

House File 535 - Introduced

HOUSE FILE 535

BY COMMITTEE ON TRANSPORTATION

(SUCCESSOR TO HSB 122)

A BILL FOR

1 An Act relating to motor vehicles operated by an automated
2 driving system, and making penalties applicable.
3 BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF IOWA:

1 Section 1. NEW SECTION. 321.514 Definitions.

2 As used in this section and sections 321.515 through
3 321.519, unless the context otherwise requires:

4 1. "*Automated driving system*" means the hardware and
5 software collectively capable of performing all dynamic driving
6 tasks on a sustained basis, regardless of whether the system is
7 limited to a specific operational design domain, if any.

8 2. "*Conventional human driver*" means a natural person
9 who manually controls the in-vehicle accelerating, braking,
10 steering, and transmission gear selection input devices in
11 order to operate a motor vehicle.

12 3. "*Driverless-capable vehicle*" means a system-equipped
13 vehicle capable of performing all dynamic driving tasks within
14 the automated driving system's operational design domain, if
15 any, including but not limited to achievement of a minimal risk
16 condition without intervention or supervision by a conventional
17 human driver.

18 4. "*Dynamic driving task*" means any real-time operational
19 and tactical function required to operate a motor vehicle on
20 a highway in traffic within an automated driving system's
21 specific operational design domain, if any. "*Dynamic driving*
22 *task*" does not include any strategic function such as trip
23 scheduling or the selection of destinations and waypoints.

24 5. "*Minimal risk condition*" means a reasonably safe state
25 to which an automated driving system brings a system-equipped
26 vehicle upon experiencing a performance-relevant failure of the
27 system that renders the system unable to perform any dynamic
28 driving task, including but not limited to bringing the vehicle
29 to a complete stop and activating the vehicle's hazard lamps.

30 6. "*On-demand driverless-capable vehicle network*" means a
31 transportation service network that uses a software application
32 or other digital means to dispatch driverless-capable vehicles
33 for the purposes of transporting persons or goods, including
34 transportation for hire as defined in section 325A.1, and
35 public transportation.

1 7. "*Operational design domain*" means a set of constraints
2 used to define the domain under which an automated driving
3 system is designed to properly operate, including but not
4 limited to types of highways, speed ranges, environmental
5 conditions such as weather or time of day, and other
6 constraints.

7 8. "*System-equipped vehicle*" means a motor vehicle equipped
8 with an automated driving system.

9 Sec. 2. NEW SECTION. 321.515 **Operation.**

10 1. A driverless-capable vehicle may operate on the public
11 highways of this state without a conventional human driver
12 physically present in the vehicle, if the vehicle meets all of
13 the following conditions:

14 a. The vehicle is capable of achieving a minimal risk
15 condition if a malfunction of the automated driving system
16 occurs that renders the system unable to perform any dynamic
17 driving task within the system's intended operational design
18 domain, if any.

19 b. While in driverless operation, the vehicle is capable of
20 operating in compliance with the applicable traffic and motor
21 vehicle safety laws and regulations of this state that govern
22 the performance of dynamic driving tasks, unless an exemption
23 has been granted to the vehicle by the department.

24 c. The vehicle has been certified by the vehicle's
25 manufacturer to be in compliance with all applicable federal
26 motor vehicle safety standards, except to the extent an
27 exemption has been granted for the vehicle under applicable
28 federal law or by the national highway traffic safety
29 administration.

30 2. a. The operation of a system-equipped vehicle capable
31 of performing all dynamic driving tasks within the automated
32 driving system's operational design domain on the public
33 highways of this state while a conventional human driver is
34 present in the vehicle shall be lawful. Such operation is
35 subject to the provisions of this chapter, including the

1 requirement that the conventional human driver possess a
2 valid driver's license pursuant to section 321.174. The
3 conventional human driver shall operate the system-equipped
4 vehicle according to the manufacturer's requirements and
5 specifications, and shall regain manual control of the vehicle
6 when prompted by the automated driving system.

7 *b.* An automated driving system, while engaged, shall be
8 designed to operate within the system's operational design
9 domain in compliance with the applicable traffic and motor
10 vehicle safety laws and regulations of this state that govern
11 the performance of dynamic driving tasks, unless an exemption
12 has been granted to the vehicle by the department.

13 3. Except as provided in this section, the motor vehicle
14 laws of this state shall not be construed to require a
15 conventional human driver to operate a driverless-capable
16 vehicle that is being operated by an automated driving system.
17 The automated driving system, while engaged, shall be deemed
18 to fulfill any physical acts required of a conventional human
19 driver to perform dynamic driving tasks.

