

SIXTH TRIENNIAL  
1201 RULEMAKING HEARINGS

PROPOSED CLASSES 22, 8, 21

May 19, 2015

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PAGES 1 - 292

1 A P P E A R A N C E S

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3 PANEL MEMBERS:

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5 JACQUELINE CHARLESWORTH  
General Counsel, Copyright Office

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Deputy General Counsel, Copyright Office

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9 STEVE RUWE  
Assistant General Counsel, Copyright Office

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13 STACY CHENEY  
National Telecommunications and Information  
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1 APPEARANCES (continued):

2

3 PROPONENTS:

4 CATHERINE GELLIS  
5 Digital Age Defense

6 SHERWIN SIY  
7 Public Knowledge

8 CHARLIE MILLER  
9 Electronic Frontier Foundation

10 KIT WALSH  
11 Electronic Frontier Foundation

12 OPPONENTS:

13 HARRY M. LIGHTSEY, III  
14 General Motors, LLC

15 STEVEN J. METALITZ  
16 Alliance of Automobile Manufacturers

17 BRUCE TURNBULL  
18 AACS LA and DVDCCA

19 JAMIE VORIS  
20 The Walt Disney Studios

21 MARK TEITELL  
22 Digital Entertainment Content  
23 Ecosystem (DECE) and Ultraviolet

24 J. MATTHEW WILLIAMS  
25 Entertainment Software Association  
Motion Picture Association of America  
Recording Industry Association of America

1 P R O C E E D I N G S

2 WESTWOOD, CALIFORNIA; TUESDAY, MAY 19, 2015

3 8:00 A.M.

4

5 MS. CHARLESWORTH: Good morning, Everyone,  
6 and welcome to the Sixth Triennial Section 1201  
7 Rulemaking Process.

8 I am Jacqueline Charlesworth, General  
9 Counsel of the U.S. Copyright Office, and I will be  
10 presiding over this today with my colleagues.

11 I am joined today by Sy Damle, Deputy  
12 General Counsel for the Copyright Office; Steve  
13 Ruwe, Assistant General Counsel for the Copyright  
14 Office; Regan Smith, also Assistant General Counsel  
15 for the Copyright Office; and Stacy Cheney, the  
16 National Telecommunications and Information  
17 Administration within the Department of Commerce.

18 We are excited to be here today to hear  
19 all of your evidence and we're thankful to UCLA for  
20 giving us this room.

21 This is not the first hearing we have had  
22 here. And as usual, UCLA has been extremely  
23 generous in providing support. Professor David  
24 Nimmer, Professor David Netel and also Rusty  
25 Klibaner -- I don't know if he is in the room -- have

1       been extraordinarily helpful to us. So we are very  
2       grateful to have this very pleasant room in which to  
3       conduct our proceedings.

4               First of all, all of you probably realize  
5       the goal of these hearings is to analyze and  
6       evaluate and further develop for the record in  
7       relation to proposed exemptions to the  
8       anti-circumvention provisions contained in  
9       Section 1201 of the U.S. Copyright Act.

10              There are a wide range of issues we will  
11       considering during the course of the hearings.

12              We are very interested this clarifying and  
13       developing the record rather than going over certain  
14       arguments in the written comments. It really helps  
15       us if we can hone in on issues, particularly  
16       disputed issues or areas where the evidence may not  
17       be as helpful as we would like it to be.

18              We carefully studied the written comments,  
19       though, and we will have many questions that come  
20       out of those comments. So we're, again, grateful to  
21       have you experts in the room with us today.

22              Some rules of the road, speak into your  
23       mic. I will be calling on people or others here  
24       will be calling on you. If you want to add  
25       something or make a comment, pick up your placard

1       and that way, we will know you want to speak. And  
2       we try to take people in order, but don't worry, we  
3       will get to you.

4               We're going to give everyone a couple of  
5       minutes -- two to three minutes -- to make a brief  
6       opening statement. And after we go through  
7       introductions, then we will delve into questions.  
8       And we have many.

9               For those of you -- none of you has  
10       exhibits today; is that correct?

11              But for anyone sitting in the audience, we  
12       will be marking exhibits. We are going to try to  
13       keep better track of them than we have in the past.  
14       If you are referencing an exhibit that actually was  
15       submitted earlier, as with your written comments, we  
16       may stop you and make sure that we are properly  
17       identifying it from the public record so we know  
18       exactly what you are talking about.

19              So please, try and be specific when you  
20       are referencing exhibits, particularly the  
21       multimedia material that was submitted earlier.

22              So are there any questions about the  
23       process?

24              So without further adieu, I am going to  
25       ask the panelists to identify themselves and any

1       affiliation or interest that they bring with them  
2       today.

3               We will start with you.

4               MR. WALSH: Is this the opportunity for  
5       our five-minute statements, as well?

6               MS. CHARLESWORTH: No. Why don't you  
7       ahead and introduce yourself first, and then we will  
8       go through the statements. This will help the  
9       reporter so he knows who everyone is.

10              MR. WALSH: I am Kit Walsh from the  
11       Electronic Frontier Foundation.

12              MR. MILLER: I am Dr. Charlie Miller. I'm  
13       a security researcher.

14              MS. GELLIS: Kathy Gellis. I'm an  
15       attorney in solo practice and I am here with my  
16       Digital Age Defense project.

17              MR. METALITZ: I am Steve Metalitz. I am  
18       a lawyer with Mitchell, Silberberg and Knupp, LLP,  
19       and I am here representing the Alliance of  
20       Automobile Manufacturers.

21              MR. LIGHTSEY: Hello, I am Harry Lightsey  
22       with General Motors.

23              MS. CHARLESWORTH: So now, we will just, I  
24       guess, go from left to right again. And if you  
25       would like to make a brief opening statement, for

1 the record, we would appreciate that.

2 MR. WALSH: Thank you.

3 We're here because experts like Dr. Miller  
4 want to make cars safer and 1201 is, unfortunately,  
5 getting in the way.

6 Independent security research is of  
7 crucial importance to vehicle security and safety  
8 and we know this because some researchers have been  
9 willing and able to take on the legal risks  
10 associated with this research and have discovered an  
11 wide range of vulnerabilities and their independent  
12 work has led to vehicles becoming safer.

13 Senator Markey's report lays out some of  
14 the history. Starting in 2010, independent  
15 researchers started to look into vehicle security  
16 and discovered that there were serious problems as a  
17 result of their ability to investigate the code,  
18 make changes, modify vehicle functions, including  
19 braking, steering and so forth.

20 And unfortunately, many of their concerns  
21 were dismissed when they brought them to the  
22 manufacturers.

23 As a result of the fact that they were  
24 able to publish and their results got the attention  
25 of consumers and regulators and the press, we have



1 over the years seen improvements in auto safety, but  
2 the Markey report makes it clear that practices  
3 remain uneven and haphazard.

4 One of the reasons for this is that  
5 Section 1202 chills legitimate security research.

6 So we have seen in the record accounts of  
7 researchers talking about the chilling effect. We  
8 have seen important information left out of  
9 publications about security research such as the  
10 identify of devices and cars being investigated and  
11 we have seen some of the research moved to countries  
12 like China.

13 So we have not only the researchers who  
14 wish to engage in this activity, but all of us who  
15 would benefit in their work are adversely impacted  
16 as a result of 1201.

17 And there can be no serious claim that  
18 this kind of research and criticism is copyright  
19 infringement. These are archetypal area uses and  
20 the lawfulness of these activities is further  
21 bolstered by Section 117. And the fact that the  
22 exemption is warranted is further reinforced by the  
23 statutory factors that are to be considered in this  
24 rulemaking, the promotion of critical works that  
25 security researches are generating through

1 improvement of code.

2 There is no reduction in the availability  
3 of vehicle software, which after all, is created for  
4 non-copyrighted purposes.

5 The exemption would serve the kinds of  
6 purposes contemplated by the second and third  
7 statutory factors, particularly research and news  
8 reporting and criticism. And the value of the  
9 copyrighted works, there are a couple of things that  
10 can happen when researchers take a look at your  
11 code. Either it can get a thumbs up, which is good  
12 for the perception of the product or it can be  
13 criticized. And that kind of criticism is  
14 explicitly something that copyright law protects.  
15 You are allowed to criticize a product. You are  
16 allowed to point out issues with its functionality.  
17 That is not a harm that is acknowledgeable by  
18 copyright law.

19 So we are left with the other factors that  
20 can be considered. And the opponents of the  
21 exemption are trying to make that consideration do a  
22 lot of work by raising a variety of speculative,  
23 non-copyright risks, but those are not properly part  
24 of the analysis.

25 So in previous rulemakings, the Copyright

1 Office has pointed out that non-copyright business  
2 interests are not a legitimate reason to deny an  
3 exemption and they're not here, too.

4 To the extent that the speculative,  
5 non-copyright harms that the opponents brought up  
6 are required addressing that other specialized  
7 agencies whose purpose and expertise is to address  
8 those risks, but there is no other process to remove  
9 the prohibition on circumvention as a barrier to  
10 legitimate research activity.

11 There is only one of those non-copyright  
12 risks that I want to talk about in specific and that  
13 is the claim that vehicle security and safety will  
14 not in fact be improved by the proposed exemption.

15 So on the two sides of that discussion, we  
16 have on our side concrete, specific examples of  
17 independent security research that has identified  
18 vulnerabilities and led to improvements in safety.

19 On the other side, we have speculation  
20 that is based on theories that have been rejected by  
21 experts in the computer security world for at least  
22 a decade.

23 MS. CHARLESWORTH: I am going to  
24 interject. I have a question.

25 Is interest in sort of the integrity of

1       your copyrighted computer code -- that is one of the  
2       concerns that is raised by the opponents, that the  
3       code no longer serves the functions or will no  
4       longer be reliable if it's tampered with--  
5       is interest in preserving the integrity of  
6       that code a copyright interest?

7               MR. WALSH: We have actually seen in the  
8       recent Garcia decision that issues of integrity or  
9       authorial branding are not part of what is protected  
10      by copyright law. And in fact, to the extent that  
11      researchers are discovering that code is not  
12      achieving its desired functionality, that  
13      analysis -- that is a factual determination based on  
14      ideas and functionality which are not copyrightable  
15      expression.

16             MS. CHARLESWORTH: Right. But if someone  
17      take a copyrighted computer code and creates a new  
18      derivative work -- and a derivative work doesn't --  
19      you know, it's unauthorized, doesn't serve the  
20      purpose, you're saying that that is not -- you don't  
21      think that is cognizable as a copyright interest  
22      even though you are affecting a copyrighted work.

23             MR. WALSH: So the copyright interest that  
24      could potentially arise when someone creates a  
25      derivative work is that the derivative work could

1       substitute in the marketplace for the original.

2               MS. CHARLESWORTH: Well, the copyright  
3       interest in exclusive work, you know, tied to  
4       create derivative work, is that you have an  
5       exclusive right to create derivative works.

6               MR. WALSH: If the context of the fair use  
7       analysis, we are talking about what are the kinds of  
8       harms that can be addressed.

9               If you are asking if there a derivative  
10      work right, then there is a derivative work right.  
11      In the context of analyzing what is the effect on  
12      the market, there are a couple of categories of uses  
13      that are contemplated by the proposed exemption.

14              One major category is looking at the code  
15      and describing it, criticism. And you're raising  
16      another potential use case where you are actually  
17      crafting a patch that fixes a vulnerability has been  
18      found in the code.

