D R A F T

FOR DISCUSSION ONLY

HIGHLY AUTOMATED VEHICLES ACT

NATIONAL CONFERENCE OF COMMISSIONERS

ON UNIFORM STATE LAWS

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November 15, 2017

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REPORTER'S INTRODUCTORY NOTE

The draft language that follows is intended as a concrete point of reference for the drafting committee's discussion. As an initial draft that is expected to evolve considerably, this text includes only legislative language plus explanatory footnotes for the benefit of the committee. Later versions can incorporate legislative and drafting notes as needed.

In short, this draft:

1) Applies to both automated operation and some forms of remote operation.
2) Addresses both dedicated automated vehicles and mixed automated-conventional vehicles.
3) Contemplates both closed systems in vertically integrated business models and open systems in complex multiplayer business models.
4) Adapts some definitions from SAE J3016.
5) Expressly authorizes automated driving.
6) Establishes an interstate database for automated driving systems.
7) Requires self-identification of an automated driving provider as a condition of vehicle registration.
8) Requires the automated driving provider to make certain safety-relevant representations.
9) Requires the automated driving provider to maintain additional insurance that covers vehicle-related injuries without regard to fault.
10) Requires the automated driving provider to maintain a bond or deposit to compensates the owner of an automated vehicle if that vehicle is deemed unsafe.
11) Requires the automated driving provider to take reasonable steps to ensure reasonable (rather than absolute) compliance with traffic laws.
12) Holds the automated driving provider liable under the vehicle code for noncompliance.
13) Exempts automated vehicles from existing rules that concern only conventional human driving.
14) Specifies when a user of an automated vehicle is and is not a legal driver and operator.
15) Requires remote drivers to be licensed.
16) Specifically prohibits intentionally or recklessly dangerous tampering with an automated vehicle.

HIGHLY AUTOMATED VEHICLES ACT
PREFATORY NOTE

4 **Introduction**
5 Like the automated driving bills already enacted in various states, a uniform state law on
6 automated driving would *explicitly* accommodate and *specifically* regulate automated driving.[1]
7 These twin modifiers—explicitly and specifically—recognize that this committee's drafting
8 occurs against the backdrop of existing law.[2] Although this existing law may already be
9 consistent at least with some forms of automated driving, the uniform law would make this legal
10 status explicit. And although this existing law already addresses aspects of automated driving
11 through rules of general application, the uniform law would provide rules that are specific to
12 automated driving. Per the drafting committee's consensus decision at its first meeting, this
13 uniform law would apply principally to deployment rather than to research-and-development
14 testing.
15
16 A key challenge for the drafting process is the diversity of automated driving.[3] This term
17 properly encompasses a wide and still expanding range of technologies, applications of those
18 technologies, and business models for those technologies. A vehicle may or may not have
19 conventional input mechanisms for accelerating, decelerating, and steering; those mechanisms
20 may or may not be used during part or all of a trip; a human user may or may not be seated
21 behind those mechanisms; another human situated close to or far from the vehicle may or may
22 not provide another form of real-time input. It is at least conceivable that vehicles manufactured
23 without automated driving systems may later be retrofitted with those systems, and it is probable
24 that automated driving systems installed on vehicles may eventually be disabled by developers
25 no longer willing to support those systems.
26
27 This diversity may also extend to the actors with some relationship to the development or
28 deployment of these systems. In a tightly closed model, one company may perform or at least
29 direct the development and manufacture of both the vehicle and its automated driving systems,
30 maintain the vehicle and those systems, generate the maps and other data used by those systems,
31 and engage the end users of that vehicle. In a more open model, each of these functions may be
32 performed by one or more entities that might not even have a legal relationship with each other.
33 Accordingly, the manufacturer, owner, user, or insurer of a vehicle may or may not have a
34 sophisticated understanding of the vehicle's current automated driving systems.
35
36 The state role in regulating these vehicles and their systems is limited by federal law. The federal

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[1] Although comprehensive automated driving policy is much broader than mere accommodation and regulation within a vehicle code, see How Governments Can Promote Automated Driving, at its first meeting the committee sensibly indicated by consensus that a uniform law focused on these two aspects would be the most prudent approach.

[2] At its first meeting, the Committee indicated by consensus that the uniform law should map existing law onto automated driving rather than (1) wholly redraft existing law for both automated and conventional driving or (2) develop an independent legal framework for automated driving to wholly display existing law.

[3] For an extended discussion of this diversity, see How Governments Can Promote Automated Driving at newlypossible.org.

1 motor vehicle safety standards (FMVSSs)[4] promulgated by the US Department of Transportation
2 (USDOT)'s National Highway Traffic Safety Administration (NHTSA)[5] preempt inconsistent
3 state law, including in some cases tort and product liability law.[6] At this point NHTSA has not
4 yet proposed, much less concluded, any rule specific to automated driving.[7] However, a bill
5 passed by the US House[8] and a companion likely to pass the Senate[9] would each preemptively
6 preempt the specific state regulation of the automated driving systems themselves.[10] Although
7 the relevant preemption provisions are ambiguous and may continue to evolve, they are likely to
8 bar states from imposing technical design and performance requirements in the context of
9 automated driving that are not comparable to requirements lawfully imposed in the context of
10 conventional driving.[11]
11
12 Many states have already enacted statutes specific to automated driving; these statutes represent
13 only a small fraction of the automated driving bills introduced in statehouses.[12] (In addition,
14 governors in a few states have issued executive orders encouraging automated driving
15 activities.)[13] Some of these bills were introduced at the behest of specific automated driving
16 system developers; more were substantially altered or defeated through lobbying by some of
17 these same developers or by the automotive industry generally.
18
19 These laws vary widely in scope, structure, and strategy.[14] Some principally address the research
20 and development testing of automated driving systems;[15] others also envision commercial
21 deployment.[16] Some envision a robust role for state agencies,[17] some distinguish among different