20 Sec. 3. NEW SECTION. 321.516 Insurance.

21 Before a system-equipped vehicle is allowed to operate on
22 the public highways of this state, the owner shall submit to
23 the department proof of financial liability coverage for the
24 vehicle in a manner and form determined by the department. A
25 system-equipped vehicle shall not operate on the highways of
26 this state unless financial liability coverage is in effect for
27 the vehicle and unless proof of financial liability coverage is
28 carried in the vehicle. If a system-equipped vehicle operates
29 on a highway in violation of this section, the owner of the
30 vehicle may be charged and convicted of a violation of section
31 321.20B as though the owner was operating the vehicle.

32 Sec. 4. NEW SECTION. 321.517 Accidents.

33 In the event of an accident in which a system-equipped
34 vehicle is involved, the vehicle shall remain at the scene of
35 the accident and the operation of the vehicle shall otherwise

1 comply with sections 321.261 through 321.273 where applicable
2 and to the extent possible, and the vehicle's owner or a person
3 on behalf of the vehicle's owner shall promptly report the
4 accident to law enforcement authorities. If a system-equipped
5 vehicle fails to remain at the scene of an accident or the
6 operation of the vehicle fails to otherwise comply with
7 sections 321.261 through 321.273 where applicable and to the
8 extent possible as required by this section, the vehicle's
9 failure shall be imputed to the vehicle's owner, and the
10 vehicle's owner may be charged and convicted of a violation of
11 sections 321.261 through 321.273, as applicable.

12 Sec. 5. NEW SECTION. **321.518 On-demand driverless-capable**
13 **vehicle network.**

14 A person may operate an on-demand driverless-capable vehicle
15 network. An on-demand driverless-capable vehicle network may
16 be used to facilitate the transportation of persons or goods,
17 including transportation for hire as defined in section 325A.1,
18 and public transportation. An on-demand driverless-capable
19 vehicle network may connect passengers to driverless-capable
20 vehicles either exclusively or as part of a digital network
21 that also connects passengers to conventional human drivers
22 who provide transportation services, consistent with chapter
23 321N or any other applicable laws, in vehicles that are not
24 driverless-capable vehicles.

25 Sec. 6. NEW SECTION. **321.519 Authority.**

26 1. The operation and use of automated driving systems
27 and system-equipped vehicles shall be governed exclusively
28 by sections 321.514 through 321.518, and this section.
29 The operation and use of automated driving systems and
30 system-equipped vehicles shall be regulated exclusively by the
31 department in accordance with sections 321.514 through 321.518,
32 and this section. The department may adopt rules pursuant to
33 chapter 17A to administer sections 321.514 through 321.518,
34 and this section. System-equipped vehicles shall otherwise be
35 considered motor vehicles subject to registration under this

1 chapter.

2 2. A political subdivision of the state shall not impose
3 requirements, including but not limited to performance
4 standards, specific to the operation of system-equipped
5 vehicles, automated driving systems, or on-demand
6 driverless-capable vehicle networks that are in addition to
7 the requirements set forth under sections 321.514 through
8 321.518. A political subdivision of the state shall not
9 impose a tax on system-equipped vehicles, automated driving
10 systems, or on-demand driverless-capable vehicle networks
11 where such tax relates specifically to the operation of
12 system-equipped vehicles, automated driving systems, or
13 on-demand driverless-capable vehicle networks.

14 EXPLANATION

15 The inclusion of this explanation does not constitute agreement with
16 the explanation's substance by the members of the general assembly.

17 This bill relates to automated driving systems (ADS).
18 OPERATION. The bill authorizes a driverless-capable vehicle
19 to operate on the public highways without a conventional
20 human driver physically present in the vehicle if the vehicle
21 meets certain conditions. First, the vehicle must be capable
22 of achieving a minimal risk condition if a malfunction of
23 the ADS occurs that renders the ADS unable to perform any
24 dynamic driving task within the ADS's intended operational
25 design domain, if any. Second, while in driverless operation,
26 the vehicle must be capable of operating in compliance with
27 the applicable traffic and motor vehicle safety laws and
28 regulations of this state that govern the performance of
29 dynamic driving tasks, unless an exemption has been granted to
30 the vehicle by the department of transportation (DOT). Third,
31 the vehicle must be certified by the vehicle's manufacturer
32 to be in compliance with all applicable federal motor vehicle
33 safety standards, except to the extent an exemption has been
34 granted for the vehicle under applicable federal law or by the
35 national highway traffic safety administration.