19              And so to the extent that that achieves a  
20      new and different purpose from the original, then  
21      that is a factor one consideration.

22              MS. CHARLESWORTH: And that is a fair use  
23      category.

24              MR. WALSH: Exactly.

25              MR. MILLER: I think you can have a couple

1 of like 30 seconds to wrap up and then we will move  
2 onto Mr. Miller's opening statement.

3 Sorry I interrupted you. This will  
4 happen.

5 MR. WALSH: I appreciate your question. I  
6 appreciate the opportunity.

7 So in short on the question of the effect  
8 of the proposed exemption on security, we have  
9 concrete evidence that it will improve security.

10 We have speculation on the other side  
11 based on a couple of myths that have been rejected  
12 in the computer security world about the idea that  
13 you can build secure systems by keeping them  
14 isolated from independent scrutiny or the fiction  
15 that there malicious hackers who are waiting for  
16 legitimate researchers to find vulnerabilities and  
17 exploit them, both of which are speculation and  
18 myths in the security research world.

19 So for the foregoing reasons --

20 MS. CHARLESWORTH: You will hold your  
21 peace for now and we will come back, I'm sure,  
22 Mr. Miller.

23 MR. MILLER: So my name is Dr. Charlie  
24 Miller. I am a security researcher for the last few  
25 years specializing in security vehicles. I think I

1 am only the only one here on the panel that is not a  
2 lawyer.

3 I would like to tell you a little about  
4 the history of independent research in security  
5 vehicles, starting back in 2010 when researchers  
6 from the University of Washington and the University  
7 of California, San Diego explored the idea of what  
8 an attacker could do if they could inject messages  
9 into a can bus of a vehicle. So these researchers,  
10 they showed what could happen if they could inject  
11 messages into the can bus of the vehicle.

12 I should digress a bit and explain that in  
13 modern automobiles, there are 30 to 50 different  
14 small computers used. These computers each have a  
15 role to play in the functioning of the vehicle and  
16 individually perform such tasks as controlling the  
17 emergency brake or displaying the speed or  
18 controlling the transmission.

19 They all talk to each other and share data  
20 with each other. A typical means to do is the via  
21 the can bus.

22 The actual data sent between ECU's is  
23 proprietary. So these researchers showed if they  
24 could send messages on the bus, they could force the  
25 vehicle to perform certain safety critical actions.

1       These include actions such as locking up the brakes,  
2       making the brakes not work, stopping the engines and  
3       others, definitely not things you want your car  
4       doing without your consent.

5               This research was very interesting but  
6       received widespread criticism because people said  
7       there wasn't a waiver and an attacker couldn't  
8       inject these messages without close physical access  
9       to the vehicle, and with that type of close physical  
10      access, they could do other things.

11             The next year, the same research group  
12      showed that they could remotely perform these  
13      attacks. By reverse engineering code and some of  
14      important ECU's, they identified several  
15      vulnerabilities in the vehicle, for example, the  
16      bluetooth stack and the cellular components -- think  
17      OnStar, for example -- that allowed them to inject  
18      the messages into a vulnerable vehicle from  
19      anywhere in the country. As they showed earlier,  
20      with this method, they would follow this by remotely  
21      locking up the brakes on these vehicles or cause  
22      other safety critical features without the driver  
23      doing anything and from many miles away.

24             Ironically, the vehicle they looked at to  
25      identify these critical flaws was made by General



1 Motors, who is here today saying that these  
2 researchers should not have been allowed to look at  
3 the code that was running on their vehicle.

4 I, for one, am glad these researchers  
5 identified these vulnerabilities and subsequently  
6 they were fixed by GM.

7 Shortly thereafter in 2012, my friend  
8 Chris Valsic and I received a grant from DARPA to  
9 produce a library of tools that would aid in  
10 continuing automotive research and reduce the  
11 barrier of entry to new researchers in this field.

12 We got a second DARPA grant specifically  
13 around reducing the cost of vehicle security  
14 research to encourage folks like us to dig in and  
15 find vulnerabilities in modern vehicles, making them  
16 safer for everyone.

17 During this time, we found many of the  
18 same findings as the UW and UCSD researchers have  
19 found. Mainly, we showed in the two cars we looked  
20 at, a Ford and a Toyota, that an attacker capable of  
21 injecting can messages could control such things as the  
22 brakes, speedometer, locks, horn, et cetera.

23 We expanded on the previous research to  
24 show that even steering would be controlled by an  
25 attacker. This addition was because cars had

1 evolved since the previous research to include  
2 features like automatic trailer parking which  
3 necessitated the steering ECU access commands in the  
4 can bus.

5 As new technology is added to vehicles,  
6 new attacks become possible.

7 The response from the automotive industry,  
8 again, was to point out these attacks were only  
9 possible because we had physical access to the  
10 vehicles in order to inject the message onto the  
11 bus.

12 Just like the UW and UCSD researchers, we  
13 continued our research and plan to present our most  
14 recent research this summer that shows  
15 vulnerabilities in the firmware of some ECU's in the  
16 vehicle that can allow us to remotely command the  
17 bus. This means that, again, we could remotely  
18 control things like braking and steering of  
19 vulnerable vehicles from many miles away without the  
20 driver doing anything.

21 In order to conduct this research, it  
22 required us to extract firmware from critical ECU's  
23 to examine it and look for these vulnerabilities.

24 I should also point out that the tools we  
25 made are being used by a number of researchers

1 interested in car research, including those at the  
2 National Highway Traffic and Safety Administration.

3 I'm here today to ask for an exemption to  
4 the cover the case of security research of  
5 automobiles. It is the societal and safety issue  
6 that the vehicles that we use are safe and that we  
7 can depend on them to be safe from attack.

8 As the academic research groups and Chris  
9 and I have shown, currently this is not the case.

10 The vehicles being produced by  
11 manufacturers are not safe from remote exploitation.  
12 This scares me, but what really scares me are laws  
13 that won't allow me to look at the codes in my  
14 automobile to determine whether it is safe, look for  
15 vulnerabilities, see how it is designed around  
16 safety or even build compatible devices to add  
17 safety futures.

18 MS. CHARLESWORTH: Mr. Miller, assuming --  
19 let's say we were inclined to grant an exemption of  
20 the sort you are talking about.

21 Who are the people who should be able to  
22 engage in that sort of research? Is there any limit  
23 on the people or any qualifications that you think  
24 should apply?

25 MR. MILLER: No. Especially in the field

1 of vehicle security, some of the people who do the  
2 best work don't have traditional sort of  
3 qualifications, so to speak.

4 I have a PhD but my researcher partner has  
5 a bachelor's. I think the important thing is that  
6 you should be allowed to do research on your own  
7 vehicles and not other people, but if it's your own  
8 vehicle and you want to find out how it works or if  
9 it's safe or what are your concerns, as long as it's  
10 your vehicle, you should be allowed.

11 MS. CHARLESWORTH: If you can wrap it up  
12 because we want to make sure we have lots of time to  
13 discuss the more controversial issues.

14 MR. MILLER: Understood.

15 Hiding away the safety critical code from  
16 observation will not solve the problem and we cannot  
17 wait for the benevolent manufacturers to do the  
18 right thing to produce safe cars. They need help  
19 and the DMCA prevents people like me from helping  
20 them.

21 I know many researches who won't  
22 participate in this field due to the legal murkiness  
23 around car safety research.

24 I should add I am not necessarily judging  
25 the cyber security practices of automobile

1 manufacturers. Very smart engineers at Microsoft  
2 and Sony still don't know how to make attack-proof  
3 web browsers.

4 Every month these companies produce  
5 patches that fix up security flaws in their  
6 products. Nobody knows how to write perfect code.  
7 So I don't expect automobile manufacturers to  
8 produce perfect cars. What I do want is the ability  
9 to evaluate their safety and security features for  
10 myself.

11 I want as many researchers as possible to  
12 be looking at this code finding flaws, suggesting  
13 patches and improving it. I want to be able to  
14 trust the safety of my vehicle. And the only way I  
15 can do that is to look at it myself.

16 MS. CHARLESWORTH: Thank you. Ms. Gellis.

17 MS. GELLIS: Good morning. Because I am  
18 slated to give testimony on behalf of a number of  
19 classes, I want to preface my comment with a few  
20 initial points.

21 The first point is that although both my  
22 original comment and the testimony this week tacitly  
23 support generously allowing exemption for any class  
24 seeking access to any digital medium, they are most  
25 directly applicable to proposed classes 11 through

1       27. And because many of my arguments are equally  
2       applicable across all of these classes, I request  
3       that be incorporated by reference to all of these  
4       classes, including the ones that I am not able to  
5       give testimony for.

6               What makes these proposed classes  
7       distinctive and why many arguments are all around is  
8       they all involve interaction with computing logic.  
9       In other words, all of these classes in some way are  
10      involved with interacting with objects that are  
11      essentially computers. They may not be what we  
12      understood computers to be like in 1998 when the  
13      DMCA was passed, but here in 2012, at this triennial  
14      proceeding, they apply to a number of different  
15      objects that are clearly recognizable to us today as  
16      computers.

17             The type of computing power that used to  
18      exist solely in the realm of desktop computers or  
19      corporate mainframe servers are now available in  
20      refrigerators and toasters, and as discussed in this  
21      proceeding, phones, TV's, and as this class  
22      addresses, in cars.

23             There are several implications to this new  
24      realty well within this proceeding here. The first  
25      is that the Copyright Office is being asked to

1 consider a type of exemption that Congress may not  
2 have fully considered in 1998 when Section 1201 was  
3 drafted.

4 Although software has long been subject to  
5 copyright, and although in previous proceedings the  
6 Copyright Office has considered exemptions apply to  
7 certain forms of mobile computing devices, over the  
8 years the types of TPMs being considered have  
9 shifted from that which serves to see copies of  
10 static media from being moved, displayed, accessed  
11 or otherwise transformed, to the types of classes  
12 being considered in classes 11 through 27, which  
13 control how a computing device can be used.

14 The question raised by these classes is a  
15 very different question and it implicates copyright  
16 in a very different way, if at all.

17 The second important point to make at the  
18 outset is that Section 1201 is not the only statute  
19 that may reach unlawful computing use.

20 As I wrote in my original comments, the  
21 Computer Fraud and Abuse Act, or CFAA, also reaches  
22 this. And this class, too, raises a number of issues  
23 which I plan to discuss throughout my testimony this  
24 week.

25 The first issue of note is that the CFAA

1 did not always have the reach it currently does now.  
2 Although the CFAA is a law that is older other than  
3 the DMCA, dating back to the mid-1980's, it has been  
4 updated significantly in the years since, including  
5 in the years since the DMCA was tasked in 1998.

6 Many of these amendments involve enhancing  
7 sentences, but in 2008, the term "protected  
8 computer" was modified in such a way so that now for  
9 all intents and purposes, it arguably reaches  
10 virtually all computers. This means that there are  
11 now potentially two statutes governing computer use,  
12 the DMCA and the CFAA.

13 I want to discuss the implications of this  
14 collision in more detail throughout the week, but  
15 the point I want to conclude with now is to point  
16 out that the only one of these two statutes that  
17 specifically tries to accommodate security research  
18 is the DMCA.