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[4] On the relationship between the FMVSS and automated driving, see
https://ntl.bts.gov/lib/57000/57000/57076/Review_FMVSS_AV_Scan.pdf and
https://cyberlaw.stanford.edu/blog/2017/10/congress%E2%80%99s-automated-driving-bills-are-both-more-and-
less-they-seem.
[5] NHTSA is just one part of USDOT. The National Transportation Safety Board (NTSB) is different than NHTSA
and independent of USDOT.
[6] Compare Geier v. American Honda Motor Co., 529 US 861 (2000) with Williamson v. Mazda Motor of America,
Inc., 562 U.S. 323 (2011).
[7] Congress and NHTSA have recently signaled interest in such a rulemaking.
[8] H.B. 3388 (2017).
[9] S.B. 1885 (2017).
[10] Under existing federal law, a FMVSS can preempt state statutory law -- and even state common law. However,
NHTSA has neither enacted nor even proposed such a standard for automated driving systems. For that reason, the
preemption in the federal bills is truly preemptive.
[11] For my analysis of the Senate bill's preemption language, see
https://cyberlaw.stanford.edu/blog/2017/10/senate%E2%80%99s-automated-driving-bill-could-squash-state-
authority. My sense is that the language may not capture the intent. Furthermore, reasonable arguments have also
been offered for why the House bill could actually have a greater preemptive effect.
[12] See http://cyberlaw.stanford.edu/wiki/index.php/Automated_Driving:_Legislative_and_Regulatory_Action;
http://www.ncsl.org/research/transportation/autonomous-vehicles-self-driving-vehicles-enacted-legislation.aspx; and
the *Attached Survey of Proposed State Legislation*, ULC; 2017-10-17; Survey Table.docx [hereinafter *Survey*].
[13] *See* Ariz. Exec. Order 2015-09 (Aug. 25, 2015); *Survey*, pp. 8-9; Del. Exec. Order 14 (Sept. 5, 2017); *Survey*, pp.
33-35; Mass. Exec. Order 572 (Oct. 20, 2016); *Survey*, pp. 72-73.
[14] *See generally*, *Survey*.
[15] *See* S.B. 379, Reg. Sess. (Ala. 2017) (failed); *Survey*, pp. 1-8.
[16] *See* Ark. Code Ann. § 27-51-305 (West 2017); *Survey*, pp. 11-12 (enacted legislation permitting a closer
following distance for trucks, presumably commercial trucks, engaged in "truck platooning")
[17] For example, while Nevada (the first state to enact such a law) and California (the largest) expressly directed their
state departments of motor vehicles to implement their laws through rulemaking, other states have declined to do so,

1 types of automated driving system developers,[18] some preclude local regulation,[19] and some
2 immunize automakers from liability for harms connected with third-party modifications.[20] More
3 differences are discussed below. This variation can be explained in part by the year of enactment,
4 the involvement of certain automated driving system developers, and the regulatory philosophy
5 prevalent in the state.[21] But this variation also reflects the significant uncertainty surrounding the
6 technologies, applications, and business models that will eventually constitute automated
7 driving.
8
9 Some states have also declined to enact legislation specific to automated driving. Arizona, for
10 example, was the first state in which an automated driving bill failed,[22] still has only an executive
11 order on automated driving,[23] and is nonetheless host to particularly advanced automated driving
12 activities.
13
14 With this background, I turn to some key issues in drafting a uniform law.
15
16 **Basic definitions**
17 Developers, legislators, and regulators have increasingly relied on the terms and language of
18 SAE International's "Taxonomy and Definitions for Terms Related to Driving Automation
19 Systems for On-Road Motor Vehicles," which is more commonly known simply as SAE
20 J3016.[24] This document is freely available—upon registration—at SAE International's website.[25]
21 Many (though not all) automated driving system developers have embraced these definitions.
22 NHTSA's Automated Vehicles Policy (both the 2016 and 2017 vintages), the bills before
23 Congress,[26] and many recent state laws expressly reference this 2016 document or incorporate
24 key language from it. [27] And the International Organization for Standardization (ISO) is currently
25 collaborating with SAE International on an update.[28]

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generally at the urging of automated driving system developers.

[18] *See* S.B. 218, Reg. Sess. (Ga. 2017); *Survey*, pp. 40-49 (pending) (indicating that a manufacturer of a vehicle that includes an ADS may be considered separate from a developer of ADS technology, for liability purposes).

[19] *See* 625 ILCS 51/11-208(e-5) (West 2017); *Survey*, pp. 57-58; H.B. 511, Reg. Sess. (La. 2017) (pending); *Survey*, pp. 63-64; S.B. 981, Reg. Sess. (Or. 2017) (pending); *Survey*, p. 139.

[20] *See* Nev. Rev. Stat. Ann. § 482A (West 2017); *Survey*, pp. 102-03; H.B. 314, Reg. Sess. (N.H. 2017) (pending); *Survey*, pp.109; H.B. 2910, Reg. Sess. (W. Va. 2017) (failed); *Survey*, pp. 190-91.

[21] Virginia's Transportation Secretary, Aubrey Layne, has explained Virginia's strategy to make Virginia "the capital of automated vehicles": "[Virginia has] no rules that prohibit autonomous vehicles, no law. A lot of states do. That's intentional that we're doing that." *See* Michael Laris, *This State Wants to Usurp California as the Capital of Driverless Cars*, WASHINGTON POST (Apr. 24, 2017), 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?utm_term=.a1043e9748fe.

[22] *See* H.B. 2679, Reg. Sess. (Ariz. 2012).

[23] Ariz. Exec. Order No. 2015-09 (Aug. 25, 2015), https://azgovernor.gov/executive-orders; *Survey*, pp. 8-11.

[24] *See generally*, Colo. Rev. Stat. Ann. § 42-1-102(7.7) (West 2017) (adopting expressly the SAE International's standard J3016, as it existed in September 2016); *Survey*, pp. 19-20; S.B. 260, Reg. Sess. (Conn. 2017) (enacted); *Survey*, pp. 24-26; Nev. Rev. Stat. Ann. § 482A (West 2017); *Survey*, pp. 101-02.

[25] *See* SAE International, *Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles* (Sept. 30, 2016), http://standards.sae.org/j3016_201609/.

[26] For example, the Senate bill provides that "The term ''dynamic driving task'' has the meaning given the term by SAE International standard J3016, published on 8 September 30, 2016."

[27] Not to be confused with the 2014 version. *See supra* n. 24.

[28] Clare Naden, *ISO and SAE International Announce Agreement to Develop Technical Standards for Road Vehicles and Intelligent Vehicle Systems*, ISO (Nov. 2, 2016), https://www.iso.org/news/2016/11/Ref2137.html.

