

Long Comment Regarding a Proposed Exemption Under 17 U.S.C. 1201 (Proposed Class #21)

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Item 1. Commenter Information

This Comment is submitted on behalf of The Alliance of Automobile Manufacturers (“Auto Alliance”), the leading advocacy group for the auto industry. Auto Alliance represents 77% of all car and light truck sales in the United States, including the BMW Group, FCA US LLC, Ford Motor Company, General Motors Company, Jaguar Land Rover, Mazda, Mercedes-Benz USA, Mitsubishi Motors, Porsche, Toyota, Volkswagen Group of America and Volvo Cars North America. For further details, see <http://www.autoalliance.org/>.

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Item 2. Proposed Class Addressed

Proposed Class 21: Vehicle Software—diagnosis, repair, or modification.

The December 12, 2014 Notice of Proposed Rulemaking (“NPRM”) described this proposed class as allowing circumvention of technological protection measures (“TPMs”) “protecting computer programs that control the functioning of a motorized land vehicle including personal automobiles, commercial motor vehicles, and agricultural machinery, for purposes of lawful diagnosis and repair, or aftermarket personalization, modification, or other improvement.”¹ The exemption as proposed required any circumvention to be undertaken by or on behalf of the owner of the vehicle.²

Electronic Frontier Foundation (“EFF”) proposes to further extend the exemption to cover “computer programs actually embedded or designed to be embedded in a motorized land vehicle ... computer programs designed to modify the memory of embedded hardware ... [and] compilations of data relating to parts specifications or diagnostic codes.”³ The Intellectual

¹ 79 Fed. Reg. 73,856, 73,869 (Dec. 12, 2014).

² *Id.*

³ EFF Class 21 Comment at 1-2.

Property & Technology Law Clinic, University of Southern California (“USC Law”) seeks to do the same specifically for agricultural machinery.⁴

EFF and USC Law submitted the only long-form comments with evidence supporting this exemption. Various individuals as well as hobbyist organization, iFixit and FarmHack, a community of farmers and engineers, submitted short-form comments endorsing the proposed exemption.⁵

Item 3. Overview

The Auto Alliance opposes this exemption. Proponents claim a need to circumvent technologies used to control access to the firmware in automobile Electronic Control Units (“ECUs”) for two distinct uses: first, to diagnose and effectuate repairs to automobiles; second, to modify aspects of the automobiles controlled by the ECUs in order to “personalize” the vehicles or change their performance. Neither proposal should be adopted: the first, mainly because there are readily available alternatives to circumvention; and the second, mainly because it risks making the American motor vehicle fleet as a whole less safe, less fuel efficient, more polluting, and less compliant with binding regulatory standards on all these topics.

Proponents have the burden to show that the copies and adaptations of copyrighted software and related materials, which circumvention would enable them to make, are noninfringing. They have not met that burden. Their argument under Section 117 of the Copyright Act cannot prevail because, with rare exceptions, the persons seeking to make software adaptations are not the owners of copies of the software being adapted; moreover, even if they were, the copies they wish to make do not fall within the narrow scope permitted by Section 117. The second claimed basis, fair use, presents some more complex issues; but the fact remains that, ultimately, proponents cannot carry the burden of persuasion that their fair use claim is meritorious.

Even if proponents had been able to prove that their planned uses were noninfringing, they must then establish: (1) that circumvention is necessary to make those uses, and (2) that there are no available practical alternatives that would not require unauthorized circumvention. This cannot be done for the claim for an exemption to allow circumvention for the diagnosis and repair of the automobiles in which the computer programs reside. A nationwide agreement entered into last year among automobile manufacturers, aftermarket providers, and repair services, which built upon a long-standing, similar commitment entered into in 2002, guarantees authorized access by any vehicle owner or independent repair facility to the same diagnostic and repair information that is available to franchised dealers. This guarantee, which applies to all vehicles sold in the U.S. beginning with the 2002 model year, provides either the means for authorized access to the firmware protected by access controls to the extent necessary to carry

⁴ USC Law Class 21 Comment at 3-4.

⁵ While some Auto Alliance members may manufacture agricultural machinery in addition to cars and trucks, the Auto Alliance does not represent their interests in that sector. Accordingly, except as otherwise noted, this comment does not respond directly to proponents such as Farm Hack, or USC Law, whose submissions focus primarily on agricultural machinery.

out the diagnostic and repair functions that proponents seek to enable through unauthorized circumvention, or the functional equivalent thereof. Whatever the situation might have been before the adoption of this nationwide agreement, today it makes circumvention almost completely unnecessary for the proponents to carry out these functions.

With regard to circumvention for the purpose of “personalization” or modification of vehicle functions, the Copyright Office must take into account the significant safety, security and legal impacts that would flow from unauthorized access to vehicle firmware for this purpose. Many of the scores of electronic control systems embodied in today’s motor vehicles are carefully calibrated to satisfy federal or state regulatory requirements with respect to vehicle safety, emissions control and fuel economy. Much of the “personalization” that proponents seek to achieve disturbs these calibrations and would have the effect of putting the vehicle into non-compliance with these legally binding requirements. Whether or not the conduct of whoever carries out the modification is itself illegal, the end result of circumvention for the purpose of modification is highly likely to render the operation or re-sale of the vehicle legally problematic. Furthermore, to the extent that these unauthorized modifications make vehicles less safe and their operations less predictable, the potential liability risks to manufacturers increase dramatically. Even if the Copyright Office does not consider these risks to safety, the environment, and other important interests to fall within the rubric of “copyright interests” that it believes Section 1201 was enacted to protect, it cannot responsibly turn a blind eye to the greatly heightened risk of these dramatic impacts that would inevitably follow if the exemption sought is recognized.

Because the proponents of proposed class #21 have not met the burden that is assigned to them in this proceeding, these proposed exemptions should be rejected. *See* Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies; Notice of Inquiry and Request for Petitions, 79 Fed. Reg. 55,687, 55,689 (Sept. 17, 2014) (“2014 NOI”).⁶

Item 4. Technological Protection Measure(s) and Method(s) of Circumvention

N/A

Item 5. Asserted Noninfringing Use(s)

As spelled out in the Notice of Inquiry with which this proceeding commenced, the burden which the statute imposes on a proponent with regard to claimed noninfringing uses is significant:

⁶ The burden of coming forward with evidence in support of the proposed exemption, as well as the burden of persuasion that the exemption should be recognized on the narrow grounds authorized by the statute, must always remain with the proponent of an exemption. 2014 NOI at 55,689. This burden applies to both factual and legal issues.

A proponent must show more than that a particular use could be noninfringing. Instead, the proponent must establish that the proposed use is likely to qualify as noninfringing under relevant law. As the Register has stated previously, there is no “rule of doubt” favoring an exemption when it is unclear that a particular use is a fair use. Rather the statutory language required that the use is or is likely to be noninfringing, not merely that the use might plausibly be considered noninfringing. And, as noted above, the burden of proving that a particular use is or is likely to be noninfringing belongs to the proponent.⁷

Proponents fall well short of satisfying this burden with respect to proposed class #21. They advance two theories under which the uses they wish to make of the vehicle firmware might plausibly be considered noninfringing – the software-specific exception in Section 117 of the Copyright Act, and the general exception for fair use under Section 107 – but in neither case do their submissions rise to the level of “proving that a particular use is or is likely to be noninfringing.”

a. Proponents have failed to prove that vehicle owners are owners of copies of Electronic Control Unit (“ECU”) firmware within the meaning of 17 U.S.C. § 117.

Under Section 117, the unauthorized exercise of certain exclusive rights in computer programs⁸ is declared noninfringing under specified circumstances, but only if carried out or authorized by “the owner of a copy of a computer program.” In several past rule-making cycles, the Copyright Office has grappled with the issue of determining when a party in possession of a copy of (and authorized to use) a computer program is an owner of that copy, and when she is merely a licensee.⁹ Only in the most recent (2012) rulemaking cycle did the Copyright Office have to analyze the Ninth Circuit decision in *Vernor v. Autodesk, Inc.*, in which the court spelled out three clear criteria for making this determination:

We hold today that a software user is a licensee rather than an owner of a copy where the copyright owner (1) specifies that the user is granted a license; (2) significantly restricts the user’s ability to transfer the software; and (3) imposes notable use restrictions.¹⁰

Measured against these criteria, proponents’ own submission makes it quite clear that under the *Vernor* analysis, vehicle owners are licensees of the firmware embodied in the ECUs of their vehicles, and not owners of copies of these programs, and therefore Section 117 does not apply. Pages 13-14 of the EFF submission quote at length from end use license agreements

⁷ 2014 NOI at 55,690 (citations omitted, emphasis in original).

⁸ Since Section 117 applies only to computer programs, EFF cannot rely upon it at all to establish that activities undertaken after circumventing access controls on “compilations of data” are or are likely to be noninfringing. See EFF Class 21 Comment at 1.