19 First, there is 1201(j), which references  
20 security research of the type of activity the DMCA  
21 is not intended to bar. Also the language of  
22 1201(a)(1)(c)(3) encourages the Copyright Office to  
23 the impact on research generally as it considers  
24 whether to allow specific exemptions, but more than  
25 that, inquire in general is a value written into the



1 DNA of the DMCA.

2 Inquiry in its resulting knowledge is at  
3 the core of copyright law, itself, which exists to  
4 promote the progress of arts and sciences.

5 As such, computer uses that advance the  
6 policy value should be liberally granted by the  
7 Copyright Office given that they advance the  
8 underlying purpose of copyright law.

9 And at this point, I yield.

10 MS. CHARLESWORTH: Mr. Metalitz.

11 MR. METALITZ: If I could have  
12 Mr. Lightsey go first and then I will.

13 MS. CHARLESWORTH: Mr. Lightsey.

14 MR. LIGHTSEY: Thank you.

15 Good morning. I am testifying today on  
16 behalf of GM, which is one of the larger  
17 manufacturers of motor vehicles in the United States  
18 and the world.

19 My testimony is also today on behalf of  
20 the Alliance of Automobile Manufacturers, a trade  
21 group of which GM is a member.

22 My testimony this morning will address the  
23 following points: One, how the technological  
24 protection measures, or TPMs, in GM's cars work;  
25 two, how the proposed exemption may lead to the

1 introduction of various vulnerabilities that  
2 undermine safety and security in the modern car, as  
3 well as compliance with regulatory requirements; and  
4 three, why the proponents cannot meet the burden of  
5 demonstrating that TPMS and the prohibition on  
6 circumvention have caused a substantial adverse  
7 impact.

8 GM's vehicles today include, on average,  
9 30 purpose-built electronic controlled units, or  
10 ECU's, with functions that range from controlling  
11 radio to regulating vital engine and safety  
12 functions.

13 Vehicles' ECU's are interconnected by a  
14 network that enable interaction between various  
15 systems and/or telematics equipped vehicles with  
16 various remote features.

17 The software operating in each ECU is  
18 carefully calibrated to ensure the safe and secure  
19 operation of the vehicle as well as compliance with  
20 various regulatory requirements, including those  
21 relating to emissions and fuel economy.

22 TPMS act as a layer of vehicle security,  
23 safety, privacy and environmental compliance  
24 regimes. Thus, the TPMS in place in GM vehicles  
25 protect important aspects of vehicle performance,

1 including, for example, engine control, braking,  
2 speed, steering, air bags, among other things.

3 MS. CHARLESWORTH: Just in the interest of  
4 time, a lot of this is in your written submission,  
5 which was very helpful because I don't know much  
6 about cars, I will confess, but if you could focus  
7 on the arguments raised by the proponents,  
8 particularly in your statement and your response for  
9 including the MOU and various other reasons why you  
10 think an exemption is not necessary.

11 I think we there is -- and then we will  
12 ask you because we may you technical questions, as  
13 well, but I just want to make sure you are using  
14 your time to your best advantage.

15 MR. LIGHTSEY: So proponents concede that  
16 ECU's in vehicles play a role in safety and  
17 security. They seem to ignore, however, that the  
18 exemption they seek would allow circumvention of the  
19 various TPMs designed to protect those  
20 safety-critical controls in these ECU's.

21 Furthermore, the exemption being sought is  
22 broad and it would allow copying code, modifying  
23 code and distributing code.

24 Even when such efforts are undertaken by  
25 well intentioned researchers like many of

1       proponents, wider distribution of the code creates  
2       unnecessary risk to vehicle safety and regulatory  
3       compliance and threatens market availability.

4               Proponents have tried to compare the TPMS  
5       in a vehicle to those used in electronic devices  
6       like phones and video games. We would respectfully  
7       suggest that a modern automobile is a very different  
8       thing than a video game or a telephone.

9               In short, the consequences of allowing  
10       circumvention of TPMS in cars would be far more  
11       serious than allowing the practice for phones or  
12       video games.

13              GM's TPMS are strategically designed and  
14       implemented to protect the vehicle occupant safety,  
15       which is our highest priority, as well as to thwart  
16       illegal activities.

17              In addition to safety issues, disabling or  
18       bypassing TPMS could lead to consumer privacy  
19       issues and violations of vehicle emissions  
20       standards.

21              An important part --

22              MS. CHARLESWORTH: Can I ask you -- here  
23       is a question on that.

24              Mr. Miller suggested you should only be  
25       able to do this to your own vehicle, as I

1       understood. I know that is not -- I'm not sure if  
2       everyone agrees to that, but if that were a  
3       limitation to the exemption, do you think that would  
4       resolve a lot of your concerns?

5               MR. LIGHTSEY: No, our concerns are that  
6       the distribution of the information is a very  
7       dangerous practice.

8               We do not doubt the well intentions of  
9       Dr. Miller and many of his fellow researchers.  
10       However, we strongly believe that granting this  
11       exemption would encourage behavior by much broader  
12       folks and some of whom's intentions may not be so  
13       benevolent. And we are very concerned about that.

14              MS. CHARLESWORTH: Dr. Miller said it was  
15       actually GM cars or vehicles that were the subject  
16       some of earlier research. And I take it Dr. Miller  
17       disclosed those findings to GM.

18              MR. MILLER: Those were not my findings.

19              MS. CHARLESWORTH: They weren't your  
20       findings.

21              But what was the process of disclosure  
22       there? Were they disclosed to GM before they were  
23       disclosed to the public?

24              MR. MILLER: I think so but I wasn't  
25       involved with that.

1 MS. CHARLESWORTH: Meaning did  
2 Mr. Lightsey know the story?

3 MR. LIGHTSEY: I was not employed by GM in  
4 2010 when those research activities took place.

5 MR. MILLER: I can talk about the way I  
6 disclosed things later, if you would like, on the  
7 vehicles that I have researched.

8 MS. CHARLESWORTH: We will get back to the  
9 issue of disclosure in a minute.  
10 So you can't really shed a lot of light on  
11 the process.

12 MR. LIGHTSEY: Not that particular  
13 process.

14 I will say that GM strongly encourages  
15 research for security and safety purposes but within  
16 a controlled environment that does not present such  
17 risk to GM and other -- GM and other car  
18 manufacturers partner with third-party researchers  
19 to identify and address security vulnerabilities.  
20 In fact, it's quite common for automobile  
21 manufacturers to contract with third-party testers  
22 and researchers for work on various parts of the  
23 vehicle.

24 These arrangements can be open to public  
25 participation such as in standard setting

1 organizations or can be restricted when confidential  
2 information such as the detail operations of the  
3 TPMS and ECU's is required for appropriate research  
4 or evaluation.

5 Any suggestion that OEM's are not  
6 incentivized to protect the proper operation of  
7 their vehicles is simply not credible. The car  
8 manufacturers are particularly attuned to the  
9 importance of and interested in the safety and  
10 security in vehicle software.

11 And EFF, itself, points out to an  
12 initiative that exemplifies this understanding,  
13 namely, the Alliance of Automobile Manufacturers and  
14 the Associated Global Automakers voluntary ISAAC  
15 efforts to share information about security  
16 vulnerabilities.

17 MR. DAMLE: So Mr. Lightsey, I have a  
18 question.

19 So Dr. Miller in the written submissions  
20 gave several examples of independent researchers not  
21 going through -- not with the approval of GM,  
22 finding security vulnerabilities and on GM cars and  
23 other cars.

24 And I am just wondering, do you dispute  
25 those facts that this has occurred, that there have

1       been independent researchers that have found  
2       vulnerabilities without the approval -- without  
3       going through the manufacturers?

4               MR. LIGHTSEY: That is exactly -- we don't  
5       dispute that. In fact, in light of that, we find  
6       the assertions that not granting the exemption  
7       creates a chilling effect to be somewhat hollow  
8       because of the fact of research is occurring, the  
9       automobile manufacturers are responding to research  
10      and in fact are working with researchers.

11             MR. RUWE: When you work with researchers,  
12      are there any criteria that they must meet?

13             Jacqueline asked Mr. Miller about the  
14      criteria of -- professional credentials of  
15      researchers.

16             Are there certain credentials that you  
17      look for and require with partners?

18             MR. LIGHTSEY: We don't have any specific  
19      requirements. Obviously, we want to work with  
20      researchers who are interested in helping us make  
21      our cars better and we look for folks with the  
22      qualifications to help us do that, but we don't have  
23      any specific qualifications, no.

24             MR. DAMLE: Mr. Miller, can you address  
25      those programs and why you do not find this



1 sufficient, and therefore, the exemption is needed.

2 MR. MILLER: Sure.

3 So he mentioned that, obviously,  
4 manufacturers often party with consultants and other  
5 paid services to do research and that's great. My  
6 problem is that if you purchased -- if you are  
7 paying for the arrangement, then when they find  
8 vulnerabilities, you are not obliged necessarily to  
9 act on them. You don't have to fix them, as you  
10 see fit, or you might to a cost analysis to decide  
11 whether you need to fix them, but if independent  
12 researchers point these out, you are much more  
13 incentivized to actually make fixes because  
14 researchers might go to the media or point these out  
15 in other ways that are really going to force the  
16 manufacturers to make the fixes.

17 MS. CHARLESWORTH: Have you participated  
18 in any of the paid research programs or the  
19 authorized research programs?

20 MR. MILLER: No. As far as I know, the  
21 only ones that exist are through paid contractor  
22 work and I am not a contractor or consultant.

23 MR. LIGHTSEY: I will say that GM and all  
24 the automobile manufacturers are highly incentivized  
25 to make their cars as safe and secure as possible,

1       and we are, therefore, highly incentivized to work  
2       with security researchers to find vulnerabilities in  
3       the code and to fix those.

4               I will also say that GM in particular, and  
5       which is my knowledge but I expect that my fellow  
6       automakers have put together similar activities,  
7       spend a lot of time and effort on making sure that  
8       we build our cars as safe as possible.

9               We combined two organizations in the fall  
10       of last year to create responsibility for the  
11       vehicle cyber security. We put together several  
12       organizational changes in compliance with the disk  
13       framework.

14              Our chief product cyber security officer  
15       reports quarterly to our Board of Directors on the  
16       state of cyber security with regard to our vehicles  
17       to a committee that is chaired by Admiral Mullen,  
18       who is former Chairman of the Joint Chiefs of Staff.

19              This is a significant concern and one that  
20       we devote a lot of resources to.

21              MS. SMITH: Have you ever denied a request  
22       to participate in paid research or research request  
23       that someone asked for of GM?

24              MS. CHARLESWORTH: Or unpaid research.

25              MR. LIGHTSEY: Not to my knowledge.

1 MS. CHARLESWORTH: Mr. Metalitz.

2 MR. METALITZ: Thank you. It's an honor  
3 to be back here for the Sixth Triennial Rulemaking.

4 I am happy to answer questions if they  
5 come up about whether the proponents have met the  
6 burden to show the uses they wish to make are, in  
7 fact, non-infringing, but I would like to focus on  
8 two other points in the brief time I have.

9 The first is why recognizing this  
10 exemption would be a radical departure from the way  
11 this rulemaking proceeding has acted in past. And  
12 the second is why granting the exemption raises a  
13 lot of questions about doing violence to the overall  
14 statutory scheme that Congress has enacted.