1   This consensus, however, has not resulted in complete uniformity. Many state laws use terms
2   like "autonomous" or "driverless"[29] that J3016 expressly deprecates, and some continue to rely
3   on a definition of the systems at issue that originally appeared in Nevada's 2012 regulations.
4   Even NHTSA, which explicitly endorses J3016, understandably refers to "automated vehicles"
5   despite J3016's rejection of that very term.
6
7   J3016 can be viewed as a credible foundation for the definitions in a uniform act. Much of its
8   precise language will be helpful. Some of that language may need modification for legal clarity[30]
9   or to satisfy drafting conventions. Substantive deviation may also be appropriate or even
10 necessary.[31] And a uniform law will likely need to define additional terms outside J3016's
11 coverage. This qualified use of J3016 would be consistent with the federal bills and most of the
12 recent state bills. However, the committee may wish to avoid referencing J3016 in favor of
13 adopting or adapting language from that document.
14
15 **Clarification of vehicle law for automated driving**
16 State vehicle codes frequently specify rules of the road with reference to drivers, operators,
17 driving, or operating.[32] For example, a code might provide that "[a] person shall not drive a
18 vehicle on a highway at a speed greater than is reasonable and prudent under the conditions"[33] or
19 that "[d]rivers of vehicles proceeding in opposite directions shall pass each other to the right."[34]
20
21 These provisions involve an end (generally the state of the vehicle as a physical object in the
22 driving environment), a means (generally the performance of the human driver as the physical
23 operator of the vehicle), and a legal subject (generally the human driver). Vehicles should be
24 visible, their speeds should be reasonable, and their major crashes should be reported. Drivers
25 should therefore turn on lights, adjust the speed of travel, and notify the police following an
26 injury crash—and are also liable if they unreasonably fail to do so. Because human drivers are
27 legal subjects, the ends and means generally converge on them.
28
29 In the context of automated driving, however, these distinctions take on greater importance. The
30 ends may be largely unchanged, although the characteristics of automated driving may justify
31 some adjustments.[35] The automated driving system rather than the human driver may be the
32 means to at least some of those ends. But unlike a human driver (or even a vehicle owner, a

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[29] Mich. Code Laws Ann. § 257.665(6) (West 2017); *Survey*, p. 94.

[30] For example, when read in isolation, references to system "capability" fit uncomfortably with advanced systems that are being tested or demonstrated under close human supervision as well as with systems that fail to perform as intended. The equivalent Nevada-inspired definition has a similar quirk. See http://cyberlaw.stanford.edu/blog/2016/12/uber-vs-law.

[31] For example, it may be appropriate to treat remote driving as part of automated driving even though J3016 distinguishes between the two.

[32] These terms are used inconsistently across and even within states. *See* Bryant Walker Smith, *Automated Vehicles Are Probably Legal in the United States*, 1 TEX. A&M L. REV. 411 (2014).

[33] S.C. Code Ann. § 56-5-1520 (West 2017).

[34] S.C. Code Ann. § 56-5-1830 (West 2017).

[35] A primary example is platooning, where coordination between vehicles may facilitate following distances closer than those currently allowed under some vehicle codes. *See* Bryant Walker Smith, *Automated Vehicles Are Probably Legal in the United States*, 1 TEX. A&M L. REV. 411 (2014); *see also*, Ark. Code Ann. § 27-51-305 (West 2017); Pa. Stat. Ann. § 3601, *et seq.* (West 2017).

1 vehicle manufacturer, or an automated driving system developer), an automated driving system
2 is not a legal subject upon which legal obligations and liabilities can be imposed.[36]
3
4 Consider the basic speed law referenced above. Although the end is unchanged ("travel at a
5 speed [no] greater than is reasonable and prudent under the conditions"), the automated driving
6 system now provides the means (setting the speed of travel). However, if that speed is exceeded,
7 the automated driving system could not be sanctioned, because it does not exist in law.
8
9 This complexity has challenged many of the states that have enacted automated driving laws.
10 These states have generally attempted to categorically define the "driver" or "operator" of an
11 automated vehicle.[37] In the early automated driving laws, that driver was generally defined as the
12 "person" who "initiated" automated mode.[38] These persons are legal subjects, but their identity
13 may be unclear.[39] Furthermore, they may not be in a position achieve the desired end.[40]
14
15 An automated driving law could instead deem a legal person such as the vehicle manufacturer to
16 be the driver.[41] This approach, however, may complicate various legal provisions that assume the
17 driver takes a human form. And this approach is further challenged by the potential diversity of
18 automated driving (as described above). An automated driving system may have been
19 manufactured, installed, maintained, or modified by multiple distinct companies—and may have
20 been installed or modified after the vehicle's manufacture.
21
22 The uniform law might adopt a four-pronged approach to addressing this potential complexity.
23 First, the uniform law could revise common existing provisions that are inapposite to automated
24 driving.[42] Second, that law could clarify that, unless otherwise provided, performative references
25 to drivers and operators should be read as referring to the automated driving system.[43] Third, that

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[36] Tennessee provides the exception that proves the rule. That state's automated driving law provides that
"'[p]erson' means a natural person, firm, co-partnership, association, corporation, or an engaged ADS," where ADS
stands for automated driving system. Tenn. Code Ann. § 55-8-101(46) (West 2017); *Survey*, p. 169. However, that
law does not impose obligations or liabilities on this "person." *See id.*

[37] *See* Tenn. Code Ann. § 55-8-101(17) (West 2017) (defining "driver"); *Survey*, p. 169; S.B. 139, Reg. Sess. (S.D.
2014) (dead) (defining "operator"); *Survey*, p. 166; Tex. Stat. Ann. § 545.451(4) (defining "human operator");
Survey, p. 179.

[38] California has a two-step definition: The person in the driver's seat is the driver, but if there is no person in the
driver's seat, the person who initiated automated mode is the driver. Cal. Veh. Code § 38750(a)(4) (West 2017);
Survey, p. 13.

[39] Who, for example, initiated the automated mode on a vehicle that operates exclusively in automated mode?

[40] As a result, they may also lack the actus reus or mens rea to be criminally or even civilly liable if the ends are not
achieved. However, on this note, consider N.C. Gen. Stat. Ann. § 20-401(c), (c1), and (d) (West 2017), which
provide, respectively, that a parent or legal guardian is responsible for a violation of the statute prohibiting minors in
the open bed of a pickup, or child restraint laws, even where the parent is presumably absent from the automated
vehicle; a parent or legal guardian is criminally liable for knowingly permitting a person less than twelve years old
to occupy a fully autonomous vehicle without adult supervision; and that a registered owner is responsible for
moving violations of a fully autonomous vehicle. *See Survey*, p. 126.

[41] *See* N.C. Gen. Stat. Ann. § 20-401 (c), (c1), (d); *Survey*, p. 126.

[42] State bills that exempt platoons from following distance requirements exemplify this kind of revision. *See* Ark.
Code Ann. § 27-51-305; *Survey*, p. 11; Pa. Stat. Ann. § 3601, *et seq.*; *Survey*, 140-158.