⁹ See, e.g., Recommendation of the Register of Copyrights, Section 1201 Rulemaking: Fifth Triennial Proceeding, 91-93 (Oct. 12, 2012) (“2012 Recommendation”). All cited materials from previous rulemaking cycles can be accessed via the U.S. Copyright Office website at <http://www.copyright.gov/1201/> under “Past Proceedings.”

¹⁰ 621 F.3d 1102, 1111 (9th Cir. 2010).

(“EULAs”) for auto-related software programs, most of which characterize themselves as a grant of a license; most of which specifically prohibit transferring or otherwise making available the software to others; and all of which impose use restrictions that can only be described as “notable,” including in particular prohibitions on reverse engineering.¹¹

In the first post-*Vernor* rulemaking cycle, in the context of a proposed exemption for circumvention of firmware on smartphones, the Copyright Office noted that “proponents have made only a cursory attempt at responding to *Vernor*.”¹² In this cycle, proponent EFF has fallen even farther short of succeeding in distinguishing *Vernor*: it has completely mis-stated the holding of that case. *Vernor*’s holding is correctly stated above as a verbatim quotation. *Vernor* emphatically did not hold what EFF says on page 12 of its submission that it held: that a list of five “formal and informal factors” needs to be considered. Instead, EFF’s submission directly paraphrases the *Vernor* court’s summary of a 9th Circuit case decided 35 years earlier (three years before Section 117 was even enacted), *United States v. Wise*.¹³ The *Vernor* court specifically rejected the argument that “*Wise* is the controlling precedent.”¹⁴

EFF also cites to *Krause v. Titleserv*,¹⁵ a Second Circuit decision that is arguably more favorable to its position that vehicle owners own the firmware copies embodied in the vehicle ECUs. However, the sharp factual disjunction between the scenario in *Krause* and the one applicable here counsels against reliance on that case. Unlike in *Krause*, the copyright owners here are not claiming that they wrote the firmware as employees of the would-be “tinkerers” and that they received significant compensation for doing so. Nor is this a case, like *Krause*, in which there is no written license agreement to point to as evidence of the intent of the parties in defining their relationship. Clearly the facts here are far more similar to those surrounding the shrink-wrap mass market licenses in *Vernor* than to the custom software, employer-employee relationship in *Krause*. For the reasons well stated by the *Vernor* court itself,¹⁶ the *Krause* decision is distinguishable, and proponents have failed to make a persuasive case why it should be controlling.

Auto Alliance is aware that in the portion of the 2012 Recommendation dealing with Section 117, even though proponents of the smartphone unlocking exemption “failed to present any evidence in support of ownership,” the Copyright Office elected to excuse them from doing so, on the grounds that the law was too uncertain to enable an evaluation of any such evidence, even if the proponents had chosen to offer it. The Copyright Office then declared itself “compel[led]” to find that “some subset of wireless customers – that is anyone considered to own

¹¹ See, e.g., EFF Class 21 Comment at 13-14 (quoting EULAs accompanying and the use restrictions imposed on various ECUs including OnStar, Ford Sync, Toyota Safety Connect, and the Mercedes-Benz mbrace System)

¹² 2012 Recommendation at 92.

¹³ 550 F.2d 1180 (9th Cir. 1977)

¹⁴ *Vernor*, 621 F.3d at 1113.

¹⁵ 402 F.3d 119 (2nd Cir. 2005).

¹⁶ *Vernor*, 621 F.3d at 1114.

the software on their phone under applicable precedent – is entitled to exercise the Section 117 privilege.”¹⁷ While we find it difficult to square this reasoning with the benchmark principle that the proponents must prove through their evidence that each use that they wish to make “is or is likely to be noninfringing,” we, of course, have neither desire nor standing to re-litigate that aspect of the Copyright Office’s 2012 Recommendation, and note that the particular instance in which the Copyright Office followed this path three years ago has at least been overtaken, if not rendered moot, by intervening legislation.¹⁸ Under these circumstances, we simply urge the Copyright Office not to repeat this practice here. Just as somewhere, somehow, some smartphone user might be able to establish that she was under applicable law the owner of the firmware in her phone, and thus entitled to exercise the Section 117 privileges, the same might conceivably be true of some motor vehicle owner; but in the absence of specific evidence in the record demonstrating the likelihood of such a finding in more than isolated instances, the proponents’ burden of proof has not been met, and Section 117 cannot be relied upon to prove noninfringing use.

b. Even if they are owners of copies, “tinkerers” have not established that their proposed uses are noninfringing under Section 117.

To the extent that some would-be “tinkerers” could demonstrate that they are owners of the copies of firmware in the ECUs of their vehicle, their use would be noninfringing only if it fell within one of the three categories specified in Section 117. Proponents’ evidence falls well short of establishing that any of the three statutorily permitted uses is involved here.

Section 117(a)(1) permits the making of copies or adaptations by (or authorized by) the owner of the copy “as an essential step in the utilization of the computer program in conjunction with a machine.” Proponents concede that the modifications they wish to make are “not essential to using the vehicle software for routine driving purposes”; but they argue that making a copy or adaptation on an entirely distinct and separate “machine,” such as “a commercial reflash tool or a general purpose computer on which the code will be analyzed in order to understand its functionality,” satisfies Section 117(a)(1).¹⁹ While some courts have been fairly liberal in interpreting this phrase to apply not only to the original computer system on which the software was first installed, but also to subsequent versions or upgrades of that computer system,²⁰ proponents point to no case in which the “machine” in question was so markedly different than the one on which the software, before copying or adaptation, was designed to run. The Section 117(a)(1) argument should also address the principle, spelled out in the authoritative legislative

¹⁷ 2012 Recommendation at 92-93.

¹⁸ Unlocking Consumer Choice and Wireless Competition Act, Pub. L. 113-144, 128 Stat. 1751 (2014).

¹⁹ EFF Class 21 Comment at 15.

²⁰ *E.g.*, *Krause*, 402 F.3d at 125-26.

history of Section 117(a), that the rights created by the statute could “only be exercised so long as they did not harm the interests of the copyright proprietor.”²¹

Section 117(a)(2) allows the making of copies or adaptations by (or authorized by) the owner of the copy “for archival purposes only and [provided] that all archival copies are destroyed in the event that continued possession of the computer program should cease to be rightful.” Archival copies are defined as only those copies that “guard against destruction or damage by mechanical or electrical failure”; the Section 117(a)(2) exception does “not extend to other copies of the program.”²² In contrast, EFF asserts that for hackers and tinkerers, “[b]ackup copies are important to establish a baseline if modifications are to be made, and to ensure that an ECU can be restored to its original state if it is compromised by *experimentation*.”²³ Experimentation, whether by owners or independent servicers acting on behalf of an owner of the copy, falls well outside the exemption allowed by Section 117(a)(2) for protection from mechanical or electrical failure.

Finally, while not mentioned in the EFF submission, the proponents of class #21 with respect to agricultural equipment make an additional argument why copying of owned software for the purpose of repair of machinery is noninfringing.²⁴ However, the provisions they cite, 17 U.S.C. § 117(c) and (d), apply only to copies automatically made when a machine is turned on, and then destroyed (again usually automatically) as soon as repairs are completed (the latter condition appears to negate any argument that the copies made are permissible archival copies under Section 117(a)(2)).²⁵ The record that either characteristic applies to the firmware involved in this proposed class is completely lacking.

c. Proponents have failed to demonstrate that their uses are fair uses under Section 107.

The proponents’ argument that their uses of the vehicle firmware is fair use under Section 107 falls short of making a persuasive case that the use “is or is likely to be noninfringing.” At the outset, it must be noted that using firmware to diagnose, repair, or modify vehicle performance does not line up with any of the illustrative list of purposes set forth in Section 107 – criticism, comment, news reporting, teaching, scholarship or research. We acknowledge that the statutory list is not exhaustive; but it is significant that diagnosing or repairing a vehicle, or

²¹ *Id.* at 129 (quoting Final Report of the National Commission on New Technological Uses of Copyrighted Works, 13 (1978) (“CONTU Report”).

²² *Atari, Inc. v. JS & A Grp., Inc.*, 597 F. Supp. 5, 9 (N.D. Ill. 1983) (quoting CONTU Report at 31).

²³ EFF Class 21 Comment at 16 (emphasis added).

²⁴ USC Law Class 21 Comment at 10-11.

²⁵ 17 U.S.C. § 117(c); Staff of House Committee on the Judiciary, 105th Cong., Section-By-Section Analysis of H.R. 2281 as Passed by the United States House of Representatives on August 4, 1998, 42 (Comm. Print 1998), *reprinted in* 46 J. COPYRIGHT SOC’Y U.S.A. 635 (1999) (“Manager’s Rep.”).

modifying its performance to, for example, “make the car go faster,”²⁶ is quite distant from the canonical purposes that the fair use doctrine has historically advanced, and that Section 107 was enacted to codify. Reciting a list of questions that circumvention of access controls on firmware could help a “tinkerer” to answer en route to his goal of carrying out diagnosis, repair or modification of vehicle performance does not turn the purpose into one of the canonical uses like “scholarship” or “research.”²⁷

Turning to the statutory list of factors for consideration, the first statutory factor, in particular, seems to weigh heavily against the applicability of the fair use privilege.²⁸ In past rulemaking cycles that presented a similar scenario, the Copyright Office has been clear that the “purpose and character” of the use are in no way transformative. Adapting the firmware for diagnostic, repair, or modification purposes does not “add something new, with a further purpose of different character, altering the [original firmware] with new expression, meaning, or message.”²⁹ “The circumvented ... code is serving the same fundamental purpose as is served by the unbroken code.”³⁰ Just as the Register concluded in the context of videogame console jailbreaking in the previous rulemaking cycle, she should conclude here that using firmware to carry out either precisely the same activity it was designed to perform before circumvention (in the case of diagnosis and repair), or essentially the same activity but using adjusted parameters (in the case of “modification or personalization,” e.g., to change the quantitative level of fuel consumption from one number to another) weighs against a fair use finding on this important initial factor.