15 Let me mention, in the past this -- the  
16 Library has granted security-related exemptions and  
17 they all involved two features that are not present  
18 here. One, in both of these cases, 2006 and 2010, I  
19 believe, TPM, itself, introduced security  
20 vulnerabilities to harm consumers. There wouldn't  
21 have been a security problem but for the TPM. That  
22 is what we found.

23 So the remedy in those cases was to eject  
24 TPM from the system. There is no evidence here that  
25 removing TPMs would improve security. And there is

1       certainly no evidence that anything in any of the  
2       TPMs causes security vulnerabilities and, of  
3       course, as we will discuss more in this afternoon's  
4       hearing, auto makers are under some regulatory  
5       obligations to use TPMs in some cases.

6               So that is totally different, but  
7       second --

8               MS. CHARLESWORTH: You are not saying  
9       that, for example, if it were established to be a  
10      clearly non-infringing use of the underlying  
11      copyrighted work, you are not saying the security  
12      vulnerability would have to be in the TPM, itself,  
13      but there is a legal -- that may be what the process  
14      is, but are you saying there is actually distinction  
15      in the statute?

16              MR. MILLER: No, it's not a legal  
17      requirement but it does influence your analysis of  
18      the fair use issues, your analysis of the impact of  
19      1201(j).

20              Let me get to what I think is the second  
21      big difference, which Mr. Lightsey has already  
22      touched on. In the past, there was strong evidence  
23      that Section 1201, specifically, had a chilling  
24      effect on research. There were threats of  
25      litigation, threats against research funding. None

1 of that is present here.

2 The proponents having had three rounds of  
3 comments to submit, what do they have in the record  
4 to show the chilling effect?

5 First, we can say they have proven that  
6 research is freely undertaken. They have proven  
7 that it's widely disseminated. Much of this  
8 research is funded by federal agencies like DARPA  
9 and the U.S. Army.

10 The only source of evidence in their first  
11 round of comments about a chilling effect went on to  
12 praise the industry for the response that they made  
13 to those finding in the BMW unlocking case. That is  
14 on page 12 of their additional comments.

15 Even in the third round of comments when  
16 we raised this issue in our opponent's comments, the  
17 best they could come up is we did it but we didn't  
18 get much response and they haven't included us in  
19 the discussion. We have heard today our concerns  
20 have been dismissed.

21 These are all legitimate issues but they  
22 have nothing to do with Section 1201. They don't  
23 show in any iota that Section 1201 is inhibiting  
24 this research.

25 And they cite to a legal impediments memo

1       that was filed in Class 25. That is five  
2       impediments. Right there, we have a problem because  
3       the statute is clears that adverse effects that not  
4       attributable to the 1201 prohibition are not  
5       relevant in this proceeding. So to the effect the  
6       CFAA is a problem, the wiretap laws are a problem,  
7       contracts are a problem, terms of service are a  
8       problem, it's totally outside the scope of this  
9       proceeding and it demonstrates that granting the  
10      exemption would not eliminate any problem that  
11      exists, if there is any such problem. The DMCA is  
12      never listed as the primary problem here.

13               Showing distinct and verifiable adverse  
14      effects caused by the Section 1201 prohibition is  
15      part of the prima facie case here.

16               So again, even leaving aside whether this  
17      is consistent with the way you have approached this  
18      in the past, there is simply no evidence that this  
19      is chilling.

20               These laws have been on the books for 17  
21      years, been enforced for 15 years. The industry has  
22      been using TPMs that entire time, and yet, we see  
23      this record that there is a robust level of research  
24      going on and that the industry is partnering with  
25      researchers like Dr. Miller in order to make

1       their -- advance the research and reduce the  
2       vulnerabilities.

3               The second point I would make is, again,  
4       on the statutory exemption, 1201(j), this is a complex  
5       issue and the office has had varying approaches to  
6       this in the past.

7               It is the burden of the proponents to show  
8       that their activities don't fall within the  
9       statutory exception. If they can't show that, they  
10      haven't met their burden because it's not a 1201(a)  
11      violation, but without getting into that question of  
12      whether particular types of research -- just look at  
13      what 1201(j) requires because it tells us something  
14      about what Congress intended when it passed a  
15      security testing exception.

16              It required that the activity not only be  
17      non-infringing, but that it not violate any other  
18      law, including the CFAA. They said it should have a  
19      sole purpose of security testing, it should be done  
20      in good faith, that it should take into account  
21      whether the results are used in the way that  
22      facilitates infringement, it should take into  
23      account whether the results are used in a way that  
24      facilitates violations of any other law, as you  
25      heard, including violation of privacy or breach of

1 security. And as you have heard from the industry,  
2 that is a significant concern.

3 And there other provisions here. There is  
4 1201(e) which applies to government employees or  
5 contractors. And again, all the research they have  
6 cited has been federally funded according to the  
7 record.

8 In the reply comments, they said a lot of  
9 it is funded by others. We have seen no evidence of  
10 that, so except for the industry funding research  
11 that we have talked about.

12 So 1201(e), obviously, also expresses some  
13 sense of bona fide -- vetting the bona fides of  
14 research because I am assuming that DARPA will not  
15 enter into a research contract with somebody off the  
16 street who wants to tinker with their own car. They  
17 are looking for some type of credentials and  
18 criteria.

19 So as I said, it's a complex question, but  
20 I think the office should ask not just in this  
21 scenario beyond what Congress might reasonably have  
22 anticipated but to ask would this exemption really  
23 reflect the antithesis of the considerations in  
24 guiding Congress in making the statutory exemptions  
25 1201(j), 1201(e) and the others. They certainly have a



1 bias towards responsible, cooperative research,  
2 which may have -- which includes publication of  
3 research results, but again, in a way that allows  
4 the industry to respond and try to fix the problem  
5 rather than going to the media as other some  
6 researchers have been doing.

7 So I will just urge you to look at 1201(j)  
8 as part of an overall statutory scheme that looks  
9 forward to cooperation rather than an adversarial  
10 effort here.

11 I think this research is valuable. There  
12 is no question about that. And the industry  
13 recognizes that and is increasingly working with  
14 independent researchers -- and the record has a lot  
15 of examples of this -- universities and the Patel  
16 challenge, the information sharing that is in  
17 process now.

18 So there is a lot of this activity that is  
19 underway and it all undermines the argument that  
20 1201 is somehow having a chilling effect on this  
21 research. I think the record is to the contrary.  
22 And particularly when you weigh it against the risks  
23 of harms that are mentioned both in the research, in  
24 the testimony. You have heard seen it in some  
25 letters will be submitting later today.

1 I think the balance which you have to  
2 strike clearly argues against recognizing this  
3 exemption.

4 MS. CHARLESWORTH: I would like Mr. Walsh  
5 to give us specific examples, if he can, and,  
6 Dr. Miller, including yourself, if it's the case, of  
7 research that you has not been pursued because of  
8 Section 1201.

9 MR. MILLER: Can I go first.

10 MS. CHARLESWORTH: This is an important  
11 issue which is, is this actually truly having a  
12 chilling effect or is that something that is easy to  
13 say, but the purposes for the record, if you can  
14 substantiate that, that would be helpful.

15 MR. MILLER: So I mentioned basically the  
16 two research groups from the universities and  
17 myself.

18 The research that was done in 2010/'11,  
19 they were not allowed to -- or lawyers told them not  
20 to publish details of their research. So they  
21 didn't even publish what kind of car it was. They  
22 didn't publish details of the vulnerabilities. They  
23 didn't publish what the messages they sent.

24 MS. CHARLESWORTH: Which specific project?  
25 Can you just generally describe the project.

1                   MR. MILLER: That was the project where  
2 they were able to remotely take control of the brake  
3 of a car, University of Washington, University of  
4 California San Diego.

5                   So anyway, so they published very limited  
6 papers.

7                   And I mentioned it was a GM car and that  
8 was only -- they never said that. We just figured  
9 that out from watching videos of the car.

10                  MR. CHENEY: I have a question. Do we  
11 know that they were not allowed to publish because  
12 of 1201?

13                  MR. MILLER: That is from personal  
14 conversations with those researchers.

15                  MR. CHENEY: We don't know what the  
16 lawyers' advice was in that case of why they weren't  
17 aloud to publish.

18                  MR. MILLER: That is just from  
19 conversations I had. They said they didn't publish  
20 because of fears of the DMCA.

21                  MR. DAMLE: Other than the other  
22 provisions that Mr. Metalitz alluded to also part of  
23 that evaluation, to your knowledge?

24                  MR. MILLER: I don't know. I don't think  
25 so because this was their car. I don't think so.

1           They were just working on their own research cars.

2                   And then just to continue on with myself,  
3           I was interested in doing automotive research and I  
4           didn't want to do it for fears of the DMCA. And the  
5           only reason that I continued was I got the DARPA  
6           grant and I felt that with that backing, I wouldn't  
7           be prosecuted because I could say I have this DARPA  
8           grant, but we had to actually start over from  
9           scratch because the university researchers had not  
10          published the details. So we had to start over.

11                   MR. DAMLE: Correct me if I am wrong, but  
12          did you just describe two instances where the  
13          research actually took place?

14                   MR. METALITZ: Yes.

15                   MR. DAMLE: The publication may have been  
16          hindered but the research took place.

17                   MR. MILLER: I should say though, one more  
18          fact that he brought up that is not actually true.  
19          So the research I am doing for the last few years  
20          has not been sponsored by any government agency,  
21          just by myself on my cars. So that had not had an  
22          impact on the research I am specifically talking  
23          about that I am going to do this summer is remotely  
24          exploiting the vehicle and the effect on the  
25          braking, for example.

1 MR. RUWE: That is not government funded.

2 MR. MILLER: Correct.

3 MS. CHARLESWORTH: Did that -- that is not  
4 government funded?

5 MR. MILLER: That is not government  
6 funded. It was not requested by the automobile  
7 manufacturers.

8 MS. CHARLESWORTH: Were you able to  
9 navigate around 1201 to do that research?

10 MR. MILLER: No. So I fear that law. I  
11 am hoping that I won't be prosecuted because of my  
12 stature and my background, but I worry a lot about  
13 that.

14 And other researchers that are very  
15 interested in this field will not pursue the field  
16 that I have talked to because they are afraid of the  
17 legal problems they would have.

18 MS. CHARLESWORTH: Do you plan to --  
19 forgive me because there have been several different  
20 projects. The most recent one, the one that we were  
21 just talking about, are you planning on publishing  
22 it or sharing your results?

23 MR. MILLER: Yes. This summer, I am going  
24 to publish the results.

25 MS. CHARLESWORTH: And do you intend to

1 share that with the car manufacturer before you  
2 publish them?

3 MR. MILLER: Yes. I have already been  
4 working with Chrysler giving them details of my  
5 research or the past year. So they are aware of  
6 this.

7 MS. CHARLESWORTH: And have they indicated  
8 that they would not -- have they given you any  
9 reassurance about your research and that they would  
10 not prosecute?

11 MR. MILLER: They have not said they would  
12 not or they would. We have not discussed that.

13 MS. CHARLESWORTH: But it sounds like you  
14 have some sort of working relationship is them?

15 MR. MILLER: No, I wouldn't really call it  
16 a relationship as much as I am just informing them  
17 of my progress so they is that have ample time to  
18 fix any issues before I publish, but they don't  
19 necessarily -- like for me, a relationship is, you  
20 know, we work together. And we're not really  
21 working together. I'm working independently and  
22 giving them my results.