[43] Current language in the Senate's automated driving bill could be interpreted to preclude any regulation of the
"design, construction, or performance" of automated driving systems—but this does not seem to be the intent of the
drafters. A handful of states have proposed legislation that expressly limits governance of automated vehicle

1 law could impose the legal obligation of that performance on some legal person connected in
2 some way to the automated driving system.[44] Finally, that law could specify the legal
3 obligations, if any, of the user of the automated driving system.[45]
4
5 Whereas the first two prongs are largely clerical, the second two prongs are mostly substantive.
6 Of these, the third prong—imposing the legal obligation of performance—may be the most
7 challenging. The next section considers it further.
8
9 **Application of vehicle law to a legal subject**
10 Absent a conventional human driver, to whom should most of the existing vehicle law apply? Or,
11 in concrete terms, who should get the speeding ticket? There are many potential answers,
12 including the user, owner, insurer, vehicle manufacturer, automated driving system developer—
13 or no one at all.
14
15 The last answer is in some ways the simplest. State law could establish rules for automated
16 driving without specifically penalizing any legal person for a failure to comply. Instead,
17 noncompliance would merely provide evidence that vehicles equipped with a particular
18 automated driving system are not reasonably safe. That safety deficiency could then be the basis
19 for deregistration at the state level or recall at the federal level.[46] Indeed, NHTSA expects (and
20 Congress is likely to agree) that automated driving systems should comply with state traffic
21 laws,[47] and although the agency may not (or may not be permitted) to act proactively,[48] it could
22 still investigate and pursue a recall when an automated driving system fails to comply with state
23 rules of the road.
24
25 Otherwise, the uniform law could place an obligation of compliance with vehicle laws on:
26
27 *The user of an automated driving system*.[49] This would preserve the state's existing set of
28 enforcement mechanisms—but would present at least two challenges. First, the user (or users) of
29 an automated driving system would be difficult to define: A vehicle may have many passengers
30 or no passengers at all, those passengers may be different than the person who dispatched that
31 vehicle, and even that dispatch may have been automated. Second, these users may not be
32 culpable for an automated driving system's noncompliance with traffic law, which could make
33 liability for this noncompliance conceptually undesirable if not legally untenable.

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operation to the code at issue, but none have limited proposed performance standards *only to* automated vehicles.
See H.B. 511, Reg. Sess. (La. 2017); *Survey*, p. 63; Tex. Stat. Ann. § 545.452 (West 2017); *Survey*, p. 181;
O.C.G.A. § 40-8-11 (West 2017); *Survey*, p. 45.

[44] *See* N.C. Gen. Stat. Ann. § 20-401(c), (c1), (d); *Survey*, p. 126.

[45] For example, North Carolina's legislation's addressing the obligation of adult users with respect to crashes or to child occupants. *See id.* The draft language introduced below places these obligations on the automated driving provider rather than the user.

[46] *See* Cal. Veh. Code § 38750(i)(1) (West 2017); *Survey*, p. 17 (providing that the California Department of Motor Vehicles shall revoke registration of any autonomous vehicle being operated in violation of the code).

[47] See NHTSA's 2016 and 2017 Automated Vehicles Policy and the current Senate bill.

[48] Under its 2017 Automated Vehicles Policy and current versions of the federal bills, NHTSA could not act on the basis of safety evaluations submitted by automated driving system developers.

[49] *See* Col. Rev. Stat. Ann. § 42-4-242(5) (West 2017); *Survey*, p. 20; L. 627, Reg. Sess. (Neb. 627) (pending); *Survey*, pp. 98-99.

The owner of the vehicle.[50] This would present similar challenges. The owner could be human or corporate, real or beneficial, and sophisticated or simple. The owner may maintain the vehicle, customize the automated driving system, and verify its operational readiness—or the owner may rely on the vehicle manufacturer, automated driving system developer, or the system itself to perform these functions. Some states do attribute certain driving infractions to a vehicle's owner even if that owner is not driving, but this attribution is a presumption of control with less relevance to automated driving.

The insurer of the vehicle. Automotive insurers are closely regulated, have access to driving data, and can influence both their customers and the manufacturers of their customers' vehicles. Although many vehicles are not covered by third-party liability policies,[51] the vehicle owner might be an appropriate substitute. Nonetheless, the attenuation between an insurer and vehicle performance would make this a peculiar linkage.

The manufacturer of the vehicle. Obligating the manufacturer would make sense for some business cases but would quickly collapse for others. The so-called SAVE Acts that have been enacted in some states and introduced in others generally take this approach,[52] but they also (at least as originally drafted) envision the participation of a vehicle manufacturer in the deployment of its vehicles. And other models are also conceivable:[53] An automated driving system developer may retrofit a vehicle without the involvement of that vehicle's manufacturer,[54] or a later developer may modify the automated driving system already installed on a vehicle.[55] Under these models, obligating the original manufacturer would not be sensible, while identifying the subsequent modifier would be difficult.[56]

The developer of the automated driving system. Identification would be a challenge here as well. Multiple entities—and even individuals—might be involved in the development, installation, maintenance, and operation of an automated driving system. Imposing obligations on an automated driving system developer would therefore require a clear mechanism for identifying that developer.

I recommend defining a new entity—the automated driving provider—on which compliance obligations can be placed.[57] As discussed below, this entity would need to warrant that the automated operation of a vehicle with an automated driving system is reasonably safe before the vehicle owner would be able to register that vehicle. Because the automated driving provider

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[50] *See* N.C. Gen. Stat. Ann. § 20-401(c), (c1), (d); *Survey*, p. 126.

[51] This is because of self-insurance, the exceptions of two states, and noncompliance in every state.

[52] *See, e.g.*, S.B. 1432, Reg. Sess. (Ill. 2017) (pending); *Survey*, pp. 51-58; S.B. 902, Reg. Sess. (Md. 2017) (dead); *Survey*, pp. 64-72; Mich. Code Laws Ann. § 257, *et seq*. (West 2017); *Survey*, pp. 85-96.

[53] Indeed, several state automated driving laws include immunity provisions that contemplate these alternative models.

[54] *See* H.B. 314, Reg. Sess. (N.H. 2017) (pending); *Survey*, p. 109 (providing that a manufacturer may be held liable for defects arising in retrofitted ADSs, if the manufacturer "participated in or facilitated the adaptation of the vehicle to autonomous technology. . . ."); A. 1037, Reg. Sess., (N.Y. 2017) (pending); *Survey*, pp. 121-22 (same).

[55] *See* S.B. 981, Reg. Sess. (Or. 2017) (pending); *Survey*, p. 136 ("Unless a manufacturer consents, the manufacturer is immune from any liability for damages or equitable relief arising out of any modification made by another person to . . . an automated motor vehicle.").

[56] *See supra*, notes 54, 55.

[57] *See* accompanying proposed legislation.