Regarding the second statutory fair use factor – “the nature of the copyrighted work” – Auto Alliance urges the Copyright Office to reconsider the approach it has taken in recent rulemaking cycles, as well as to recognize some important differences between the computer programs at issue here and the firmware in smartphones, which were at issue in previous cycles. The Copyright Office’s conclusion that when “highly functional works used to operate a device” are involved, “the second factor decisively favors a finding of fair use,” is ripe for re-examination, especially to the extent that it depends on the debatable copyrightability of some elements of such software.³¹

The recent Federal Circuit decision in *Oracle Am., Inc. v. Google, Inc.*, 750 F.3d 1339 (Fed Cir. 2014), included a careful analysis of the *Sega* and *Connectix* line of cases on which

²⁶ EFF Class 21 Comment, Appendix A, Statement of David Blundell (“Blundell Statement”) at ¶ 3.

²⁷ See EFF Class 21 Comment at 8-9.

²⁸ See 17 U.S.C. § 107(1).

²⁹ Recommendation of the Register of Copyrights in RM 2008-8; Rulemaking on Exemptions from Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 94-95 (June 11, 2010) (“2010 Recommendation”) (quoting *Campbell v. Acuff-Rose*, 510 U.S. 569, 579 (1994)).

³⁰ 2012 Recommendation at 41.

³¹ 2012 Recommendation at 73 (quoting 2010 Recommendation at 96).

proponents rely so heavily in their fair use analysis.³² The Federal Circuit emphasized that these cases do not hold that software is uncopyrightable just because other software developers want to interoperate with it.³³ Although the Federal Circuit did not decide the fair use issue, remanding the case to the district court for factual findings on Google’s fair use defense, the case nevertheless calls into question the Register’s reasoning from prior cycles. Furthermore, to the extent that the Copyright Office’s prior recommendations rely on a finding that “it is customary for [firmware] to enable third party programs to interoperate with them,” no such “customary” usage has been demonstrated here.³⁴

EFF argues that tinkerers need to “copy the entire firmware or update within an ECU,” and that therefore the third statutory factor – “amount and substantiality of the portion used” – should be weighed in favor of fair use. However, proponents’ argument may run ahead of its evidence on this point. In the seminal Koscher article cited for the proposition that tinkerers must access and copy all the firmware, the researchers actually did so (“dumped the code ... and used a third-party debugger”) in only a “small subset of ECUs.”³⁵ The bulk of their work was carried out using packet sniffing, targeted probing, and other techniques that evidently did not require any circumvention, and certainly did not rely on access to the entire code.³⁶ Thus, EFF’s conclusion that “the use of the entire work is fair in light of the legitimate purposes of the use”³⁷ is questionable, both on the facts, and because the issue is not whether a use is “legitimate” but whether it is of the kind that the fair use doctrine was intended to foster (see discussion regarding first statutory factor above).

With respect to the fourth statutory factor – “the effect of the use upon the potential market for or value of the copyrighted work” – while it is true that there is no separate market for the computer programs and other works at issue here aside from the market for the vehicle in which they are embedded, vehicle values may certainly be adversely affected by the uses which “tinkerers” wish to make, especially with regard to the “modification/personalization” prong of the proposed exemption. When circumvention facilitates modifications that take the vehicle out of compliance with regulatory standards in areas such as fuel economy, emissions control, or safety, the ability to re-sell the car, or of a subsequent purchaser to meet state vehicle registration requirements, may be compromised.³⁸ In the worst case scenario, tampering with ECUs that leads to degradation of safety features of a car not only erodes its resale value but can lead to serious injuries and/or significant property damage. Since the fair use analysis must assess not

³² EFF Class 21 Comment at 8.

³³ *Oracle*, 750 F.3d at 1369-70.

³⁴ 2012 Recommendation at 73 (quoting 2010 Recommendation at 96).

³⁵ EFF Class 21 Comment at 2, fn. 7 (citing Karl Koscher, et al., *Experimental Security Analysis of a Modern Automobile*, CENTER FOR AUTOMOTIVE EMBEDDED SYSTEMS 2010 IEEE SYMPOSIUM ON SECURITY AND PRIVACY, 5 (May 16, 2010), <http://www.autosec.org/pubs/cars-oakland2010.pdf> (“Koscher Article”)).

³⁶ Koscher Article at 8-9.

³⁷ EFF Class 21 Comment at 10.

³⁸ See “Statutory Factors,” Item 7, *infra*.

only the impact on value in a particular instance, but also the impact if the use in question were to become widespread,³⁹ it is important to consider the potential negative impact on brand equity of makes of cars that may be frequently modified (through circumvention) in ways that make them less saleable, less compliant with regulatory requirements, and/or less safe.

Finally, while we acknowledge that the statutory factors listed in 17 U.S.C. § 107 are not exhaustive, and it is appropriate for proponents to point to other factors in their fair use analysis, EFF's assertion that access controls on vehicle firmware "exist to control the ways in which vehicle hardware can be used and restrict access to information about vehicular functionality" is at best misleading.⁴⁰ EFF's version of reality excludes the Memorandum of Understanding ("MOU") and Right to Repair ("R2R") Agreement (discussed in Item 6, *infra*), under which the Auto Alliance and other manufacturers have guaranteed to independent repair facilities and to individual car owners a wide range of "information about vehicular functionality," information which virtually eliminates any perceived need to circumvent access controls in order to carry out the diagnosis and repair functions that form a significant part of proponents' case.⁴¹ Access controls are used to inhibit tampering with vehicle ECUs for security reasons, to protect the safety of drivers and passengers, and to enable these devices to continue to meet the rigorous safety, fuel economy, emissions control, and other legal and regulatory standards in force in the highly regulated automotive industry. Indeed, the interaction between cybersecurity and vehicle safety has received heightened scrutiny by Congress and the National Highway and Traffic Safety Administration.⁴²

While proponents are correct that "manufacturers have not put firmware restrictions on vehicles in order to protect a market for copies of the firmware,"⁴³ this assertion completely misses the point. These restrictions are there for a compelling business and legal reason: to enable manufacturers to continue to produce cars that meet all regulatory requirements. As discussed in more detail below, the call to eliminate Section 1201(a)(1)(A) as an element of legal protection against hacking of ECUs threatens to reduce the level of compliance, and the social benefits, in safety, cleaner air, and energy conservation, that compliance with these regulatory requirements provides. These considerations should also enter into the fair use calculus.

Overall, EFF's heavy reliance in its fair use analysis on the Register's 2010 analysis involving smartphone operating systems is misplaced.⁴⁴ Whatever the justifications for allowing

³⁹ See, e.g., *Am. Geophysical Union v Texaco Inc.*, 60 F3d 913, 928, n 14 [2d Cir 1994] ("Properly applied, the fourth factor requires a court to consider 'not only . . . particular actions of the alleged infringer, but also whether unrestricted and widespread conduct of the sort engaged in by the defendant . . . would result in a substantially adverse impact on the potential market for the original,' quoting *Campbell*, 510 U.S. at 590).

⁴⁰ EFF Class 21 Comment at 11.

⁴¹ See "The R2R Agreement and Nationwide MOU," Item 6.B., *infra*.

⁴² See, e.g., Automotive Cybersecurity, NHTSA, <http://www.nhtsa.gov/Research/Crash+Avoidance/Automotive+Cybersecurity>.

⁴³ EFF Class 21 Comment at 11.

⁴⁴ EFF Class 21 Comment at 7-11.

smartphone jailbreaking, the automotive industry is a wholly different environment. Access control restrictions are in place on vehicle ECUs for completely different reasons than apply in the largely unregulated area of smartphone apps. Those reasons include achieving compliance with extensive regulatory requirements that are intended to conserve precious energy resources, improve our environment, and protect the lives and safety of drivers, passengers and pedestrians. The Copyright Office should resist EFF's misleading invitation to equate the two situations.

Item 6. Asserted Adverse Effects

a. Readily available alternatives to circumvention exist that negate the claim that the anti-circumvention prohibition has a significant adverse impact on noninfringing uses.