23 MS. CHARLESWORTH: And I mean how are they  
24 being -- how are the results being received? Are  
25 they saying we are going to sue you?

1 MR. MILLER: No, no.

2 MS. CHARLESWORTH: Are they saying thank  
3 you?

4 MR. MILLER: Yes.

5 MS. CHARLESWORTH: They are saying thank  
6 you.

7 MR. MILLER: Yes.

8 MS. CHARLESWORTH: Mr. Walsh.

9 MR. WALSH: I think the primary evidence  
10 that we have of this chilling effect are the  
11 self-reports of security researchers describing  
12 those chilling effects. And most are understandably  
13 hesitant to come forward and say that they have done  
14 something that they think might have legal liability  
15 attached to it, but both the joint letter that was  
16 submitted in Class 25 by a wide range of security  
17 researchers and academics refers to the DMCA having  
18 a chilling effect on this research.

19 Dr. Miller just further described it.  
20 Bruce Snider's comments further elaborate on it.

21 And I think Mr. Metalitz' run down of  
22 1201(j) is basically an explanation of why security  
23 researchers are chilled from relying on that  
24 provision. I will talk about that in a second.

25 And we have also seen in the record

1 discussion of domestic security researchers  
2 speculating that DMCA could be a reason by BMW's  
3 unencrypted update technology was not investigated  
4 in the U.S.

5 And we have seen security research  
6 competitions taking place quite openly in China with  
7 respect to Tesla's vehicle software being won by a  
8 Chinese company rather than taking place here where  
9 Tesla is located and where the DMCA is enforced.

10 And we also have seen the articles not  
11 making the essential disclosures that are needed,  
12 to inform the public about security vulnerabilities  
13 in specific vehicles, but also to advance the state  
14 of research in terms of enabling follow-on  
15 researchers to build on the results of previous  
16 teams because out of fear of the DMCA, they didn't  
17 disclose details of what they found, how they found  
18 it and what vehicles they were working with.

19 As far as the statutory exemption for  
20 security testing goes, there are a wide range of  
21 aspects of that exemption that seem to limit it in  
22 some way which means that security researchers even  
23 acting in good faith, even acting for the purposes  
24 that Congress has been able to contemplate 17 years  
25 ago don't rely on that provision.



1                   In large part, the statutory factors  
2                   introduced an element of vagueness and uncertainty  
3                   that makes a researcher who is engaging in research  
4                   for the public benefit very aware that of  
5                   well-fueled vendor or manufacturer might come after  
6                   them asserting a 1201 claim.

7                   In particular, the first factor to be  
8                   considered is whether the information is used solely  
9                   to promote the security of the owner or operator of  
10                  such computer, the computer being investigated.

11                  Researchers may legitimately worry that if  
12                  they are publishing information for the benefit of  
13                  others, not just the owner of the vehicle they  
14                  investigated but for everyone who relies on that  
15                  vehicle for safety, that a court might in  
16                  considering this factor decide that their activity  
17                  was not solely for the purpose contemplated and they  
18                  can't have certainty that their activity is going to  
19                  be protected.

20                  The other factor is similarly difficult to  
21                  predict, whether they have maintained the  
22                  information in a manner that does not facilitate  
23                  infringement. That is a much stricter standard than  
24                  the standard of, for example, what would be an  
25                  appropriate critical discussion of the software

1 under copyright law -- that would be an acceptable,  
2 transformative, fair use having no cognizable market  
3 harm, yet it may not be clear that disclosing  
4 information necessary to advance the field is  
5 maintaining the information in a way that doesn't  
6 facilitate copyright infringement by some bad actor.

7 MS. CHARLESWORTH: I mean you skipped over  
8 the part about shared directly with the developer of  
9 the computer, meaning disclosure, which is a big  
10 concern in a lot of comments.

11 This standard sort of contemplates as a  
12 factor in looking back on something that was done,  
13 but I think the question is, is there a way to  
14 address that issue.

15 If we were inclined to grant an  
16 exemption for this, how do address the disclosure  
17 issue, because there is a strong argument that a  
18 manufacturer should in many cases become aware  
19 before the public does, I think, at least come  
20 through in the paper.

21 How would you propose that concern be  
22 addressed?

23 MR. WALSH: So in many cases, the  
24 responsible thing to do is to inform the vendor  
25 first. And the record shows a variety of

1 responsible researchers who have responsibly done  
2 their research and taken the appropriate measures to  
3 inform vendors and get things fixed.

4 However, the freedom of researchers to  
5 disclose publicly is an essential element in making  
6 sure that the vulnerabilities do get fixed when  
7 merchandisers find out about them.

8 So in vehicle software, very early on,  
9 researchers informed manufacturers about  
10 vulnerabilities that were found and those concerns  
11 were dismissed.

12 And Senator Markey discusses this history  
13 in his report. And as a result of their ability to  
14 disclose -- publicly to disclose to consumers and to  
15 regulators, we have seen improvements.

16 In fact, the initiatives that McCalley  
17 from General Motors was describing are largely a  
18 result of independent security research.

19 Professor Savage in his statement explains  
20 that the NHTSA initiative around motor vehicle cyber  
21 security was inspired by their work. He was part of  
22 the team that researched remote takeover of brakes  
23 and other systems.

24 MS. CHARLESWORTH: Right, but the question  
25 is -- I mean the concern is someone finds a

1 vulnerability and publishes it before there is any  
2 opportunity to fix it and then bad actors learn of  
3 this, someone who may not have known of it before,  
4 and then start doing bad things to cars.

5 I mean that is -- how do you address --  
6 we're merely the Copyright Office. If someone had  
7 told me even three years ago that I would be having  
8 this discussion with you today, I would say you are  
9 crazy, but here we are thanks to 1201.

10 But the thing is, how do you deal with  
11 that? How do you deal with that concern, which is a  
12 legitimate concern. And if it's not -- I hear you  
13 are sort of -- I think you are arguing for a broad  
14 exemption and leave it up to the researcher, but the  
15 argument on the other side is there may be  
16 researchers who don't necessarily have everyone's  
17 best interest at heart.

18 So what is your solution to that?

19 MR. WALSH: I think your instinct is right  
20 to be surprised that we are having this  
21 consideration in the context of the 1201 rulemaking  
22 because malicious hacking is subject to other laws,  
23 subject to CFAA and wiretap laws. And those laws  
24 can address the use of cyber security  
25 vulnerabilities in malicious ways. And the people

1       who want to engage in malicious hacking are out  
2       there and if they're not deterred by those other  
3       laws, they're not deterred.

4               MS. CHARLESWORTH: I get that, but  
5       Congress clearly thought about this disclosure issue  
6       and put something into the existing exemption that  
7       kind of favors disclosure to the manufacturers.

8               In other words, I understand it's not --  
9       it's not a clear, bright line rule, but it's clearly  
10      something that weighs into this conversation in  
11      terms of how to approach this issue.

12              And, you know, it's -- as I said, I mean  
13      the question is -- you know, I guess all options  
14      are, you know, not granting an exemption, grant an  
15      exemption and somehow address this issue, grant an  
16      exemption and don't address the issue, and I am just  
17      trying to get some guidance.

18              And we are going to go back down to the  
19      other end of the table because they have been very  
20      patient. So I want to get back to them, but on this  
21      issue of disclosure and what the duty would be to  
22      notify the manufacturers, what is your -- what is  
23      the EFF's kind of final best thinking on that that  
24      would probably be the most salable to the people at  
25      the other end of the table?

1                   MR. WALSH: Well, I think as far as the  
2                   Congressional intent goes, we now have 17 more years  
3                   of experience with security research and there is no  
4                   strict requirement of disclosure to the vendor. And  
5                   that reflects the fact that while it is often a best  
6                   practice, the freedom to -- particularly in light of  
7                   a vendor that you know may be hostile -- and we have  
8                   had aggressive submissions from many of the  
9                   manufacturers stating that they believe that they  
10                  have the right to enjoin or punish the security  
11                  research activity we are talking about, it may also  
12                  be responsible, instead, to go to, for example, a  
13                  regulator or even to the press.

14                 And so the need to preserve that kind of  
15                 legitimate activity is part of how we get the  
16                 benefits of getting independent security research.

17                 MS. CHARLESWORTH: I think I understand  
18                 your position.

19                 I think we will go back to Mr. Lightsey.

20                 MR. LIGHTSEY: Just very briefly, on  
21                 behalf of GM, we have never threatened or initiated  
22                 a lawsuit against any researcher with regard to any  
23                 findings of security vulnerabilities.

24                 We have developed -- encouraged  
25                 third-party research by folks like Dr. Miller. And

1 we find that the discussion of any kind of chilling  
2 effect is just very speculative.

3 And just to tag onto the discussion about  
4 the prior experience of the act, I would just simply  
5 suggest that there is a distinct difference between  
6 cell phones, video games and automobiles in today's  
7 world.

8 Thank you.

9 MR. DAMLE: The involvement of other  
10 regulatory bodies has been raised. And this is a  
11 general question to any panelist who wishes to weigh  
12 in.

13 Do you see a role for any other regulatory  
14 body in an exemption, for instance, in disclosure  
15 requirements or otherwise, is just a broader  
16 question.

17 I put that to start on the other side of  
18 the table since you have been patient.

19 MR. LIGHTSEY: Yeah. Go ahead. If you  
20 could give me the question again.

21 MR. DAMLE: Do you see a role for another  
22 regulatory body to be incorporated in an exemption?  
23 Is there an avenue through which that would address  
24 or could address some of your concerns? If so, do  
25 you have any thoughts about how that might function?

1 I am specifically thinking about in  
2 disclosure requirements, but I think there is room  
3 to consider how it might be addressing some of your  
4 concerns in other areas, as well.

5 MS. CHARLESWORTH: Your paper mentioned  
6 this, and the EPA and various other regulatory  
7 standards that you're asserting could be impacted by  
8 an exemption here.

9 And the question is what role -- how  
10 should we think about those, if at all? Are they  
11 relevant to this discussion? Do you think they are?

12 So we're interested in hearing a little  
13 bit more about that.

14 MR. LIGHTSEY: Well, it's clear from the  
15 automobile manufacturers that we are required to  
16 make our products in ways to comply with various  
17 laws EPA laws and regulations as well as other  
18 aspects.

19 And we're concerned that some of the  
20 activities that could lead to exploitation of  
21 vulnerabilities in the software could endanger that.

22 MS. CHARLESWORTH: Do you think it would  
23 actually cause -- your paper sort of argued it  
24 caused some of your vehicles to be out of compliance  
25 with regulatory requirements.



1 MR. LIGHTSEY: Correct.

2 MS. CHARLESWORTH: Is that your position?

3 MR. LIGHTSEY: Correct.

4 MS. CHARLESWORTH: And can you be a little  
5 more specific about that.

6 MR. LIGHTSEY: So our automobiles are  
7 required to meet certain EPA requirements, as well  
8 as safety requirements specified by the EPA and by  
9 NHTSA. And those requirements apply not just when  
10 the vehicle is initially sold but during the life of  
11 the vehicle.

12 And so various elements of that compliance  
13 are controlled by the software in the vehicle. And  
14 if a vulnerability is exploited and the vehicle is  
15 alter in a way that it is no longer in compliance  
16 with those requirements, that concerns us.