1   would self-identify as a condition of this registration, the provider could be any of the actors
2   considered above—but only if this actor is prepared to make certain promises and to incur
3   certain obligations, including ensuring the vehicle's compliance with vehicle laws.
4

5   **State role in safety supervision**
6   State vehicle codes already provide tools for regulating roadway safety.[58] These tools often
7   include the vehicle registration (and deregistration) process, vehicle inspections, minimum
8   insurance requirements, crash reporting requirements, and prohibitions against operating
9   dangerous vehicles or otherwise driving dangerously.[59] Unless Congress preempts states from
10 part or all of this traditional role, these tools will still be available for automated driving.[60] In
11 contrast, the traditional state function of driver licensing is much less relevant to automated
12 driving, particularly in the case of vehicles that are not designed for conventional human drivers.
13 Indeed, federal law may even prohibit states from refusing to license people who are unable to
14 operate conventional vehicles.[61]
15

16 Against this backdrop, some states have sought additional safety assurances for automated
17 driving systems.[62] While most of these requirements originated in the special regimes envisioned
18 for research-and-development testing,[63] some have carried over to general deployment, and they
19 often amount, in intent or effect, to modest barriers to entry. For example, as noted previously,
20 some of the so-called SAVE Acts would condition their express authorizations on the
21 participation of an established automaker.[64] And several laws impose higher insurance
22 requirements for automated driving than for noncommercial conventional driving.[65] California,
23 which has a regulatory regime for automated driving that is far more detailed than any other
24 state, requires developers to obtain a permit prior to commercially deploying their automated
25 driving systems.[66]
26

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[58] *See* Bryant Walker Smith, *How Governments Can Promote Automated Driving*, 47 N.M.L. REV. 99 (Winter 2017), available at http://digitalrepository.unm.edu/cgi/viewcontent.cgi?article=1411&context=nmlr.

[59] *See id.*

[60] As discussed above, clarification may be appropriate for rules of the road that are currently directed toward drivers or a comparable legal subject. It appears that for the time being, the U.S. DOT does not intend to expand the scope of its governance beyond that which it has been traditionally. *See Automated Driving Systems 2.0: A Vision for Safety*, U.S. DOT (Sept. 12, 2017), https://www.nhtsa.gov/automated-vehicles/vision-safety

[61] This argument would currently rest on the Americans with Disabilities Act or constitutional law—and may soon rest on a more explicit prohibition in federal automated driving legislation.

[62] *See* S.B. 379, Reg. Sess. (Ala. 2017) (failed); *Survey*, pp. 1-8.

[63] *See, generally*, *id*.

[64] *See supra*, note 52. Michigan's current set of automated driving laws also contemplates certain other established companies.

[65] The vast majority require coverage of $5 million or more. *See* Cal. Veh. Code § 38750(b)(3) (West 2017); *Survey*, p. 13; S.B. 260, Reg. Sess. (Conn. 2017) (enacted); *Survey*, p. 26. Although some states also impose crash reporting requirements specific to automated driving, in many cases these requirements merely apply an existing requirement to a legal subject other than a conventional driver. *Compare* Mich. Code Laws Ann. § 665b(1)(b)(ii); *Survey* pp. 95-96 (requiring participants in Michigan's SAVE project to self-certify that its automated vehicles are equipped with automatic crash notification technology), *with* O.C.G.A. § 40-1-216 (West 2017); *Survey*, p. 48 (requiring an operator of an automated vehicle without a human driver to report any type of accident that is reportable under existing code sections 40-6-272, 273).

[66] This permit, which is essentially a driving license for an automated vehicle, is envisioned by the state's statutory law and detailed in its regulatory law. *See* Cal. Veh. Code § 38750(b), (c) (West 2017); *Survey*, pp. 14-16.

1   **Relationship to other laws**
2   Beyond the relationship with the broader vehicle code, some state automated driving laws also
3   address their interaction with federal law, municipal law, and state liability law.[67] Many state
4   laws recognize that the federal government could preempt state requirements; indeed, many of
5   these laws even seem to invite this preemption.[68] Some states in turn preempt the specific
6   regulation of automated driving by their municipalities, although this implicates peculiarities of a
7   state's relationship to its internal entities.[69] And some state laws declare that an automaker is
8   immune from liability for damages that "arise out of" unauthorized modifications to its vehicle;[70]
9   however, the drafting committee decided by consensus to exclude this issue from its scope.

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[67] *See* Cal. Veh. Code § 38750(g) (West 2017); *Survey*, p. 19 (bowing to federal regulations promulgated by NHTSA); Col. Rev. Stat. Ann. § 42-4-110, 242 (West 2017); *Survey*, p. 24 (respectively, exerting supremacy over state and municipal agencies, but submitting to federal supremacy); S.B. 218, reg. sess. (Ga. 2017) (pending); *Survey*, p. 48 (same).

[68] *See id.*

[69] *See id.*

[70] These declarations are either modest restatements of existing law or dramatic grants of immunity for many kinds of foreseeable harms, including cyberattacks. *See supra* notes 54, 55.

HIGHLY AUTOMATED VEHICLES ACT

2   **SECTION 1. SHORT TITLE.** This [act] may be cited as the Highly Automated

3   Vehicles Act.[71]

4   **SECTION 2. DEFINITIONS.** In this [act]:

5   (1) "Associated automated vehicle" means an automated vehicle associated with an

6   automated driving provider through the registration of that vehicle.

7   (2) "Automated driving provider" means the person that expressly warrants the

8   automated operation of an associated automated vehicle to be reasonably safe.

9   (3) "Automated driving system" means the combination of hardware and software

10   represented as capable of performing the entire dynamic driving task on a sustained basis.[72]

11   (4) "Automated operation" means the performance of the complete dynamic driving task

12   by an automated driving system, a remote driver, or a combination of automated driving system

13   and remote driver.[73] Automated operation begins upon this performance and continues until a

14   human driver or operator intentionally terminates this performance for a reason other than a

15   reasonable perception of imminent harm.[74]

16   (5) "Automated operation insurance" means an insurance policy that covers damages to

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[71] Particularly in light of potential federal language on preemption, the term "driving" may be more appropriate than the term "vehicle."

[72] The automated driving provider would make this representation. SAE J3016 defines this term as "[t]he hardware and software that are *collectively capable* of performing the entire DDT on a sustained basis, regardless of whether it is limited to a specific operational design domain (ODD); this term is used specifically to describe a level 3, 4, or 5 driving automation system" (emphasis added). Recent state and federal bills reference or adopt this definition. I have modified this language to clarify that the term covers systems that fail to perform as represented. Although neither definition satisfactorily addresses the opposite situation in which a system capable of performing the entire dynamic driving task on a sustained basis is nonetheless represented to be less capable, such a situation is more likely to arise in testing rather than in deployment. See, e.g., Uber vs. the Law.