1 The bill provides that the operation of a system-equipped
2 vehicle capable of performing all dynamic driving tasks within
3 the ADS's operational design domain on the public highways
4 while a conventional human driver is present in the vehicle
5 shall be lawful. Such operation is subject to the provisions
6 of Code chapter 321, including the requirement that the
7 conventional human driver possess a valid driver's license.
8 The conventional human driver must operate the system-equipped
9 vehicle according to the manufacturer's requirements and
10 specifications, and must regain manual control of the vehicle
11 when prompted by the ADS.

12 The bill provides that the motor vehicle laws of this state
13 shall not be construed to require a conventional human driver
14 to operate a driverless-capable vehicle that is being operated
15 by an ADS. The ADS, while engaged, is deemed to fulfill
16 any physical acts required of a conventional human driver to
17 perform dynamic driving tasks.

18 INSURANCE. The bill requires, before a system-equipped
19 vehicle is allowed to operate on the public highways, that
20 the owner submit to the DOT proof of financial liability
21 coverage for the vehicle in a manner and form determined
22 by the DOT. Under Code chapter 321, "financial liability
23 coverage" means an owner's policy of liability insurance in
24 the amounts specified in Code section 321A.21, a bond filed
25 with the DOT, a certificate of deposit filed with the DOT, or
26 a valid certificate of self-insurance issued by the DOT. The
27 bill prohibits a system-equipped vehicle from operating on the
28 highways unless financial liability coverage is in effect for
29 the vehicle and unless proof of financial liability coverage is
30 carried in the vehicle. If a system-equipped vehicle operates
31 on a highway in violation of the bill, the owner of the vehicle
32 may be charged and convicted of a violation of Code section
33 321.20B as though the owner was operating the vehicle.

34 ACCIDENTS. In the event of an accident in which a
35 system-equipped vehicle is involved, the bill requires

1 the vehicle to remain at the scene of the accident and the
2 operation of the vehicle to otherwise comply with Code sections
3 321.261 through 321.273 where applicable and to the extent
4 possible, and the vehicle's owner or a person on behalf
5 of the vehicle's owner to promptly report the accident to
6 law enforcement authorities. The bill provides that if a
7 system-equipped vehicle fails to remain at the scene of an
8 accident or the operation of the vehicle fails to otherwise
9 comply with Code sections 321.261 through 321.273 where
10 applicable and to the extent possible as required by the
11 bill, the vehicle's failure shall be imputed to the vehicle's
12 owner, and the vehicle's owner may be charged and convicted
13 of a violation of Code sections 321.261 through 321.273, as
14 applicable.

15 NETWORKS. The bill authorizes a person to operate
16 an on-demand driverless-capable vehicle network. An
17 on-demand driverless-capable vehicle network may be used to
18 facilitate the transportation of persons or goods, including
19 transportation for hire and public transportation. An
20 on-demand driverless-capable vehicle network may connect
21 passengers to driverless-capable vehicles either exclusively or
22 as part of a digital network that also connects passengers to
23 conventional human drivers who provide transportation services
24 in vehicles that are not driverless-capable vehicles.

25 AUTHORITY. The bill specifies that the operation and
26 use of ADS and system-equipped vehicles shall be governed
27 exclusively by the bill and regulated exclusively by the
28 DOT. System-equipped vehicles are otherwise considered motor
29 vehicles subject to registration under Code chapter 321.

30 The bill prohibits a political subdivision of the state
31 from imposing requirements, including but not limited
32 to performance standards, specific to the operation of
33 system-equipped vehicles, ADSs, or on-demand driverless-capable
34 vehicle networks that are in addition to the requirements
35 set forth under the bill. The bill also prohibits a

1 political subdivision of the state from imposing a tax on
2 system-equipped vehicles, ADSs, or on-demand driverless-capable
3 vehicle networks where such tax relates specifically to the
4 operation of system-equipped vehicles, ADSs, or on-demand
5 driverless-capable vehicle networks.

6 PENALTIES. Under Code section 321.482, it is a simple
7 misdemeanor for a person to do an act forbidden or to fail
8 to perform an act required by Code chapter 321, unless a
9 penalty is otherwise specified by law. A simple misdemeanor is
10 punishable by confinement for no more than 30 days or a fine of
11 at least \$65 but not more than \$625 or by both.