17 MR. DAMLE: Are TPMs required by  
18 regulations? Are there any specific regulations  
19 that say you must encrypt your vehicle software?

20 MR. METALITZ: If I can just respond, we  
21 are getting very much into the exemption 21 issues  
22 and we have a witness this afternoon who can testify  
23 directly to that, but the short answer is yes,  
24 California Air Resources Board, which sets the  
25 standards initially for emissions control, required

1 anti-tampering technology like such as encryption to  
2 try to reduce the likelihood of tampering with  
3 emission controls.

4 They later dropped that because the  
5 industry said yes, we are going to do that, we are  
6 committed to having these types of TPMs.

7 And again, if the TPMs went away, not  
8 only would it not solve the security problems, but  
9 it could put the industry out of compliance.

10 The other issue about modifying the ECU's,  
11 that is more in, again, in the number 21 area, but I  
12 guess the sort answer is it attempts to balance  
13 this. And the ECU's as they are manufactured, as  
14 they are designed, attempt to meet all the  
15 regulatory compliance.

16 And this is an industry -- again, contrast  
17 this with the software industry. There is no  
18 federal agency telling the software industry, with  
19 very limited exemptions, you know, what its products  
20 have to do and not do.

21 Here, these vehicles have to meet emission  
22 standards, they have to meet safety standards, they  
23 have to meet fuel efficiency standards. And the  
24 ECU's, the software we are talking about here, is  
25 one of the main means of doing that.

1                   So just bringing in -- even on the  
2                   security section, just bringing in the paradigm from  
3                   the software industry I think is a bit simplistic.  
4                   We are talking about a different kind of product  
5                   here with a lot more regulatory constraints and lot  
6                   more potential for risk and damage to life and  
7                   public safety than we may be, for example, with the  
8                   software.

9                   MS. CHARLESWORTH: Just to clarify, do you  
10                  see that as pretty much only on the Class 21 issue  
11                  in terms or do you thin it extends into this class,  
12                  as well, as a concern?

13                 MR. METALITZ: I think those agencies may  
14                 well have an interest this in exemption, as well.  
15                 And I think you quite properly have notified them,  
16                 EPA and NHTSA and DOT, about pendency. And I don't  
17                 know what role they will play, but yeah, this  
18                 industry functions in a highly regulated  
19                 environment. So I would -- the idea that the  
20                 Copyright Office would put the seal of approval of a  
21                 government agency on this type of activity by  
22                 changing the law -- you expressed surprise we are  
23                 even here talking about this. We are here talking  
24                 about because after 15 years of this provision being  
25                 enforced, the entire time, the industry has been

1       using TPMs. The entire time, at least especially  
2       in the last five years, this research has been going  
3       on, but now EFF and the other proponents have  
4       decided we need to change the law, the status quo is  
5       not good.

6               And that's why we're here to talk about  
7       it. It's not because the industry is coming in and  
8       asking for changes or greater control. It's the  
9       proponents.

10              And I know you know that, but it's pretty  
11       obvious from reading the comments, the public does  
12       not understand that. The public thinks that the  
13       auto industry is trying to change the law here.  
14       And, in fact, the proponents are asking to change  
15       the law.

16              MS. CHARLESWORTH: We understand.

17              I mean the interesting question to me --  
18       and may be this is a question for Mr. Lightsey -- I  
19       mean before this proceeding, had you ever even heard  
20       of 1201 before this happened? Because this gets to  
21       the issue of is the auto industry, was it really  
22       relying on the Copyright Act to protect TPMs or was  
23       there any knowledge of it or was it just -- what was  
24       the perception of your TPMs and whether they could  
25       be hacked?

1                   MR. LIGHTSEY: I think the automobile  
2 industry considers the software in the vehicles to  
3 be very important and something that we devote a lot  
4 of resources. Each manufacturer has its own  
5 solutions. The way the code is designed is an  
6 expression of that manufacturer's creativity in  
7 solving these problems.

8                   So I think we think of the software in the  
9 vehicle the way others think of software.

10                  MS. CHARLESWORTH: But did you have any  
11 conception before this issue came up whether or not  
12 someone could -- whether there was such a thing as a  
13 TPM. Had you ever heard of it?

14                  MR. LIGHTSEY: Absolutely. I think we  
15 relied on the fact that we felt that the software  
16 was protected.

17                  MS. CHARLESWORTH: So even though it was  
18 in the Copyright -- I guess that is sort of the  
19 question. Was there any -- I don't want to put  
20 words in your mouth, but was there some sort of  
21 general industry understanding of the code was  
22 protected in some way? And if so, what was that?

23                  MR. LIGHTSEY: I believe so. I think that  
24 the industry has felt that the code is protected.

25                  We will get into this, I think, in the

1 Class 21 discussion in greater detail, but we put  
2 limitations on the ability of people to see the  
3 code. We protect it. We have had these protective  
4 measures in place. And we maintain the code over  
5 the life of the vehicle.

6 So we consider it to be something that is  
7 very important to our brand and our reputation.

8 MS. CHARLESWORTH: Maybe this is a  
9 follow-up question again.

10 Did you know whether or not it was illegal  
11 to circumvent the TPMs? Was that something that  
12 the industry was aware of?

13 MR. LIGHTSEY: Yeah.

14 MS. CHARLESWORTH: In other words,  
15 specifically 1201 -- I am sorry, I don't mean  
16 to interrupt, I'm just sort of getting at the  
17 question from different angles -- but were you  
18 specifical aware of the anti-circumvention provision  
19 in 1201 before this proceeding came up?

20 MR. LIGHTSEY: I think that GM was, yes,  
21 the industry.

22 MR. METALITZ: The industry has  
23 intellectual property lawyers. So they are aware of  
24 this, but I think the track record of how it's been  
25 applied over 15 years in the research area in

1 particular is relevant here to the issue of whether  
2 there is evidence in the record of any chilling  
3 effect.

4 And, again, just referencing the legal  
5 impediment statement that a number of people put in,  
6 some computer science professionals and some  
7 lawyers, law professors, on Class 21, I think it's  
8 quite interesting they go through and talk about the  
9 research that has been done on automobiles, but the  
10 example they give of the reaction is there is  
11 efforts undertaken by the Society of Automotive  
12 Engineers, NHTSA has a program. The OnStar chief of  
13 information security said his team had its research  
14 staff grow by an order of magnitude.

15 Again, is this a chilling effect? And  
16 contrast it with what they said about voting system  
17 vendors which they say went to great lengths to  
18 prevent the research from even looking at the  
19 material, the medical device manufacturers often  
20 respond with hostility during a first encounter.

21 I am not sure whether those amount to  
22 chilling effects either, but the fact they don't  
23 even say that about the auto industry suggested,  
24 again -- I think we have to -- the paradigms that  
25 may apply in other sectors may not apply here based

1 on the facts as they were brought out in the record.

2 MR. WALSH: I would like to respond to  
3 your question about the role of other regulatory  
4 agencies from a few minutes ago.

5 So I think it's right to acknowledge that  
6 there are other regulatory agencies that have  
7 expertise in jurisdictions over these areas. The  
8 idea of inserting some connection with those  
9 agencies into an exemption doesn't strike me as  
10 necessary, in part, because if you have the  
11 exemption, it doesn't disturb those other regulatory  
12 regimes. They are free to, on the basis of their  
13 expertise and the policy considerations that are  
14 within their bailiwick, say that conduct ought to be  
15 unlawful, that they ought to have the right to  
16 enforce, for example, an anti-tampering provision  
17 which has numerous exemptions and doesn't introduce  
18 a private right of action.

19 So you have those regulatory agencies on  
20 the basis of their expertise, on the basis of the  
21 needs of that area of tailoring law to the issues  
22 that exist.

23 And as I mentioned, this is the only  
24 proceeding that can remove 1201 as a barrier to a  
25 broad legitimate scope of activities that



1 researchers want to engage in.

2 MR. DAMLE: Can I just follow up.

3 Is it your -- I don't know if we have  
4 evidence of this, but is it at least theoretically  
5 possible that these other agencies -- a version of  
6 Jacqueline's question -- the other agencies were  
7 relying on the prohibition in Section 1201 to say we  
8 don't need to worry about general circumvention of  
9 these anti-tampering provisions because it's already  
10 barred by Section 1201?

11 MR. WALSH: So the regulations from those  
12 other agencies predate the recent computerization in  
13 cars and in some instances have driven the  
14 computerization of cars, but it's not correct to  
15 claim that the situation has been unchanged for many  
16 years because cars have more and more computers,  
17 have more and more network functions, more and more  
18 wireless entry points that allow remote  
19 vulnerabilities to exist.

20 And so the opportunity for regulatory  
21 deference here is to grant an exemption so that when  
22 other agencies craft nuanced rules that operate  
23 within this broad sweep, that those rules actually  
24 have meaning and affect legitimate activities they  
25 have protecting.

1                   So I would also like to point out that  
2                   this computerization of cars in the presence of 1201  
3                   is an unintended consequence of 1201, something that  
4                   couldn't have been anticipated 17 years ago.

5                   And in the auto safety arena, we have a  
6                   very long history of independent research on the  
7                   mechanics of automobiles, so crash test dummies and  
8                   so on. And the analogous safety research with  
9                   respect to computers has been anemic. And that's  
10                  evidence of a chilling effect of 1201 on safety  
11                  research in particular.

12                 MS. CHARLESWORTH: Dr. Miller.

13                 MR. MILLER: I was going to say almost the  
14                 same thing.

15                 So since the original research in 2010  
16                 that these computers in cars can be a problem, there  
17                 has been thousands of different research papers done  
18                 on various topics, but only one group, myself and  
19                 Chris, have done research on cars since then. In  
20                 five years, there has only been one group that does  
21                 remote exploitation research.

22                 The only thing I would like to say, both  
23                 of the gentlemen down there said they think car  
24                 companies are reaching out and working with  
25                 researchers. And I guess I have to wonder how

1       they can reconcile that with the fact they don't  
2       want researchers to see the code in the cars.

3               So I don't know how I can work with them  
4       if I am not allowed to see the code to look for  
5       vulnerabilities.

6               MS. CHARLESWORTH:   Ms. Gellis.

7               MS. GELLIS:   I just want to follow up on  
8       two questions that have two issues that have been  
9       brewing for a little bit.  One is the issue of the  
10      chilling effect and whether there is, as  
11      Mr. Metalitz suggested, there is not enough in the  
12      record.  And I believe there was a comment -- and I  
13      apologize that I can't remember who submitted it,  
14      whether it was the New America Initiative or Public  
15      Knowledge or somebody else -- it's filed up at the  
16      top of the original 1201 comments -- points out who  
17      might not be here as part of this process given  
18      that, as I think Dr. Miller had suggested there, to  
19      say I intend to do something that may attach legal  
20      liability may itself be chilling and it may be  
21      chilling from this process.

22              So if there is questions about the record  
23      not being adequate, that may also be something that  
24      is working into the works.

25              And the second point I wanted to just

1 touch on briefly is I think with the question  
2 Ms. Charlesworth asked about were you relying on --  
3 were the auto makers relying on 1201, I think a TPM  
4 can have multiple purposes. And the question of  
5 whether it was being -- the preservation of them was  
6 important for a copyright interest, I think in that  
7 case, the record seems sparse that the auto makers  
8 were dependent on a copy interest as they bring it  
9 to bear in this matter.