[73] Unlike J3016, this definition includes remote driving within automated operation.

[74] This second sentence addresses the conceptually ambiguous transition between automated and convention operation in a vehicle capable of both. It has several important if subtle implications. First, a user of an automated driving system—even the fallback-ready user of a level 3 automated driving system—could not become the driver involuntarily. Second, an individual would generally not become a driver merely by trying to prevent a crash. Third, automated operation continues even if the vehicle is parked or turned off.

1   the person or property of another arising from the automated operation of an automated vehicle

2   without regard to fault.[75]

3   (6) "Automated vehicle" means a motor vehicle with an automated driving system,

4   regardless of whether the vehicle is under automated operation.[76]

5   (7) "Automated vehicle owner" means the owner of the automated vehicle, as the term

6   owner is defined in this Title.[77]

7   (8) "Automation continuation guarantee" means a surety bond or cash deposit that

8   specifically covers diminution in the value of an automated vehicle arising from revocation of

9   the registration for that vehicle.[78]

10   (9) "Dedicated automated vehicle" means an automated vehicle designed for exclusively

11   automated operation while on public [[roadways] or [highways]][79].[80]

12   (10) "Disability" means as provided in the Americans with Disabilities Act, 42 U.S.C. §

13   12102.[81]

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[75] Automated operation insurance is intended to provide modest compensation in the event of an injury related to automated driving. (As provided below, the amount required would be the same as the minimum amount of third-party liability coverage required in the state.) The provision is intended to address gaps in current insurance policies, facilitate limited recovery by injured individuals instead of or in addition to a product liability suit, enlist insurers in supervising the safety of automated driving systems, and help assuage public unease about automated driving. However, the committee might decide to exclude insurance from its scope of work.

[76] NHTSA and Congress use the term "automated vehicle" even though SAE J3016 cautions against its use. (Many state bills also refer to automated vehicles or autonomous vehicles.) This definition clarifies that a motor vehicle with an automated driving system is an automated vehicle regardless of whether the automated driving system is engaged.

[77] This definition accounts for differences in how states define vehicle ownership, particularly in the context of leasing and other financial structures.

[78] This automation continuation guarantee anticipates that some automated driving systems may become obsolete or unsupported, particularly if an automated driving provider becomes insolvent. The guarantee is accordingly intended to reduce the financial costs to vehicle owners as well as the political costs to a department of motor vehicles. As with the automation operation insurance, this guarantee would be a small step into the domain of insurance.

[79] States use a variety of words to refer to roads and other publicly accessible vehicle facilities.

[80] A dedicated automated vehicle is called an "automated driving system dedicated vehicle (ADS-DV)" in J3016 and a "dedicated highly automated vehicle" in the Senate bill.

[81] 42 U.S.C. § 12102 provides that "[t]he term 'disability' means, with respect to an individual—(A) a physical or mental impairment that substantially limits one or more major life activities of such individual; (B) a record of such an impairment; or (C) being regarded as having such an impairment (as described in paragraph (3))…."

1   (11) "Drive" means as provided in the vehicle code, except that an automated driving

2   system exclusively drives a vehicle under automated operation.[82]

3   (12) "Driver" means as provided in the vehicle code, except that an automated driving

4   system is the exclusive driver of a vehicle under automated operation.

5   (13) "Dynamic driving task" means the real-time operational and tactical functions

6   collectively required to operate a vehicle in on-road traffic, including controlling lateral vehicle

7   motion, controlling longitudinal vehicle motion, monitoring the driving environment, executing

8   responses to objects and events, planning vehicle maneuvers, and enhancing vehicle

9   conspicuity.[83]

10   (14) "Operate" means as provided in the vehicle code, except that an automated driving

11   system exclusively operates a vehicle under automated operation.

12   (15) "Operator" means as provided in the vehicle code, except that an automated driving

13   system is the exclusive operator of a vehicle under automated operation.

14   (16) "Participating agency" means the [Department of Motor Vehicles], an administrative

15   agency of another state that shares automated vehicle registration information with this State, or

16   an administrative agency of the United States that shares automated vehicle registration

17   information with this State.[84]

18   (17) "Person" means [[as defined in this Title] or [an individual, estate, business or

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[82] This language is intended to avoid disrupting the various statutory and judicial interpretations of drive, driver, operate, and operator outside of the automated driving context. This drafting effort could not ameliorate the tremendous variation among and even within states on these terms. See Automated Vehicles Are Probably Legal.

[83] This definition is adapted from the much lengthier definition provided in SAE J3016. Alternately, the committee could (1) use J3016's full definition (including additional terms defined therein), (2) adopt the likely federal definition ("[t]he term 'dynamic driving task' has the meaning given the term by SAE International standard J3016, published on 8 September 30, 2016."), or (3) reference this eventual federal definition (in which case the reader would need to first consult the federal law and then consult J3016).

[84] As detailed below, this draft envisions a basic interstate database of automated driving systems to avoid duplicative efforts by automated driving providers, automated vehicle owners, and departments of motor vehicles.

1   nonprofit entity, public corporation, government or governmental subdivision, agency, or

2   instrumentality, or other legal entity.]][85]

3   (18) "Remote driver" means a natural person who performs part of or the complete

4   dynamic driving task while not seated in a position to manually exercise in-vehicle braking,

5   accelerating, steering, and transmission gear selection input devices.[86]

6   **SECTION 3. APPLICATION; GOVERNING LAW.**

7   (a) This [act] applies to ownership, registration, insurance, and operation of an automated

8   vehicle, even if the ownership, registration, and insurance of the automated vehicle was

9   compliant with laws before the date of this [act].

10   (b) The [Department of Motor Vehicles and the Department of Insurance] may make

11   rules, issue interpretations, and take other lawful actions to administer and enforce this [act].[87]

12   **SECTION 4. DRIVING LICENSING.**

13   (a) A person that uses an automated vehicle without driving or operating the vehicle shall

14   not be required to hold a driving license.

15   (b) A remote driver shall hold a driving license that is valid in this State.[88]

16   (c) A remote driver who is employed, contracted, or compensated in that capacity shall

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[85] This standard ULC definition has been modified to reflect that many but not all state vehicle codes already define person.