Throughout past DMCA rulemaking proceedings, the Copyright Office has consistently recognized the significance of alternative means of carrying out noninfringing uses that do not require circumvention that would otherwise violate Section 1201(a)(1)(A). This would include not only ways to achieve the use without circumventing access controls at all, but also ways to obtain permission from the copyright owner or its licensees or agents to circumvent the access controls under specified circumstances and for particular purposes.⁴⁵ As explained by the Register in her Recommendation in the most recent rulemaking cycle:

...[T]he mere fact that a particular medium or technology may be more convenient to use for noninfringing purposes than other formats is generally insufficient to support an exemption. The Register and Librarian will, when appropriate, assess the alternatives that exist to accomplish the proposed noninfringing uses. Such evidence is relevant to the inquiry regarding whether the prohibition adversely affects the noninfringing use of the class of works. If sufficient alternatives exist to permit the noninfringing use, there is no substantial adverse impact. Proponents of an exemption must show sufficient harm to warrant the exemption from the default rule established by Congress, the prohibition on circumvention.⁴⁶

In this case, ample alternative means that do not require actionable circumvention of an access control exist, and are readily available to the "tinkerers" that proponents purport to represent. This is particularly true with respect to the first of the two main purposes for which proponents seek the right to circumvent: lawful diagnosis and repair of personal automobiles and commercial motor vehicles.⁴⁷ While proponents nowhere define either "diagnosis" or

⁴⁵ Note that the statutory definition of circumvention includes the element of acting "without the authority of the copyright owner." 17 U.S.C. § 1201(a)(3)(A). Thus, the same act, when carried out with the authority of the copyright owner, is not technically circumvention of an access control at all, or at least not an actionable one.

⁴⁶ 2012 Recommendation at 8.

⁴⁷ As noted above, the Auto Alliance does not represent the manufacturers of agricultural machinery.

“repair,”⁴⁸ and in fact provide very little information about how the proposed exemption would facilitate these activities (focusing instead largely on modification/personalization uses), virtually every instance they cite of automobile diagnosis and repair could be carried out without circumventing access controls within the meaning of the statute. This is because a well-established nationwide system is in place to guarantee to motor vehicle owners and independent repair facilities authorized access to the same diagnostic and repair information that is available to franchised dealers. In light of this fact, it cannot be said that the proponents have yet shouldered the burden of “show[ing] sufficient harm to warrant the exemption from the default rule established by Congress.”

b. The R2R Agreement and Nationwide MOU.

On January 15, 2014, an MOU was signed by the major organizations representing automobile Original Equipment Manufacturers (“OEMs”) and auto repair and aftermarket services nationwide. Besides the Auto Alliance, signatories included:

- The Association of Global Automakers (“Global Automakers”):⁴⁹ Global Automakers represents international automakers that design, build, and sell automobiles in the U.S. It currently represents 12 automakers including: Hyundai, Honda, Toyota, Aston Martin, Kia, McLaren, Subaru, Ferrari and others.
- The Automotive Aftermarket Industry Association (“AAIA”): The AAIA is a trade association for repair shops, parts stores and distribution outlets of aftermarket products that are typically geared towards hard parts – e.g., hoses, lubricants, gaskets, and other OE replacement type parts. AAIA’s 23,000 members and affiliate companies include suppliers, distributors, retailers, service providers, program groups, manufacturers’ representatives, educators, and publishers.⁵⁰
- The Coalition for Auto Repair Equality (“CARE”):⁵¹ CARE’s membership encompasses automotive part stores, independent repair shops, and other sellers of equipment as well as enthusiasts and hobbyists. CARE’s underlying role is to ensure that consumers receive safe, affordable and convenient vehicle repair and service. Members of CARE include NAPA, Midas, CARQUEST, AutoZone,

⁴⁸ The Copyright Act does contain a useful definition of “repair”: “the ‘repair’ of a machine is the restoring of the machine to the state of working in accordance with its original specifications and any changes to those specifications authorized for that machine.” 17 U.S.C. § 117(d)(2).

⁴⁹ <http://www.globalautomakers.org/about>.

⁵⁰ Since signing the MOU, AAIA has rebranded and is now the Auto Care Association (“ACA”). ACA “represents 500,000 businesses in the auto care industry form a coast-to-coast network of independent manufacturers, distributors, repair shops, marketers and retailers small and large.” See www.autocare.org, last accessed March 20, 2015.

⁵¹ <http://www.careauto.org/>.

Advance Auto, O'Reilly's Auto Parts and Bridgestone-Firestone as well as numerous independent small businesses.

Attached to the MOU was a comprehensive "Right to Repair" or R2R Agreement. All the automobile manufacturing members of the Auto Alliance and the Global Automakers submitted individual letters of endorsement agreeing to comply with the MOU and the R2R Agreement throughout the United States. A copy of the MOU and R2R Agreement is attached as Exhibit A.

For purposes of this proceeding, the key commitment of the entire U.S. auto industry is set forth in Section 2(a) of the R2R Agreement:

[F]or Model Year 2002 motor vehicles and thereafter, a manufacturer of motor vehicles sold in United States shall make available for purchase by owners of motor vehicles manufactured by such manufacturer and by independent repair facilities the same diagnostic and repair information, including repair technical updates, that such manufacturer makes available to its dealers through the manufacturer's internet-based diagnostic and repair information system or other electronically accessible manufacturer's repair information system. All content in any such manufacturer's repair information system shall be made available to owners and to independent repair facilities in the same form and manner and to the same extent as is made available to dealers utilizing such diagnostic and repair information system. Each manufacturer shall provide access to such manufacturer's diagnostic and repair information system for purchase by owners and independent repair facilities on a daily, monthly and yearly subscription basis and upon fair and reasonable terms.⁵²

Section 2(b)(i) of the R2R Agreement contains a similar commitment with respect to "all diagnostic repair tools" that the manufacturer makes available to dealers. The tools provided to any vehicle owner or independent repair facility must have the "same functional repair capabilities" as are made available to franchised dealers.

The R2R Agreement includes further commitments relating to tool standardization that take effect starting with the 2018 Model Year. But even before those additional enhancements take effect, it is clear that the MOU and R2R Agreement guarantee both independent vehicle repair facilities, and individual vehicle owners who may wish to undertake their own diagnostic and repair activities, access to a wealth of the information, which EFF and other proponents assert cannot otherwise be obtained without circumventing access controls on vehicle firmware.

While, as noted, the submissions in support of proposed class #21 contain very few specifics about the diagnosis and repair activities that proponents wish to carry out using the proposed exemption, a review of these examples demonstrates that the MOU and R2R Agreement provides a virtually complete alternative means of achieving these goals, in which actionable circumvention would not be required. For example:

⁵² R2R Agreement at ¶ 2(a).

- Replacement of engine components, axles or transmission systems:⁵³ while it is far from clear to what extent these replacements constitute repairs, as distinguished from modifications,⁵⁴ clearly the information necessary to calibrate the replacement parts falls within the scope of the current R2R Agreement terms;
- Disabling the anti-theft system:⁵⁵ taking at face value that this step is necessary to make unspecified “engine or computer replacements,” the information necessary to do so would be made available to owners or independent repair facilities, if not under the general R2R Agreement commitment, then under the special provision in Section 2(d) for “an immobilizer system or security-related electronic modules,” employing the established “secure data release model system as currently used by the National Automotive Service Task Force or other known, reliable and accepted systems”;⁵⁶
- Deciphering proprietary diagnostic signals under the “open international standard for Unified Diagnostic Services”:⁵⁷ operating again on the assumption that circumvention would otherwise be needed to achieve this, if it is correct that these signals are “used by the manufacturers and dealers,” then they would be covered by Section 2(b) of the R2R Agreement.

Notably, the EFF submission does not even mention the R2R Agreement or the MOU, although both have been well publicized.⁵⁸ The great majority of its scattered references to “repair” provide no specific information about why circumvention is purportedly needed in order to carry out repairs, much less whether, if that was ever the case, it is still the case since the

⁵³ EFF Class 21 Comment at 3 and 7.

⁵⁴ For example, every one of the activities discussed in the Blundell statement that EFF cites in footnotes 12 through 14 of its comment is explicitly described by Blundell as a modification, not a repair. Blundell Statement at ¶ 4-5.

⁵⁵ Blundell Statement at ¶ 6; EFF Class 21 Comment at 7.

⁵⁶ The NASTF Secure Data Release Model (“SDRM”) is a data exchange system designed by automakers, the independent repair, insurance, and law enforcement communities. It allows the aftermarket to access security sensitive information related to automobiles, i.e. key codes, PIN numbers, immobilizer reset information, and similar types of information. See <http://www.nastf.org/i4a/pages/index.cfm?pageid=3532>.

⁵⁷ EFF Class 21 Comment, Appendix C, Statement of Craig Smith (“Smith Statement”) at ¶ 7.

⁵⁸ See, e.g., *Automakers and Aftermarket Move to Preserve Consumer Choice in Auto Repair*, News, AUTO ALLIANCE (Jan. 23, 2014), <http://www.autoalliance.org/index.cfm?objectid=0879D470-8457-11E3-AB0B000C296BA163>; Christopher Jensen, *Carmakers to Share Repair Data*, N.Y. TIMES, Jan. 31, 2014, <http://www.nytimes.com/2014/02/02/automobiles/carmakers-to-share-repair-data.html?ref=automobiles&r=1>; *A Right to Repair*, AUTOMOTIVE NEWS (Feb. 3, 2014), <http://www.autonews.com/article/20140203/OEM/140139966/a-right-to-repair>.