10 MS. CHARLESWORTH: Do you want to respond  
11 to that? And then I had a question for you two.

12 MR. LIGHTSEY: I just would like to  
13 respond briefly.

14 I think with regard to the question about  
15 our relationships with these third party  
16 researchers, our concern is, as we indicated  
17 earlier, that we have access to the results in a way  
18 that we can fix the vulnerabilities before it's  
19 widely disseminated and before possible bad actors  
20 could obtain the information and use it to endanger  
21 lives, frankly.

22 So that is certainly one thing.

23 Also, I would dispute Dr. Miller and say  
24 that at least to my knowledge, there are many  
25 researchers engaged in this field both within the

1 industry, itself. As was indicated earlier, the  
2 organization in GM has grown by an order of  
3 magnitude. We now have over 80 full-time folks that  
4 are looking into the code in our vehicles and there  
5 are numerous efforts of cross-industry platforms  
6 like SAE.

7 So I would dispute the fact that that  
8 activity is very limited.

9 And finally, I think there was a reference  
10 earlier to the fact that there was a competition in  
11 China and not in the U.S. and that is evidence of a  
12 chilling effect in the U.S.

13 I would like to point out there have been  
14 competitions in the U.S. as referenced by  
15 Mr. Metalitz. There was the Patel competition.

16 I think the fact that the competition  
17 referred to in China took place is merely  
18 serendipitous in the way the schedule of the shows  
19 worked out.

20 So obviously, automobiles are a worldwide  
21 product and the security of these cars is a  
22 worldwide issue and it doesn't surprise us that this  
23 is being paid attention to in other parts of world  
24 as well as in the United States.

25 MS. CHARLESWORTH: You anticipated my

1 question for you which is on the disclosure issue --  
2 it sounds like something that is important to you --  
3 if there were to be an exemption, if we were  
4 inclined to do that, if it included something that  
5 said -- that addressed disclosure to the  
6 manufacturer for a period of time the manufacturer  
7 had to act before it could be disclosed publicly,  
8 would that address some of your concerns?

9 MR. LIGHTSEY: Our concern is that if the  
10 exemption is granted that that in fact encourages  
11 bad behavior, folks that do not necessarily have  
12 beneficial interests at hearts know that they can't  
13 be held accountable for their activities and that  
14 therefore, are likely to engage in the broader  
15 activity.

16 So I would I guess in response to that say  
17 that I think that the concern is still something  
18 that wouldn't be impacted. Even if there were  
19 carefully crafted exemptions with some kind of  
20 requirement, the fact that there is an exemption,  
21 itself, is something that would be of concern to the  
22 industry.

23 MS. CHARLESWORTH: But I mean going back  
24 to sort of the scenario -- let's say we were  
25 inclined to grant one -- I mean if the exemption

1       said something like you don't have an exemption  
2       unless you disclose this first or a certain period  
3       of time, would that at least address some of your  
4       concerns or disclose it -- forgive me -- to the  
5       manufacturer 90 days before you disclose it anywhere  
6       else or publicly. I mean would that address some of  
7       your concerns or is that -- I mean I sort of heard  
8       you saying it's still no good. I am just trying to  
9       gauge whether there is any -- whether you would want  
10      to -- if there were an exemption, whether you would  
11      want some kind of refinement or language in there  
12      that addressed the disclosure issue, and if so, what  
13      that would be.

14               And I mean this is all assuming we were to  
15      move forward, but for the sake of the record, it's  
16      helpful to know what your position would be on that.

17               MR. METALITZ: Well, if I can respond to  
18      that, again, if you look at -- if you wish to be  
19      guided by what Congress said about this, in 1998, a  
20      period when the concept of security testing was  
21      known -- I am not sure all of its ramifications  
22      or instances were known -- and a period in which  
23      there was computerization in cars in which  
24      technological protection measures were being used,  
25      again, I think you see a bias there toward

1 responsible disclosure requirements. You see a bias  
2 toward some level of vetting for qualifications, but  
3 again, as you pointed out, correctly, these are not  
4 bright lines in 1201(j).

5 And I think you see a bias toward a good  
6 faith requirement.

7 So there are a lot of things missing from  
8 the proposed exemption that would be in a more  
9 narrowly crafted exemption as safeguards, but  
10 I think Mr. Lightsey's point remains well taken. We  
11 can make suppositions, we can psychoanalyze why  
12 people maybe didn't come forward or what they meant  
13 to say, but the statutory requirement for this  
14 proceeding is pretty clear that the burden is on the  
15 proponents to show that this statute -- this statute  
16 is having distinct, verifiable impacts on their  
17 ability to carry out the type of non-infringing  
18 activity that they want to carry out.

19 And I think the record falls so fall short  
20 in that area, I think it would raise a lot of  
21 questions about this process if an exemption were  
22 granted in this area.

23 MS. CHARLESWORTH: I am not sure who was  
24 up first, but Mr. Walsh and Dr. Miller.

25 MR. WALSH: Very brief factual point, that



1 the competition in China did not have authorization  
2 of the manufacturer. It was an independent security  
3 research competition in a way that I'm not sure has  
4 occurred domestically.

5 The second point is about this 90-day  
6 potential disclosure window.

7 So one of the reasons why a requirement of  
8 going directly to the manufacturer before discussing  
9 a vulnerability with others is dangerous is because  
10 that is a potential 90-day window for the  
11 manufacturer to essentially threaten and intimidate  
12 the researcher out of further disclosure in order to  
13 keep the vulnerability.

14 MS. CHARLESWORTH: How would that -- I  
15 mean if you had an exemption that said as long as  
16 you could demonstrate that you disclosed the  
17 information 90-days in advance, you have a record of  
18 that and that if you did that, the exemption  
19 applies.

20 It's a hypothetical, but what would be the  
21 basis of the intimidation? You would be  
22 intimidating them because you are saying you are  
23 going to go public in 90 days if you don't deal with  
24 this.

25 MR. WALSH: If there is a very clear

1 exemption from DMCA liability that would help with  
2 the level of legal threat and intimidation that can  
3 currently be brought to bear, I agree with that.

4 There has been documented in the cyber  
5 security joint letter forms of intimidation that are  
6 not based on valid legal threats but are based  
7 either on pressure through an institution where the  
8 researcher is hosted or over-aggressive legal  
9 threats potentially based on other areas of law.

10 So I do think that the ability to disclose  
11 not necessarily first to the manufacturer is an  
12 important one to protect.

13 MS. CHARLESWORTH: I mean if it were a  
14 choice between some version of  
15 disclose-to-the-manufacturer requirement or no  
16 exemption, which would you pick?

17 MR. WALSH: It's interesting that the  
18 Copyright Office is the venue for a discussion of  
19 sort of what are the best practices in security  
20 disclosure because this is a debate that has been  
21 going on for over 20 years.

22 MS. CHARLESWORTH: I agree with that, but  
23 the problem is the issue is before us and it came to  
24 us through 1201, but, you know, look, I think the  
25 question is -- I mean we're exploring all the

1 options here and this is an important issue that has  
2 been raised by all the parties. This disclosure  
3 issue is very significant. So Congress did think  
4 about this. So it's not that far afield from 1201.  
5 When they put this permanent exemption in, as was  
6 already said, it was certainly on Congress's mind.  
7 They didn't put a satisfactory standard in there  
8 from your point of view. So that's why I am trying  
9 to figure out whether there is some balance here  
10 that can be achieved that would satisfy -- not  
11 satisfy anyone fully but would be sort of somewhere  
12 as a compromise on this particular issue.

13 And I'm trying to sort of get your -- you  
14 have already stated your position that you don't  
15 want it and you can stick to that. I think we have  
16 circled back to you again and the issue came up  
17 again in case you have any further thoughts.

18 MR. WALSH: I am trying to elaborate the  
19 concerns so you can take them into consideration.

20 And I think --

21 MR. DAMLE: Just one another question  
22 about that.

23 So in some of the submissions for  
24 Class 25, we have seen people talk of international  
25 standards for disclosure for standards for ethical

1       hacking. Do you mean -- I don't know the extent you  
2       can talk about the sort of why the accepted  
3       standards for cyber security research and I  
4       understand there may be debate, but are there sort  
5       of standards that are generally accepted -- this is  
6       a question for Dr. Miller -- with respect to  
7       disclosure?

8               MR. WALSH: That would be a good question.

9               I think what I would like to say on that  
10       is just that the record shows people doing public  
11       security research. That's what the evidence is in  
12       this proceeding. There isn't evidence about  
13       irresponsible practices.

14              MR. MILLER: I just wanted to quickly say  
15       that earlier when I talked about that there hasn't  
16       been any research done since the original research  
17       in 2010, I was specifically talking about  
18       independent researchers like myself.

19              So just because there have been more  
20       people hired at GM to do this kind of research,  
21       those people don't fall under DMCA or work for GM.

22              So I am only specifically talking about  
23       outside research and there has been no research  
24       except for myself and Chris.

25              As far as disclosure, I guess I just want

1 to point out something that hasn't specifically been  
2 said although we all know that researchers  
3 who find vulnerabilities aren't the ones who are  
4 making the flaws in the software. We're just  
5 finding them.

6 So to say that we are enabling the bad  
7 guys to do bad things, we're not. We're not  
8 putting vulnerabilities in software. We're just  
9 trying to get them fixed. And so the bad guys can  
10 take advantage of these flaws whether we talk about  
11 them or not. They're there in the software.

12 MS. CHARLESWORTH: That is a commonly  
13 stated thing, that they are going to find them  
14 anyway, but the specific concern, as I understand  
15 it, is as follows: You find a vulnerability that the  
16 bad guys don't know about yet you immediately  
17 publish an article that explains it and how to hack  
18 something in a dangerous way before the manufacturer  
19 has a chance to address the vulnerabilities. That  
20 is the concern we are talking about and I think it's  
21 probably the one that Congress was concerned about.

22 So that is what I am struggling with here,  
23 you know, because, again, this issue is before us  
24 because it's part of our considerations of the  
25 exemption.

1                   So if you could give me your best thinking  
2                   on how to address that concern, particularly from  
3                   your standpoint, I think that would be helpful.

4                   MR. MILLER: I think if we look at the two  
5                   cases that are before us, which is the research I  
6                   have done with Chris and then the academic  
7                   researchers, in both cases, as you know, we have  
8                   approached the manufacturers of any publications in  
9                   advance.

10                  MS. CHARLESWORTH: So it would be  
11                  consistence with your practice to have a disclosure  
12                  requirement to the manufacturers maybe before you  
13                  published it.

14                  MR. METALITZ: I would disclose before,  
15                  for sure. Whether we want to have that in law, I  
16                  don't know about that just because every instance is  
17                  different. And I don't want to try to predict what  
18                  is going to happen in the future, but personally, I  
19                  can't imagine not talking to the manufacturer in  
20                  advance.

21                  MS. CHARLESWORTH: Mr. Lightsey.

22                  MR. LIGHTSEY: Just in brief to respond to  
23                  the question, I think our position is still that  
24                  it's their burden of proof and they haven't met it  
25                  and we do believe that the fact that the prohibition

1 is in effect may be to some degree responsible for  
2 the fact there haven't been issues of the bad  
3 disclosures, but on the other hand, just to address  
4 your question, if you wanted to grant an exemption  
5 and if you want to do it in a way that encouraged  
6 the right behavior, our main concern would be that  
7 we would have -- you know, we would have to figure  
8 out a vehicle that would allow us to learn of the  
9 vulnerability and figure out the fix for the  
10 vulnerability and then get that disseminated into  
11 the fleet for all of those cars that would be  
12 impacted with that.