[86] This definition is adapted from SAE J3016. Remote involvement in driving could take many different forms. For example, a user might be standing next to and supervising a vehicle as the vehicle pulls into a tight parking space, specifying a vehicle's speed on a laptop while seated in the back of that vehicle, manually steering the lead vehicle as the only driver in a truck platoon, or slowly directing a vehicle through a construction zone from a monitoring center located hundreds of miles away—among many other possibilities. This diversity raises difficult issues of both substance and wording, particularly for roles that may not cross into driving. Consider, for example, a passenger who is merely watching the road when this is not technically or legally required or an individual at a monitoring facility who instructs an automated driving system to briefly cross a double yellow line but who does not remotely steer that vehicle.

[87] Although California and Nevada expressly directed their state motor vehicle agencies to develop regulations for automated driving, other states generally did not. This provision would give motor vehicle and insurance agencies explicit authority to implement this law without requiring rulemaking.

[88] Per the discussion above, this requirement may be excessive for some forms of remote driving—if they are even to be considered forms of remote driving.

1 hold a commercial driving license that is valid in this State.[89]

2 (d) A person who would be entitled to a driving license but for a disability shall instead

3 be entitled to a driving license that carries an appropriate restriction.[90]

4 **SECTION 5. VEHICLE REGISTRATION.**

5 (a) An automated vehicle owner may register an automated vehicle in this State

6 regardless of whether the owner is a resident of this State.[91]

7 (b) An automated vehicle owner shall register an automated vehicle in this State if the

8 vehicle travels more than [80] percent of its miles inside this State as measured on a [calendar

9 year] basis.[92]

10 (c) Registration of an automated vehicle may be granted, maintained, and renewed only

11 if, by means of a current electronic record automatically retrievable by any participating agency,

12 an automated driving provider:[93]

13   (1) identifies the vehicle by vehicle identification number;[94]

14   (2) describes the capabilities and limitations of the automated driving system of

15 the vehicle;[95]

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[89] Per the discussion above, this requirement may be particularly excessive for some forms of remote driving—if they are even to be considered forms of remote driving.

[90] Driving automation—as well as related technological advances—may open forms of driving to individuals who are currently unable to drive. This provision is intended to serve these individuals, to comply with federal law, and to account for considerable variation among states in specifying license criteria.

[91] This provision would make the implicit explicit.

[92] This provision is intended to discourage the long-term operation in one state of an automated vehicle registered in another state. Additional language about the burden and method of establishing in-state or out-of-state miles may also be prudent.

[93] As introduced above, an automated vehicle could be registered only if one legal or natural person has self-identified as the automated driving provider and made all of the enumerated representations and warranties. The vehicle owner would apply to register the vehicle. The department of motor vehicles would then use the vehicle identification number (VIN) to check whether the vehicle had been associated with an automated driving provider in an interstate registry. That registry would in turn link to additional vehicle information that would be maintained by the automated driving provider and may even be contained in a database controlled by that provider.

[94] Although a VIN contains a variety of information about a vehicle, the number itself currently provides no information about the vehicle's automation features. However, the VIN could be used as the key to a separate record that does contain this information.

[95] This information would likely be included in the safety assessment letters that the National Highway Traffic

1   (3) provides proof of automated operation insurance for the vehicle;[96]

2   (4) provides proof of any required automation continuation guarantee for the

3 vehicle;[97]

4   (5) represents to each participating agency that the provider believes the

5 automated operation of the vehicle to be reasonably safe;[98]

6   (6) represents to each participating agency that clear and convincing evidence

7 supports this belief;[99]

8   (7) warrants to the public that the automated operation of the vehicle is reasonably

9 safe; and[100]

10   (8) irrevocably appoints each participating agency as a lawful agent upon which

11 process may be served in any action arising from the automated operation of the vehicle.[101]

12 (d) The [Department of Motor Vehicles] may decline, suspend, revoke, or decline to

13 renew the registration of any motor vehicle it determines to be unreasonably dangerous,

14 improperly equipped, insufficiently insured, noncompliant with a vehicle registration

15 requirement, or otherwise unfit to be operated on a highway.[102]

16 (e) Registration of a motor vehicle shall create no presumption as to the safety of that

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Safety Administration has encouraged and the safety evaluation reports that Congress may require.

[96] As specified above, this insurance would be maintained by the automated driving provider rather than by the vehicle owner.

[97] This is explained above.

[98] This is a subjective requirement: The provider would need to declare its confidence in the automated vehicle and the automated driving system.

[99] This is an objective requirement: Although the provider would not need to provide this evidence, it would need to vouch for the existence of that evidence. The committee may wish to consider alternative standards for the persuasiveness of this evidence, including a substantial evidence standard and a compelling evidence standard.

[100] This is a warranty to the public at large and independent of the two prior representations.

[101] This is a basic jurisdictional provision.

[102] Some vehicle codes already make these powers explicit, and some go further by making deregistration mandatory in certain situations. These powers are included here to ensure they are available to the appropriate state agency. They would apply equally for automated vehicles and conventional vehicles—but they may be particularly useful for automated vehicles.

1   vehicle or its equipment.[103]

2   **SECTION 6. EQUIPMENT.**

3   (a) [This Title's equipment provisions] shall be interpreted to facilitate the development

4   and deployment of automated vehicles in a way that improves [[roadway] or [highway]]

5   safety.[104]

6   (b) Any provision of this Title requiring equipment that is necessary only for

7   performance of the dynamic driving task by a human driver shall not apply with respect to a

8   dedicated automated vehicle.[105]

9   (c) An automated vehicle shall be reasonably safe.[106]

10   (d) An automated driving system shall be reasonably safe.[107]

11   **SECTION 7. RULES OF THE ROAD.**

12   (a) [This Title's rules of the road] shall be interpreted to facilitate the development and

13   deployment of automated vehicles in a way that improves [[roadway] or [highway]] safety.[108]

14   (b) Automated operation of an automated vehicle in accordance with this [act] and in a

15   reasonably safe manner is lawful.[109]

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[103] This provision is intended to address potential agency concerns about the legal implications of registration decisions. It would apply equally for automated vehicles and conventional vehicles.

[104] As with the parallel provision for rules of the road (below), this provision recognizes that states may have anomalous equipment provisions that could be interpreted to be inconsistent with automated driving and that there may even be unanticipated issues related to more common provisions. It provides further evidence and direction to courts that any remaining inconsistencies are implicitly addressed by this act.

[105] This provision categorically addresses various and varying state requirements about steering wheels, brake pedals, mirrors, and other accoutrements for conventional drivers. These requirements would continue to apply to automated vehicles that are capable of conventional operation. (The federal motor vehicle safety standards (FMVSS) may already preempt some of these requirements.)

[106] This provision makes the implicit explicit.

[107] This provision makes the implicit explicit.