MOU and R2R Agreement came into force nationwide.⁵⁹ Instead, the submission is peppered with complaints about copyright being used to give manufacturers “a monopoly in vehicle repair parts,”⁶⁰ or “to deprive users of control over their own vehicles and the ability to repair them.”⁶¹ EFF complains that “only manufacturers are able to effectuate repairs” and so “users can no longer do it themselves or use an independent service provider of their choice;”⁶² that “dealers will sometimes have diagnostic equipment not available to independents”;⁶³ and that “[t]he prevalence of proprietary computer systems in cars has reduced the effectiveness of independent repair shops significantly.”⁶⁴ These and similar assertions, either unsourced or citing references up to a decade old, reflect an agenda quite distinct from the issues involved here, and are largely beside the point; but to the extent that they are relevant, they do not match up with the reality of a nationwide system in which manufacturers share with independent facilities and interested owners essentially all the information related to diagnosis and repair that they provide to dealers.⁶⁵

Ultimately, proponents point to only two specific cases in which either circumvention was required to perform diagnostic work, or an independent repair facility was assertedly denied access to information necessary to effectuate a repair. The first case involved a 1987 Cadillac DeVille, for which even the dealership (which ultimately made the repair) was unable to obtain

⁵⁹ The 2014 MOU built on previous commitments adopted by all auto manufacturers in the U.S. Twenty years ago, EPA and California passed regulations mandating that original equipment manufacturers (OEMs) “make available” diagnostic service codes and repair information for emissions control systems without “restriction” and shall not “require any access codes or devices.” See 40 CFR 86.1806-05(f) and 13 CCR 1968.2(g). About 15 years ago, there was a push to expand that information to all diagnostic information, which OEMs agreed to do under a voluntary agreement called the “Dorgan Letter” which was negotiated with then-Senator Dorgan in 2002. A copy of the Dorgan letter is attached as Exhibit B.

⁶⁰ EFF Class 21 Comment at 8.

⁶¹ EFF Class 21 Comment at 11.

⁶² EFF Class 21 Comment at 17.

⁶³ EFF Class 21 Comment at 17, fn. 119 (citing Alina Tugend, *Who’s Best for Your Car, Dealer or Independent?*, N.Y. TIMES, Feb. 26, 2011, <http://www.nytimes.com/2011/02/26/your-money/26shortcuts.html?pagewanted=all>).

⁶⁴ EFF Class 21 Comment at 17, fn. 120 (citing Jennifer Saranow, *Where to Get Your Car Fixed*, THE WALL ST. J., Sept. 29, 2005, <http://www.wsj.com/articles/SB112795765902455411>).

⁶⁵ The R2R Agreement includes a partial exemption with respect to “telematics services,” including diagnostic services. R2R Agreement at ¶ 2(e). The paragraph assures that independent repair facilities receive any information that a franchised dealer receives telematically, albeit in a different format. Tellingly, aside from a single paragraph criticizing the privacy policies of automakers, EFF Class 21 Comment at 21-22, the submissions make virtually no reference to these services, and certainly none that suggest that the manner in which the R2R Agreement addresses telematics services is having any adverse impact on the ability of vehicle owners to obtain necessary diagnostic information or to make necessary repairs.

the appropriate error code.⁶⁶ In the second case, a newspaper article in 2013 reported that, during the previous winter, because Subaru assertedly “wouldn’t give [an independent repair shop] the computer codes for the low tire pressure sensor,” a single vehicle owner was forced to drive 180 miles to the dealership for a repair.⁶⁷ This paltry record falls far short of meeting the burden of persuasion in a proceeding in which “the identification of isolated or anecdotal problems generally will be insufficient to warrant an exemption”⁶⁸ and “‘mere inconveniences’ or ‘individual cases’ do not satisfy the rulemaking standard.”⁶⁹

Item 7. Statutory Factors

The statute specifically authorizes the Librarian, in deciding on whether or not to issue a proposed exemption, to take into account “such other factors as the Librarian considers appropriate.”⁷⁰ Auto Alliance urges the Copyright Office, in its recommendation to the Librarian, to take into account the impact on motor vehicle safety, energy policy (including fuel efficiency), the environment (including air pollution and the emission of greenhouse gas pollutants), and personal security (including cybersecurity) of granting proposed class #21 with respect to “aftermarket personalization, modification or other improvement” [sic].

Auto Alliance is well aware that the factors just listed have not figured significantly, if at all, in previous rulemaking cycles. But this is because no previous exemption proponent has seriously argued for an exemption with a direct impact on such a highly regulated sector as the automotive industry. Many of the electronic control units which proponents seek to hack in order to modify their firmware were first developed, and have consistently been maintained, for the purpose of achieving compliance with numerous federal and state regulatory mandates, in critical fields including but not limited to those listed above. (Indeed, the very first computerized controls in autos were adopted with the specific goal of facilitating compliance with the pioneering air pollution standards imposed in California in the 1970s.)⁷¹

Today’s motor vehicles must meet exacting standards regarding fuel economy, emissions controls, driver and passenger safety, and many other criteria. Vehicles which do not meet these standards are not allowed to be sold; dealers, repair shops, and other commercial providers are prohibited from knowingly modifying vehicles to take them out of compliance with these

⁶⁶ Freeman Class 21 Comment.

⁶⁷ See EFF Class 21 Comment at 18, fn. 129 (Tom Bell, *Long Drive for Car Repair Sparks Call For Legislation*, PORTLAND PRESS HERALD, Feb. 4, 2013, http://www.pressherald.com/2013/02/04/long-drive-for-car-repair-sparks-call-for-legislation_2013-02-04/). The article’s concluding sentence states that the repair shop in question now has the needed codes, which it had lacked the preceding year, and thus could henceforth carry out the diagnosis and repair itself. Subaru is not a member of the Auto Alliance.

⁶⁸ 2012 Recommendation at 8.

⁶⁹ 2014 NOI at 55,690.

⁷⁰ 17 U.S.C. § 1201(a)(1)(C)(v).

⁷¹ EFF Class 21 Comment at 2, fn. 7 (citing Koscher Article).

standards; and vehicles that have been so modified may no longer be able to satisfy vehicle inspection standards for state motor vehicle registration.⁷² Because the firmware in the ECUs of today's cars has been carefully calibrated to achieve compliance with this array of regulatory standards, the modifications which would (according to the proponents of the exemption) be facilitated through circumvention of access controls on the firmware will frequently take the vehicles out of compliance with these standards.

Without regard to the complex question of who would be legally responsible for such non-compliance, the "real-world effect" of giving the Copyright Office's sanction to unlimited modification of these ECUs by (or on behalf of) individual owners would be to lower the overall level of compliance.⁷³ More fossil fuel will be consumed; more air pollution will be generated; more drivers, passengers and pedestrians will be injured in the operation of less safe vehicles; and the personal security of American drivers, including their security against theft of their vehicles, will be diminished. The extent of these negative impacts may be impossible to quantify; but they appear to be an inescapable consequence of allowing unrestricted modification or "personalization" of these aspects of today's motor vehicles; and a decision by the Librarian of Congress to exempt this firmware from the legal protection offered by the DMCA's prohibition on circumvention of access controls will inevitably be perceived by the public as a government endorsement of such activities.

A few examples may illustrate the problem.

- The radio head unit lockouts prevent, among other things, front-seat display of video while the vehicle is in motion, in order to reduce driver distraction. A well-known hack, available at www.dvdbypass.com, circumvents this lockout and enables video displays while driving. The safety concerns are obvious, and are reflected and documented in the Driver Distraction Guidelines promulgated by the National Highway Traffic Safety Administration (NHTSA), which hold that displaying a video not related to driving inherently interferes with a driver's ability to safely operate her vehicle.⁷⁴ While the guidelines are voluntary, this modification also brings the vehicle into non-compliance with federal motor carrier safety regulations that mandate that any viewers, screens, or other equipment for receiving a television broadcast must be placed behind the driver or

⁷² See, e.g., 42 U.S.C. § 7522 (3) (knowingly removing or rendering inoperative after delivery to the purchaser "any device or element of design" installed in or on a motor vehicle in compliance with emissions standards regulations is prohibited); 49 U.S.C. § 30122 (b) ("motor vehicle repair businesses [as well as dealers] may not knowingly make inoperative any part of a device or element of design installed in or on a motor vehicle in compliance with an applicable motor vehicle safety standard").

⁷³ See 2012 Recommendation at 44 (proponents must "address the "real-world impact" of their proposed exemption).

