grant of driving privileges from this state in the form of a license, driver permit, endorsement or statutory grant of driving privileges allowing the person to engage in the particular type of operation.");

⁷ ORS 807.020 (1) ("A person who is not a resident of this state or who has been a resident of this state for less than 30 days may operate a motor vehicle without an Oregon license or driver permit if the person holds a current out-of-state license issued to the person.");

⁸ *Moe v. Motor Vehicles Division*, 889 P.2d 1334, 1336 (1995).

⁹ ORS 801.370

¹⁰ *Moe v. Motor Vehicles Division*, 889 P.2d at 1337 (Intoxicated person in passenger seat who turned on the ignition and accidentally hit the gear shift, knocking the car into gear and causing the car to lurch forward was a "driver" because his acts constituted "the operation, movement or propulsion of the car.");

privileges by statute, it appears that operators of automated motor vehicles must be either licensed or granted driving privileges by statute.

The next questions address who the "driver" of an automated vehicle is and whether that person may be granted a license under Oregon law.

3. Who is the "driver" of an automated vehicle?

Oregon courts have defined "driver" to be the person whose acts constitute the operation, movement or propulsion of the vehicle.¹¹ Where a human driver is required to be physically present in the vehicle while operating the vehicle (i.e., SAE Level 0 to Level 3 vehicles), identifying the driver is relatively straightforward. However, where a human driver's presence is not necessary for the operation of the motor vehicle (i.e., SAE Level 4 and Level 5 vehicles), determining who is operating the motor vehicle depends on how the automated vehicle is being used and by whom.

If a Level 4 or Level 5 automated vehicle is owned by a private individual and a licensed driver is present in the vehicle while it is being operated, we believe that a court would find that the licensed driver in the vehicle is likely the operator of the vehicle. If the automated vehicle is, for instance, transporting the vehicle owner's minor children to school with no licensed driver in the vehicle, it is likely that a court would find that the person who gave the vehicle the destination instructions is the operator of the vehicle. If the operator is a licensed driver, it is possible that the automated vehicle would be legally operating on Oregon's highways.¹² If, however, the person who gave the vehicle the destination instructions was, for instance, the owner's minor child, a court may find that the minor child was operating the motor vehicle without driving privileges.

If a Level 4 or Level 5 automated vehicle is owned by a corporation and used for public transportation services (e.g., taxi services, ride sharing, etc.), but a corporate representative is not physically in the vehicle during its operation, would a passenger be considered the "operator" of the vehicle? We cannot say how a court would resolve this question. If the individual inputs his or her destination manually into the vehicle, it is possible that individual would be considered the "operator." If, instead, the individual uses a mobile app or other service to hail the vehicle and the vehicle is given destination instructions from the corporation that controls the mobile app, then the corporation might be considered the operator of the vehicle.

Similarly, if a Level 4 or Level 5 automated vehicle is used for other commercial purposes (e.g., trucking), but a corporate representative is not physically in the vehicle during its operation, it is possible that a court may find that the corporation is the operator of the vehicle because it controls the programming that results in the "operation, movement or propulsion" of the vehicle.

4. May corporations be granted driver licenses under Oregon law?

In Oregon, the statutory term "person" includes entities, such as corporations, as well as individuals.¹³ As stated above, a "person" may not operate a motor vehicle, including an

¹¹ *Id.*

¹² But see discussion below regarding duties of motor vehicle operators.

¹³ "As used in the statute laws of this state, unless the context or a specially applicable definition requires otherwise . . . [p]erson' includes individuals, corporations, associations, firms, partnerships, limited liability companies and joint stock companies." ORS 174.100.

operator duties that cause concern when applied to vehicles operated without human drivers physically present in the vehicle:

- ORS 807.570 requires a motor vehicle driver to have a license in the person's possession and to present the license to a police officer under certain circumstances.¹⁷ It is arguable that the operator of an SAE Level 4 or Level 5 vehicle who is not physically in the vehicle could be in compliance with the first part of ORS 807.570 if the person has a valid license in the person's possession at the time of operation; however, it is less clear how the operator would comply with the second requirement of ORS 807.570 if the person is not physically in the vehicle to present the license to a police officer.
- ORS 811.585 prohibits a person from leaving a stopped vehicle unattended on a highway without first stopping the engine, locking the ignition and setting the brake on the vehicle.¹⁸ It is not clear whether an SAE Level 4 or Level 5 vehicles operating without a human driver present in the vehicle would be considered "unattended" for purposes of ORS 811.585. If so, ORS 811.585 then appears to prohibit SAE Level 4 and Level 5 vehicles from operating on highways without a human driver present in the vehicle because all vehicles must occasionally come to a complete stop while being operated.
- ORS 811.700 sets forth several duties vehicle operators must perform in the event of an accident, including the duty to remain at the scene of the accident under certain circumstances.¹⁹ If the operator of an SAE Level 4 or Level 5 vehicle is not physically present in the vehicle at the time of the accident, it is not possible for the operator to comply with the requirement that the operator remain at the scene of the accident.
- ORS 811.485 prohibits drivers from following other vehicles too closely.²⁰ For passenger vehicles, the test is that the space between vehicles must be "reasonable and prudent." It is not clear how a court would apply this test to an automated vehicle if a human is not in the vehicle determine whether the distance is "reasonable and prudent." Furthermore, commercial vehicles are expressly prohibited from following a vehicle so closely that an overtaking vehicle would not be able to occupy the space.²¹ This provision seems to prohibit commercial truck platoons.

6. Current law does not appear to prohibit operation of SAE Level 3 vehicles on Oregon highways, provided there is a licensed human driver physically present in the vehicle.

It is likely that Oregon's current motor vehicle laws do not prohibit operation of SAE Level 3 vehicles on Oregon highways provided that the human driver in the vehicle has a valid operator's license. Nothing in the Oregon Vehicle Code prohibits automated vehicles from operating on Oregon highways; however, as discussed above, current law does appear to require that a licensed driver be present in the vehicle while the vehicle is being operated. SAE Level 3 vehicles require a licensed human driver in the vehicle during the vehicle's operation to take over driving tasks at the request of the automated driving system. Accordingly, provided

¹⁷ ORS 807.570 (1).

¹⁸ ORS 811.585 (1).

¹⁹ ORS 811.700 (1)(a).

²⁰ ORS 811.485 (1).

²¹ ORS 811.485 (1)(b).

the licensed driver obeys all of Oregon's motor vehicle laws, there does not appear to be any restriction on the SAE Level 3 vehicle's operation on Oregon highways.

7. Additional legislation is likely needed to permit operation of SAE Level 4 and Level 5 vehicles on Oregon highways without a licensed human driver physically present in the vehicle.

It does not appear that SAE Level 4 and Level 5 vehicles are permitted to operate on Oregon highways without a licensed driver physically present in the vehicle during the vehicle's operation. As discussed above, the Oregon Vehicle Code presumes that a human driver must be physically present in the vehicle during the vehicle's operation. Additional legislation appears necessary before SAE Level 4 and Level 5 vehicles may operate on Oregon highways without a licensed driver in the vehicle. Specifically, direction is needed regarding (1) how to identify the operator of an SAE Level 4 or Level 5 vehicle; (2) If the owner of the SAE Level 4 or Level 5 vehicle is considered the operator of the vehicle, how entities may be granted driving privileges; and (3) how the operator of an SAE Level 4 or Level 5 vehicle can fulfill the operator's duties under the Oregon Vehicle Code.


Summary

Nothing in the Oregon Vehicle Code prohibits the operation of automated vehicles on Oregon highways; however, current law presumes the presence of a licensed driver in any vehicle operating on a public highway. Accordingly, it appears that any automated vehicle, including SAE Level 3 to Level 5 vehicles, may operate on Oregon highways provided there is a licensed driver in the vehicle while the vehicle is in operation. However, further legislation appears necessary before SAE Level 4 or Level 5 vehicles may operate on public highways without a licensed driver physically present in the vehicle during the vehicle's operation.

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Very truly yours,

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