[108] As with the parallel provision for equipment (above), this provision recognizes that states may have anomalous equipment provisions that could be interpreted to be inconsistent with automated driving and that there may even be unanticipated issues related to more common provisions. It provides further evidence and direction to courts that any remaining inconsistencies are implicitly addressed by this act.

[109] This provision expressly authorizes automated driving.

1 (c) An automated driving provider shall take reasonable steps to ensure reasonable

2 compliance with all provisions of [this Title's rules of the road] by an associated automated

3 vehicle under automated operation.[110]

4 (d) If an automated vehicle under automated operation fails to comply with [this Title's

5 rules of the road], the automated driving provider shall be liable under [this Title] as would a

6 human driver or operator.[111]

7 (e) A motor vehicle shall not be operated on a public highway if it is unreasonably

8 dangerous, improperly equipped, insufficiently insured, noncompliant with a vehicle registration

9 requirement, or otherwise unfit for such operation.[112]

10 (f) An automated vehicle under automated operation shall not be deemed unattended

11 unless it is not lawfully registered in this State or another, poses a risk to public safety, or

12 unreasonably obstructs other road users.[113]

13 (g) An automated vehicle under automated operation shall not be deemed abandoned

14 unless it is not lawfully registered in this State or another, poses a risk to public safety, or

15 unreasonably obstructs other road users.[114]

16 (h) Restrictions [under this Title] on the use of electronic devices by a driver or operator

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[110] This provision would prospectively impose an obligation of compliance with the rules of the road on the automated driving provider—with two important qualifications. First, this provision does not demand perfect compliance; this means, for example, that an automated vehicle might lawfully cross a double yellow line to give more space to a cyclist or to get around a stalled vehicle. Second, the automated driving provider need only take reasonable steps; this recognizes that an automated driving provider may not be able to prove that its automated vehicle will never perform unreasonably. This provision should be read in conjunction with the following provision.
[111] This retrospective provision is intended to treat an automated driving provider like a human driver in the retrospective case of noncompliance. In other words, notwithstanding the qualifications of the prior provision, if a human would be ticketed or charged for a violation, the automated driving provider would be too. However, this reference to a human driver is also intended to reflect that human drivers are not subject to perfect enforcement.
[112] Many vehicle codes already contain these restrictions. They would apply equally for automated vehicles and conventional vehicles—but they may be particularly useful for automated vehicles.
[113] This provision would address existing prohibitions on leaving vehicles unattended.
[114] This provision would address existing prohibitions on abandoning vehicles.

1   shall not apply during the automated operation of an automated vehicle.[115]

2   (i) Requirements [under this Title] that impose a minimum following distance other than

3   a reasonable and prudent distance shall not apply to operation of a non-leading vehicle traveling

4   in a procession of vehicles if the speed of each vehicle is automatically coordinated.[116]

5   (j) A person that in willful or wanton disregard for the safety of persons or property

6   initiates, continues, or impairs the automated operation of an automated vehicle shall be guilty of

7   reckless driving.[117]

8   **SECTION 8. INSURANCE.**

9   (a) An automated driving provider shall maintain automated operation insurance for each

10   associated automated vehicle in an amount not less than the amount of third-party liability

11   insurance specified in the financial responsibility statute of this State.[118]

12   (b) An automated driving provider shall maintain an automation continuation guarantee

13   for each associated automated vehicle in an amount not less than $[10,000], but this requirement

14   shall not apply if the automated driving provider is also the automated vehicle owner.[119]

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[115] This provision would address a wide variety of existing prohibitions and restrictions on the use of electronic devices, including phones and televisions. It has two distinct purposes: To clarify that an occupant of an automated vehicle under automated operation can use these devices (even though, because this occupant would not be the driver, they would not be subject to these restrictions) and to establish that the automated driving system (which would be the driver) can make use of these devices.

[116] Many vehicle codes specify minimum following distances that are inconsistent with vehicle platooning. This provision would exempt these platoons from these requirements. It would apply even to platoons that feature only level 1 or level 2 driving automation.

[117] This provision is intended to bring a wide range of particularly egregious behavior related to automated driving into the existing crime of reckless driving. Relevant behaviors might include maliciously hacking a vehicle, deploying an automated vehicle that is manifestly unsafe, deliberately declining to prevent an obvious crash when it would be easy to do so, and testing or challenging an automated vehicle by, for example, deliberately jumping in front of it. Because of wide variation in the relationship between vehicle codes and criminal codes, adoption of this provision may require particular care.

[118] Automated operation insurance is discussed above. Most states require third-party liability coverage in the low to mid five figures. Although these minimums are appalling low for any driver and any vehicle, they provide a concrete basis for this basic automated operation insurance. Tying the two together could conceivably encourage some states to raise their minimums.

[119] The automation continuation guarantee is discussed above. The $10,000 figure is arbitrary. The concerns motivating this guarantee are not present where the automated driving provider is also the vehicle owner.

1   (c) This [act] does not displace other insurance requirements.[120]

2   **SECTION 9. PENALTIES.** Unless otherwise provided by this [act] or by the laws of

3   this State, a person that fails to comply with a provision of this [act] shall be liable for a civil

4   infraction and fined not more than $[1,000] for each day of each violation.[121]

5   **SECTION 10. UNIFORMITY OF APPLICATION AND CONSTRUCTION.** In

6   applying and construing this uniform act, consideration shall be given to the need to promote

7   uniformity of the law with respect to its subject matter among states that enact it.[122]

8   **[SECTION 11. SEVERABILITY.** If any provision of this [act] or its application to

9   any person or circumstance is held invalid, the invalidity does not affect other provisions or

10   applications of this [act] which can be given effect without the invalid provision or application,

11   and to this end the provisions of this [act] are severable.][123]

12   **SECTION 12. EFFECTIVE DATE.** This [act] takes effect [30] days after its

13   enactment.[124]

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[120] This provision clarifies that existing insurance requirements would be unaffected, including coverage requirements for personal vehicles and for commercial operations. Many commercial operations—including trucking, taxi service, and transportation network companies—may be subject to far higher insurance requirements as well as a variety of additional requirements. At its first meeting, the committee decided by consensus not to address the application of these various regimes to automated driving.

[121] States take a wide variety of approaches to enforcing their vehicle codes, including some of the provisions referenced or expanded by this draft. Accordingly, this provision would merely establish a default rule that a violation of this act would constitute a civil infraction. Tension between California's Department of Motor Vehicles and an automated driving developer in that state highlighted the lack of a standalone penalty provision in that state's automated driving law. See Uber vs. the Law.

[122] This is a standard ULC provision.

[123] This is a standard ULC provision and is to be accompanied by a legislative note.

[124] This is a standard ULC provision.