⁷⁴ *Visual-Manual NHTSA Driver Distraction Guidelines For In-Vehicle Electronic Devices*, NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, Docket No. NHTSA-2010-0053 (Issued Apr. 19, 2013).

situated where the driver cannot see the screen.⁷⁵ In addition, most states have enacted laws regarding the acceptance of image displays, screens, monitors, etc. within the passenger compartment, and this modification of an ECU would violate most if not all of these.⁷⁶

- “Odometer Correction Tools” are hand held devices with vehicle-specific software that was reverse engineered to unlock vehicle ECUs and modify the odometer value.⁷⁷ Odometer tampering is a federal felony, and has been for decades.⁷⁸ It also violates the laws of virtually every state.⁷⁹ Investigation by one Auto Alliance member showed that use of some of these tools also had collateral (and perhaps inadvertent) safety consequences, as they caused erratic vehicle behavior while the odometer was being modified.
- All vehicle ECU systems are interconnected through a central Controller Area Network (CAN). As sources cited by EFF explain, “many features require complex interactions across ECUs.”⁸⁰ Modifications made to one ECU system may inadvertently affect other ECUs control of other vehicle functions, and can also wreak havoc with the CAN system as a whole.

While the legal and safety implications of these particular hacks of vehicle ECU firmware are blatant and perhaps dramatic, they are far from exceptional. Many of the modifications described in the materials submitted by proponents, including aftermarket engine-transmission calibration modifications such as those found on sites like diabloport.com, take vehicles out of compliance with emissions and fuel economy standards. Auto Alliance is not asserting that all the modifications enabled by circumvention of access controls on auto firmware

⁷⁵ 49 C.F.R. 393G § 393.88 (FMCSRs), Code of Federal Regulations, Federal Motor Carrier Safety Regulations, Parts and Accessories Necessary for Safe Operation, Television Receivers.

⁷⁶ See, e.g., Code of Alabama, § 32-5-219 (2008); The Alaska Statutes, AS § 28.35.161; Arizona Revised Statutes, § 28-963; California Vehicle Code, § 27602(a); Connecticut General Statutes, § 14-105; Illinois Vehicle Code, 625 ILCS 5/Ch. 12, § 604.1; Louisiana Revised Statutes, § 32:365; Massachusetts General Laws, § 90-13; Nebraska Revised Statutes, § 60-6,287; New Hampshire Statutes, § 266:75; New Jersey Permanent Statutes, § 39:3A-1; New York Vehicle and Traffic Law, § 375-24; North Carolina General Statutes, § 20-136.1; Oklahoma Statutes, § 47-12-411; Oregon Revised Statutes, § 815.240; Texas Transportation Code, § 547.611; Vermont Statutes Annotated, 23 VSA § 1095; Revised Code of Washington, §46.37.480(1); West Virginia Code, § 17C-15-42; Wisconsin Statutes, § 346.89(2)

⁷⁷ For an example, see <http://smelecomus.com/smelecom/usa-prog.htm>.

⁷⁸ 49 U.S.C. § 32701 et seq.; see <http://www.justice.gov/civil/case/federal-odometer-tampering-statutes>.

⁷⁹ <http://notfea.org/fraud/>.

⁸⁰ EFF Class 21 Comment at 2, fn. 7 (citing Koscher Article (describing interactions among Electronic Stability Control, Anti-Lock Braking System, Roll Stability Control, Active Cruise Control, and other systems in preventing accidents)).

necessarily have these deleterious effects on compliance with regulatory standards, and on the social and environmental values those standards are meant to advance. It is certainly possible, for example, that particular modifications that recognition of this exemption would facilitate, could, for instance, improve the fuel economy of a particular vehicle – although, as proponents’ own sources admit, there is plenty of reason for skepticism.⁸¹ But in general, the modifications that this exemption would enable would, to a greater or lesser degree, have the opposite effect. In this regard, it is notable that David Blundell’s “first step in the field of ECU modification” had a very simple goal, one probably shared by the great majority of the “tinkerers” that EFF purports to represent – “to make the car go faster.”⁸² In addition to the obvious safety risks associated with unregulated speeds, cars that go faster tend to burn more fuel and tend to produce more emissions. Certainly this is not always the case – but it is true more often than not, and it stands to reason that encouraging modification will lead to more, not fewer cars on the road that are out of compliance with federal emissions and fuel economy standards.

The security implications of action in this proceeding to permit the circumvention access controls on firmware in vehicle ECUs is particularly troubling. A seminal research report cited several times by EFF describes a chilling array of exploits enabled by hacking motor vehicle firmware, including disabling the brakes, falsifying speedometer readings, preventing the car from being turned on or off, and both starting and killing the engine.⁸³ While this 2010 article may not reliably reflect the current status quo with regard to the security and resiliency against attack of today’s ECUs, its central point remains valid: “the core problem is lack of access control.”⁸⁴ If access controls that are too weak, or too easily circumvented, play a fundamental role in the security challenges facing the automotive industry, then it defies logic to argue that exempting from any liability for such circumvention a legion of “tinkerers,” and perhaps also the businesses and individuals who cater to them, is a reasonable solution.

Consider the assertion by Blundell that any replacement of a “modern vehicle computer” requires reprogramming, or disabling, the anti-theft system.⁸⁵ Blundell acknowledges that one way this can be done is with the cooperation of the manufacturer, but he evidently objects to the fact that there is some cost associated with this method (“paying for the information from the manufacturer”). The alternative proposed by EFF is to encourage “tinkerers” to disable these systems in order to enable the modifications they desire, with no assurance that the system will be re-activated or that it will function properly afterwards.

⁸¹ See EFF Class 21 Comment at 2, fn. 9 (citing James Foxall, *Can You Improve Economy by Chipping Your Car’s Engine?*, THE TELEGRAPH, Feb. 7, 2013 (“The manufacturers are obsessed with making their cars as fuel efficient as possible. They invest in new materials and spend billions developing engines. If they could get their engines to be more economical without a tradeoff somewhere, they would.”)).

⁸² Blundell Statement at ¶ 3.

⁸³ Koscher Article at 7-12.

⁸⁴ *Id.* at 14.

⁸⁵ Blundell Statement at ¶ 6.

Along with safety and security issues come liability questions. When an accident occurs, especially if the result is loss of life or serious personal injury, forensic investigations can often detect defective or previously damaged physical parts that may have contributed to causing the accident, thus assisting in the assignment of legal responsibility. However, it may be much more difficult to detect modifications to vehicle software, even though these could just as easily be contributing to the accident. Other liability issues could arise through re-sale of a vehicle that has been modified, perhaps without the knowledge of subsequent purchasers and re-sellers, to take it out of compliance with federal safety, emissions, and/or fuel economy standards.

Auto Alliance is aware that in past rulemaking cycles, the Copyright Office has been unreceptive to objections to proposed exemptions that it perceives to be motivated by harms to “business interests” rather than “copyright interests.” Without regard to whether that distinction – which is not mandated or even referenced in the statute – was appropriately applied in the past, Auto Alliance urges the Copyright Office not to do so here. Compelling evidence of the legal and regulatory harms that would be inflicted by a decision to allow unrestricted circumvention of access controls on vehicle firmware, in order to modify or “personalize” the performance of motor vehicles, should neither be excluded nor deprecated.

In the previous cycles – for example, with respect to smartphone jailbreaking – the Copyright Office approved exemptions when it found that “access controls served to promote a restrictive business model rather than meaningful copyright interests.”⁸⁶ That is emphatically not the dichotomy that applies here. The widespread and proliferating use of ECUs to control more, and more complex, aspects of motor vehicle performance, whether or not it delivers business benefits, is a necessity, not a choice, for the U.S. automotive industry, in order to produce cars that will fulfill ever more stringent regulatory standards for safety, fuel efficiency, and emissions controls. And the decision to employ access controls to hinder unauthorized “tinkering” with these vital computer programs is also a business necessity, in order to protect the safety and security of drivers and passengers and to reduce the level of non-compliance with regulatory standards.

EFF is correct that “code is necessary for vehicles to function and is produced for non-copyright related reasons.”⁸⁷ But it is wrong to assert that allowing unrestricted circumvention of access controls will produce “no market harm cognizable by copyright law.” As the Copyright Office recognized in setting the ground rules for a previous rulemaking cycle, “the harm identified by a proponent of an exemption must be balanced with the harm that would result from an exemption. In some circumstances, the adverse effect of a proposed exemption in light of these considerations may be greater than the harm posed by the prohibition on

⁸⁶ 2012 Recommendation at 40.

⁸⁷ EFF Class 21 Comment at 23. However, EFF’s analysis of some of the other statutory factors is completely unsupported by evidence in the record. In particular, to assert that Section 1201(a)(1)(A) has cast a “legal cloud” that “reduces participation in research, scholarship and teaching on vehicle functionality, repair and modification, as well as critiquing, commenting and reporting on the functionality of manufacturer software and potential alternatives,” is belied by proponents’ own evidence of the robustness of the “tinkerer” community and the liveliness of the public debate over the issues highlighted in the EFF submission. *Id.* at 24.

circumvention of works in the proposed class.”⁸⁸ The Auto Alliance urges the Copyright Office to acknowledge that this proposal presents one of those circumstances. It diverges dramatically from all past proposals that targeted access controls that were employed in much less regulated sectors, and that were instituted for reasons having nothing to do with ensuring legal and regulatory compliance with fundamental national policies. We urge the Copyright Office to give full consideration to the impacts on critical national energy and environmental goals, and on motor vehicle safety, in its decision on this proposed exemption.

Item 8. Documentary Evidence

Exhibit A: Memorandum of Understanding and Right to Repair (R2R) Agreement
(January 15, 2014)

Exhibit B: Letter to Sen. Dorgan (September 20, 2002)

⁸⁸ Exemption to the Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies; Notice of Inquiry and Request for Petitions, 76 Fed. Reg. 60,398, 60,403 (Sept. 29, 2011).

Exhibit A



AUTO ALLIANCE
DRIVING INNOVATION[®]

AAIA[®]
Automotive Aftermarket
Industry Association

GlobalAutomakers 

CARE


MEMORANDUM of UNDERSTANDING

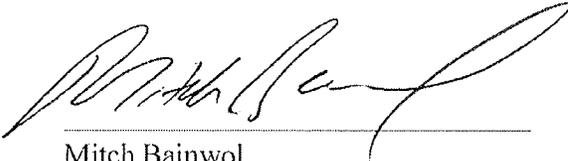
The Automotive Aftermarket Industry Association (“AAIA”), Coalition for Auto Repair Equality (“CARE”), Alliance of Automobile Manufacturers (“Alliance”) and Association of Global Automakers (“Global Automakers”) (“the Original Parties”) enter into this Memorandum of Understanding (MOU) on this Fifteenth (15th) day of January, 2014 and voluntarily agree as follows:

1. The Original Parties fully support this MOU and attached “Right to Repair” (R2R) agreement (“R2R Agreement”). Automobile manufacturer members of the Alliance and Global Automakers indicate their individual company’s agreement to comply with the MOU and R2R Agreement in all fifty (50) States and the District of Columbia through their individual letters of endorsement.
2. Until such time as the provisions of Section 2(e)(i) (common interface device) of the R2R Agreement have been fully implemented, with respect to model year 2018 and newer vehicles, for two years or January 2, 2019, whichever is earlier, and provided the OEMs comply with the MOU during this period, CARE and AAIA agree to continue to work with other Original Parties to fully implement the MOU and to oppose and not to fund or otherwise support, directly or indirectly, any new state R2R legislation.
3. The Original Parties agree to work to strongly encourage any new entrants to the U.S. automotive market or to R2R issues to become signatories to the MOU.
4. The Original Parties agree to work together to resolve any future or related R2R issues that might otherwise be the subject of state legislation and, subject to the mutual consent of the Original parties, amend the MOU and R2R Agreement to include these additional matters.
5. Once the Original Parties have signed on to the MOU, additional parties may join but any amendments or revisions to the terms of the MOU and R2R Agreement, triggered by admission of additional participants, shall require consent of the Original Parties.
6. The Original Parties agree to meet as needed and at least semi-annually, to assess how the MOU is operating, address operational concerns and discuss any other matters relevant to R2R or the MOU or future amendments or parties to the MOU. In the event that one of

the Original Parties concludes that, due to changed circumstances, the MOU or R2R Agreement may no longer be viable, that party shall, upon thirty (30) days written notice to the other three Original Parties, call a meeting to discuss the need for the MOU and R2R Agreement to continue.

7. The Original Parties agree that should a state(s) pass a law relating to issues covered by this MOU and R2R Agreement, after the effective date of the MOU and R2R Agreement, any automobile manufacturer member of the Alliance and Global Automakers may elect to withdraw its letter of endorsement for the MOU and R2R Agreement partially or entirely for the impacted state(s).

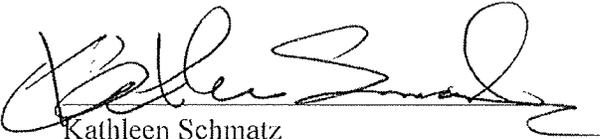
Signed on this 15th day of January, 2014:



Mitch Bainwol
President & CEO
Alliance of Automobile Manufacturers



Michael Stanton
President & CEO
Association of Global Automakers



Kathleen Schmatz
President & CEO
Automotive Aftermarket Industry Association



Ray Pohlman
President
Coalition for Auto Repair Equality

R2R AGREEMENT

Section 1. As used in this agreement, the following words shall, unless the context clearly indicates otherwise, have the following meanings:

“Dealer”, any person or business who, in the ordinary course of its business, is engaged in the business of selling or leasing new motor vehicles to consumers or other end users pursuant to a franchise agreement and who has obtained a license, as required under applicable law, and is engaged in the diagnosis, service, maintenance or repair of motor vehicles or motor vehicle engines pursuant to said franchise agreement.

“Franchise agreement”, a written arrangement for a definite or indefinite period in which a manufacturer or distributor grants to a motor vehicle dealer a license to use a trade name, service mark or related characteristic and in which there is a community of interest in the marketing of new motor vehicles or services related thereto at wholesale, retail, leasing or otherwise.

“Fair and Reasonable Terms” Provided that nothing in this MOU and R2R Agreement precludes an automaker and an owner or independent repair shop who is subject to the agreement from agreeing to the sale of information and tools on any other terms on which they agree, in determining whether a price is on “fair and reasonable terms,” consideration may be given to relevant factors, including, but not limited to, the following:

(i) The net cost to the manufacturer’s franchised dealerships for similar information obtained from manufacturers, less any discounts, rebates, or other incentive programs.

(ii) The cost to the manufacturer for preparing and distributing the information, excluding any research and development costs incurred in designing and implementing, upgrading or altering the onboard computer and its software or any other vehicle part or component. Amortized capital costs for the preparation and distribution of the information may be included.

(iii) The price charged by other manufacturers for similar information.

(iv) The price charged by manufacturers for similar information prior to the launch of manufacturer web sites.

(v) The ability of aftermarket technicians or shops to afford the information.

(vi) The means by which the information is distributed.

(vii) The extent to which the information is used, which includes the number of users, and frequency, duration, and volume of use.

(viii) Inflation.

“Immobilizer system”, an electronic device designed for the sole purpose of preventing the theft of a motor vehicle by preventing the motor vehicle in which it is installed from starting without the correct activation or authorization code.

"Independent repair facility", a person or business that is not affiliated with a manufacturer or manufacturer's authorized dealer of motor vehicles, which is engaged in the diagnosis, service, maintenance or repair of motor vehicles or motor vehicle engines;

"Manufacturer", any person or business engaged in the business of manufacturing or assembling new motor vehicles.

"Dispute Resolution Panel (DRP)", a 5-person panel established by the Original Parties comprised of the following: one Alliance representative, Alliance member or Alliance designee, one Global Automakers representative, Global Automakers' manufacturer member or Global Automakers designee, two representatives of the independent vehicle repair industry to be selected and mutually agreed upon by AAIA and CARE, and one DRP Chair. The DRP Chair shall be an independent professional mediator with no affiliation to any of the Original Parties, shall be selected by unanimous consent of the Original Parties and shall be funded in equal amounts by each of the Original Parties. The Original Parties shall, at one of the two annual meetings, have an opportunity to revisit their respective representative or ask the Original Parties to revisit the person acting as DRP Chair.

"Motor vehicle", any vehicle that is designed for transporting persons or property on a street or highway and that is certified by the manufacturer under all applicable federal safety and emissions standards and requirements for distribution and sale in the United States, but excluding (i) a motorcycle; (ii) a vehicle with a gross vehicle weight over 14,000 pounds; or (iii) a recreational vehicle or an auto home equipped for habitation.

"Owner", a person or business who owns or leases a registered motor vehicle.

"Trade secret", anything, tangible or intangible or electronically stored or kept, which constitutes, represents, evidences or records intellectual property including secret or confidentially held designs, processes, procedures, formulas, inventions, or improvements, or secret or confidentially held scientific, technical, merchandising, production, financial, business or management information, or anything within the definition of 18 U.S.C. § 1839(3).

Section 2.

(2)(a). Except as provided in subsection (2)(e), for Model Year 2002 motor vehicles and thereafter, a manufacturer of motor vehicles sold in United States shall make available for purchase by owners of motor vehicles manufactured by such manufacturer and by independent repair facilities the same diagnostic and repair information, including repair technical updates, that such manufacturer makes available to its dealers through the manufacturer's internet-based diagnostic and repair information system or other electronically accessible manufacturer's repair information system. All content in any such manufacturer's repair information system shall be made available to owners and to independent repair facilities in the same form and manner and to the same extent as is made available to dealers utilizing such diagnostic and repair information system. Each manufacturer shall provide access to such manufacturer's diagnostic and repair information system for purchase by owners and independent repair facilities on a daily, monthly and yearly subscription basis and upon fair and reasonable terms.

(2)(b)(i) For Model Year 2002 motor vehicles and thereafter, each manufacturer of motor vehicles sold in the United States shall make available for purchase by owners and independent repair facilities all diagnostic repair tools incorporating the same diagnostic, repair and wireless capabilities that such manufacturer makes available to its dealers. Such tools shall incorporate the same functional repair capabilities that such manufacturer makes available to dealers. Each manufacturer shall offer such tools for sale to owners and to independent repair facilities upon fair and reasonable terms.

(ii) Each manufacturer shall provide diagnostic repair information to each aftermarket scan tool company and each third party service information provider with whom the manufacturer has appropriate licensing, contractual or confidentiality agreements for the sole purpose of building aftermarket diagnostic tools and third party service information publications and systems. Once a manufacturer makes such information available pursuant to this section, the manufacturer will have fully satisfied its obligations under this section and thereafter not be responsible for the content and functionality of aftermarket diagnostic tools or service information systems.

(2)(c)(i) Commencing in Model Year 2018, except as provided in subsection (2)(e), manufacturers of motor vehicles sold in the United States shall provide access to their onboard diagnostic and repair information system, as required under this section, using an off-the-shelf personal computer with sufficient memory, processor speed, connectivity and other capabilities as specified by the vehicle manufacturer and:

(a) a non-proprietary vehicle interface device that complies with the Society of Automotive Engineers SAE J2534, the International Standards Organizations ISO 22900 or any successor to SAE J2534 or ISO 22900 as may be accepted or published by the Society of Automotive Engineers or the International Standards Organizations; or,

(b) an on-board diagnostic and repair information system integrated and entirely self-contained within the vehicle including, but not limited to, service information systems integrated into an onboard display, or

(c) a system that provides direct access to on-board diagnostic and repair information through a non-proprietary vehicle interface such as Ethernet, Universal Serial Bus or Digital Versatile Disc. Each manufacturer shall provide access to the same on-board diagnostic and repair information available to their dealers, including technical updates to such on-board systems, through such non-proprietary interfaces as referenced in this paragraph. Nothing in this agreement shall be construed to require a dealer to use the non-proprietary vehicle interface (i.e., SAE J2534 or ISO 22900 vehicle interface device) specified in this subsection, nor shall this agreement be construed to prohibit a manufacturer from developing a proprietary vehicle diagnostic and reprogramming device, provided that the manufacturer also complies with Section 2(c)(i) and the manufacturer also makes this device available to independent repair facilities upon fair and reasonable terms, and otherwise complies with Section 2(a).

(2)(c)(ii) No manufacturer shall be prohibited from making proprietary tools available to dealers if such tools are for a specific specialized diagnostic or repair procedure developed for

the sole purpose of a customer service campaign meeting the requirements set out in 49 CFR 579.5, or performance of a specific technical service bulletin or recall after the vehicle was produced, and where original vehicle design was not originally intended for direct interface through the non-proprietary interface set out in (2)(c)(i). Provision of such proprietary tools under this paragraph shall not constitute a violation of this agreement even if such tools provide functions not available through the interface set forth in (2)(c)(i), provided such proprietary tools are also available to the aftermarket upon fair and reasonable terms. Nothing in this subsection (2)(c)(ii) authorizes manufacturers to exclusively develop proprietary tools, without a non-proprietary equivalent as set forth in (2)(c)(i), for diagnostic or repair procedures that fall outside the provisions of (2)(c)(ii) or to otherwise operate in a manner inconsistent with the requirements of (2)(c)(i).

(2)(d) Manufacturers of motor vehicles sold in the United States may exclude diagnostic, service and repair information necessary to reset an immobilizer system or security-related electronic modules from information provided to owners and independent repair facilities. If excluded under this paragraph, the information necessary to reset an immobilizer system or security-related electronic modules shall be obtained by owners and independent repair facilities through the secure data release model system as currently used by the National Automotive Service Task Force or other known, reliable and accepted systems.

(2)(e) With the exception of telematics diagnostic and repair information that is provided to dealers, necessary to diagnose and repair a customer's vehicle, and not otherwise available to an independent repair facility via the tools specified in 2(c)(i) above, nothing in this agreement shall apply to telematics services or any other remote or information service, diagnostic or otherwise, delivered to or derived from the vehicle by mobile communications; provided, however, that nothing in this agreement shall be construed to abrogate a telematics services or other contract that exists between a manufacturer or service provider, a motor vehicle owner, and/or a dealer. For purposes of this agreement, telematics services include but are not limited to automatic airbag deployment and crash notification, remote diagnostics, navigation, stolen vehicle location, remote door unlock, transmitting emergency and vehicle location information to public safety answering points as well as any other service integrating vehicle location technology and wireless communications. Nothing in this agreement shall require a manufacturer or a dealer to disclose to any person the identity of existing customers or customer lists.

Section 3. Nothing in this agreement shall be construed to require a manufacturer to divulge a trade secret.

Section 4. Notwithstanding any general or special law or any rule or regulation to the contrary, no provision in this agreement shall be read, interpreted or construed to abrogate, interfere with, contradict or alter the terms of any franchise agreement executed and in force between a dealer and a manufacturer including, but not limited to, the performance or provision of warranty or recall repair work by a dealer on behalf of a manufacturer pursuant to such franchise agreement.

Section 5. Nothing in this agreement shall be construed to require manufacturers or dealers to provide an owner or independent repair facility access to non-diagnostic and repair information

provided by a manufacturer to a dealer, or by a dealer to a manufacturer pursuant to the terms of a franchise agreement.

Section 6. If an independent repair facility or owner believes that a manufacturer has failed to provide the information or tool required by this MOU, he may challenge the manufacturer's actions by first notifying the manufacturer in writing. The manufacturer has thirty (30) days from the time it receives the reasonably clear and specific complaint to cure the failure, unless the parties otherwise agree. If the complainant is not satisfied, he has thirty (30) days to appeal the manufacturer's decision to the DRP. The DRP shall be convened by the Chair within thirty (30) days of receipt of the appeal of the manufacturer's decision. The DRP will attempt to reach agreement between the parties. If unsuccessful, the DRP shall convene and issue its decision. The decision must be issued within 30 days of receipt of the appeal of the manufacturer's decision, unless otherwise agreed to by the parties. The DRP decision shall be disseminated to the complainant, the manufacturer, and the Original Parties. If the manufacturer and complainant still cannot reach agreement, the complainant may take whatever legal measures are available to it.

Exhibit B



September 20, 2002

The Honorable Byron Dorgan
Chairman
Subcommittee on Consumer Affairs, Foreign Commerce and Tourism
U.S. Senate Commerce, Science, and Transportation Committee
Washington, D.C. 20510

Dear Chairman Dorgan:

As the Subcommittee requested, our associations have discussed the issues reviewed at the Subcommittee's July 30, 2002 hearing on Customer Choice in Automotive Repair Shops (S. 2617). We believe the following commitments by automakers will provide independent repairers the necessary service information and diagnostic tools to compete and serve consumers in the marketplace.

The members of the Alliance of Automobile Manufacturers and the Association of International Automobile Manufacturers listed below fully support the following:

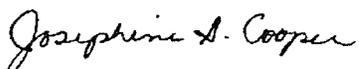
Automobile manufacturers hereby commit to make available, by August 31, 2003, emission and non-emission-related service information, training information, and diagnostic tools in the same manner and to the same extent as specified by California Air Resources Board (CARB) regulations for emission-related systems and components. This means that 1) the same service and training information related to vehicle repair will be made available to independent repair shops either via the Internet, or in the same manner and extent as it is made available to franchised dealerships and 2) the same diagnostic tools related to vehicle repair that are made available to the franchised dealers will be made available to the independent repair shops. These will be made available at a reasonable price consistent with the guidelines provided in CARB regulations. The service and training information and manufacturer tools will be available to independent repair shops without the need for them to return to a franchised dealership (to the extent allowed by law).

This commitment will continue the viability of the automotive service industry and preclude the need for current legislation while we work on implementation. Moreover, successful implementation will eliminate the need for future state and federal legislation.

Manufacturers recognize the value of third-party providers of tools, service and training information and are committed to making available to information providers and tool companies the service and training information, tools and tool information. The National Automotive Service Task Force will continue to provide a forum for industry and aftermarket to resolve service information issues. We ask that the Subcommittee and its staff periodically review the progress being made toward the objectives above.

We believe this continues a long tradition of the independent repairer's important position in the automotive industry. It also demonstrates our mutual commitment to fair and open competition in the auto service industry and to consumer choice in seeking these services. Please feel free to call on our organizations if you have any questions.

Sincerely,



Josephine S. Cooper
President & CEO
Alliance of Automobile
Manufacturers, Inc.



Timothy C. MacCarthy
President & CEO
Association of International
Automobile Manufacturers, Inc.



Dan Frohlich
Chairman
Automotive Service Association

Automobile Makes:

Acura
Aston-Martin
Audi
BMW
Buick
Cadillac
Chevrolet
Chrysler
Dodge
Ford
GMC
Honda

Hyundai
Infiniti
Isuzu
Jaguar
Jeep
Kia
Land Rover
Lexus
Lincoln
Mazda
Mercedes-Benz
Mercury

Mitsubishi
Nissan
Oldsmobile
Pontiac
Saab
Saturn
Subaru
Suzuki
Toyota
Volvo
Volkswagen