13 So how we would do all of that, whether  
14 it's "X" number of days or until the fleet has been  
15 fixed or something, we would have to work with you  
16 all.

17 MS. CHARLESWORTH: I mean do you have any  
18 sense in terms of -- I mean maybe you have some  
19 experience where when you learn of a flaw, how long  
20 does it take to deploy a fix?

21 MR. LIGHTSEY: Sometimes it takes quite a  
22 while because quite, frankly, not all the cars are  
23 connected by network. It would depend on the flaw,  
24 what ECU it's in, how accessible it is. Sometimes  
25 cars have to be recalled and brought into the

1 dealers and that depends on the owner's response to  
2 those type of things. So, you know, all of that is  
3 a consideration.

4 MS. CHARLESWORTH: But in terms of time  
5 frames, if it's networked, is it a matter of days or  
6 weeks or --

7 MR. LIGHTSEY: No. Well, I think, like I  
8 said, it depends on the vehicle architecture, the  
9 particular ECU that may be involved, how accessible  
10 that is, how complicated the fix is. It could take  
11 quite a while.

12 MR. MILLER: Just to add a footnote on  
13 that, I think that the opponents are correct that  
14 cars have become more computerized. Cars have also  
15 become more networked over time and but today, as I  
16 think they pointed out in their filing of number 21,  
17 the average, you have, you know, 10-, 11-,  
18 12-year-old cars on the road. And if the  
19 vulnerability exists then the process that  
20 Mr. Lightsey just described may have to be gone  
21 through.

22 It's not like the software industry where,  
23 again, today -- maybe this wasn't true ten years  
24 ago -- but today, so many consumer software packages  
25 are distributed online and updated and this type of



1        thing. That model can be applied there but it can't  
2        be applied anywhere near as quickly or easily in the  
3        automobile industry.

4                That's some of the complications of  
5        Mr. Lightsey was addressing.

6                MR. WALSH: As Dr. Miller pointed out,  
7        researchers are not creating vulnerabilities that  
8        exist in those systems, but to the extent they are  
9        able to do that research, discover them and service  
10       them, that provides an incentive for manufacturers  
11       to come up with ways that they are going to be able  
12       to fix them in a timely fashion.

13               MS. CHARLESWORTH: Mr. Cheney.

14               MR. CHENEY: I just have one follow-up.

15               With this line of questioning as we start  
16       to limit and think about this exemption and our  
17       recommendations to the office, are you more  
18       comfortable, Mr. Lightsey or Mr. Metalitz, with a  
19       limit in the number of individuals who would be  
20       granted this exemption.

21               So this question started a little earlier  
22       whether specific researchers could be granted this  
23       exemption.

24               Would you be more comfortable with it if  
25       it was a specific group of individuals that were

1 granted the exemption rather than to all individuals  
2 who owned the car, for example?

3 MR. METALITZ: The breath of the proposed  
4 exemption is a serious concern. We have heard a lot  
5 about responsible research that has gone on and is  
6 carried out in a responsible way in the past 15  
7 years with the DMCA, in effect, but we are concerned  
8 about giving the government-sealed approval to  
9 anybody claiming to be a security researcher, not  
10 even necessarily having that as their sole purpose,  
11 to be able to claim this exemption.

12 I don't minimize the difficulty which --  
13 the Office has faced this before in other  
14 settings -- of trying to come up with a definition  
15 of credentials or qualifications, but again, I think  
16 the breath of the proposed exception and the  
17 limitless number of people who could claim it is a  
18 concern that we have.

19 MR. CHENEY: Would you be more comfortable  
20 if it was limited?

21 MR. METALITZ: Well, yes, I think that if  
22 there is a way to do that -- and, again, without  
23 negating the fact that the statutory requirement for  
24 recognizing exemption hasn't been met on this  
25 record, but it certainly would be better to have,

1 even to have -- if it can be fashioned and I don't  
2 underestimate the difficulty of doing it because as  
3 Dr. Miller points out, this isn't necessarily a  
4 question of standard of professional credentials.  
5 So I think it is a difficult question.

6 MS. CHARLESWORTH: Anyone else.

7 I want to thank you all. This was very  
8 helpful and informative and helped to sharpen the  
9 issues and our understanding of them.

10 We're going to take a break until  
11 11:00 a.m. So I don't know if you are all aware,  
12 but across the courtyard there is a place to -- I  
13 assume it's obvious -- grab coffee and lunch and  
14 snacks and so go stretch your legs and we will be  
15 back for space shifting. See you in a few.

16 (The proceeding was concluded at  
17 10:36 a.m.)

18  
19 P R O C E E D I N G S

20 WESTWOOD, CALIFORNIA; TUESDAY, MAY 19, 2015

21 11:00 A.M.

22  
23 MS. CHARLESWORTH: Welcome, and welcome  
24 back for those of who you were here this morning.

25 I am Jaclyn Charlesworth, general counsel

1 of the Copyright Office. And this is the Sixth  
2 Triennial 1201 Rulemaking proceeding to consider  
3 potential exemptions to the anti-circumvention  
4 provision.

5 The class we are about to start with is  
6 Proposed Class 8: Audiovisual works, space-shifting  
7 and format-shifting.

8 And before we get into the substance of  
9 your presentations, just a couple of ground rules.

10 It's helpful if we don't speak over one  
11 another. I will call on people or other people here  
12 will call on people.

13 And I will let them introduce themselves  
14 in a moment.

15 In you want to add a comment or respond to  
16 something, just tip your placard up and we will get  
17 back to you and hear what you have to say.

18 We do have a couple of exhibits that have  
19 been handed in. And especially in this class, we  
20 are referring to -- I think maybe referring to  
21 audiovisual evidence, if you can refer to the  
22 exhibit number when you are discussing it, that  
23 really helps us with the transcript. We will try to  
24 do the same.

25 If you are referring back to anything

1       that -- a multimedia exhibit that you previously  
2       submitted that is in the public record already, we  
3       may stop and make sure that we all know what we are  
4       talking about so it's properly identified for the  
5       record.

6                   And what we are going to do, I think, here  
7       is, I know a couple of you have presentations; is  
8       that correct?

9                   So we will go down and everyone has a few  
10       minutes to make sort of an initial opening remark,  
11       slash, presentation. We have just been going left  
12       to right.

13                   So will start with Mr. Siy and go that  
14       way. And if after once we call on you, you can make  
15       remarks, get up and present your material. And then  
16       after that, we will be explore some of the issues.

17                   And we are happy to have you here today to  
18       help with that.

19                   Just going quickly down the row for those  
20       of you who weren't here earlier, this is . . .

21                   MR. RUWE: Steve Ruwe, Assistant General  
22       Counsel in the Copyright Office.

23                   MR. DAMLE: I'm Sy Damle, Deputy General  
24       Counsel.

25                   MS. SMITH: Regan Smith, Assistant General

Counsel.

1 MR. CHENEY: Stacy Cheney, Senior Attorney  
2 at NCIA.

3 MS. CHARLESWORTH: So without further  
4 adieu, if you could just briefly introduce  
5 yourselves, tell us who you are and who you  
6 represent, if anyone, or what interest you  
7 represent.

8 And then we will go back and start with  
9 Mr. Siy and with the actual presentations.

10 MR. SIY: My name is Sherman Siy. I am  
11 Vice President of Legal Affairs at Public Knowledge  
12 and we are interested in and we applied for the  
13 exemption and in the interest of consumers being  
14 able to space-shift their own video media.

15 MS. CHARLESWORTH: And I apologize for  
16 mispronouncing your last name.

17 MR. WILLIAMS: Matt Williams with  
18 Mitchell, Silberberg. I am here for MPAA, ESA and  
19 RIAA.

20 MR. VORIS: Jamie Voris. I am the Chief  
21 Technology Officer for the Walt Disney Studio.

22 MR. TEITELL: I'm Mark Teitell, General  
23 Manager of the Digital Entertainment Content  
24 Ecosystem which operates UltraViolet for consumers  
25 in the video industry.

1 MS. CHARLESWORTH: If you could speak into  
2 the microphones.

3 In fact, if you want to grab it, there is  
4 an extra microphone. I think everyone can have one.  
5 That helps the court reporter.

6 MR. TEITELL: Would you like me to repeat  
7 that.

8 THE COURT REPORTER: If you could, please.

9 MR. TEITELL: I'm Mark Teitell. I'm the  
10 general manager of an organization called the  
11 Digital Entertainment Content Ecosystem which runs  
12 UltraViolet on behalf of consumers and the video  
13 industry.

14 MR. TURNBULL: Bruce Turnbull. I'm an  
15 attorney and I represent the Advanced Access Content  
16 System Licensing Administrator, LLC, and also in  
17 this case, also the DVD Copy Control Association.

18 MS. CHARLESWORTH: Mr. Siy, take it away.

19 MR. SIY: Thank you.

20 So I believe that when addressed according  
21 to the framework of the statute, the exemption for  
22 personal space-shifting of DVD's should be granted.

23 First, the use is clearly non-infringing.  
24 Second, the presence of TPMs on the media creates a  
25 substantial and measurable adverse effect on the

1 lawful use. And finally. The statutory factors  
taken together weigh in favor of the exemption.

2 So in terms of it being non-infringing,  
3 the case law is clear. The Dish case, which we have  
4 in our comments, spells out that space-shifting is a  
5 paradigmatic fair use.

6 Dish is not isolated, either. There is a  
7 long history of case law that clearly indicates that  
8 space-shifting is legal.

9 Similarly, the Congressional record  
10 indicates that Congress has considered for decades  
11 the prevalence of personal home recording in both  
12 the audio and video context and has permitted its  
13 continuation.

14 Respondents in their comments have claimed  
15 no contrary case law or legislation that counters  
16 this.

17 Second, with regard to the adverse effect,  
18 Respondents mention that there is an availability of  
19 alternatives that overcome the anti adverse effect  
20 that a consumer might face.

21 I don't believe that that does overcome  
22 the adverse effects of the prohibition.

23 First, there is an adverse effect  
24 regardless of monetary costs. The adverse effect is  
25 measured in terms of restricting the consumers'



1 ability to use the copies that they have already  
2 purchased as a law allows.

3 As we have discussed in our initial  
4 comments, this represents a significant amount of  
5 value lost to the consumer in what they have  
6 received in exchange for their money.

7 Secondly, if we're talking about the  
8 alternatives that are available, the monetary harms  
9 or the monetary costs to consumers who avail  
10 themselves of these alternatives is real and not  
11 de minimus.

12 Even though the cost to one consumer  
13 rebuying one movie might seem small, it's still  
14 cognizable even in isolation. We don't consider the  
15 illegal downloading of one or twelve sound  
16 recordings to be de minimus in themselves.

17 Further, taken in the aggregate, this is a  
18 substantial amount of money. Consumers spend  
19 billions on DVD's each year. Even a small fraction  
20 of those being rebought instead of space-shifted  
21 will be save consumers millions.

22 In addition is the problem of existing  
23 libraries that would have to be replaced and these  
24 are not single, isolated films, not single isolated  
25 pieces of video program.

1           Then the presence of many movies via  
2           streaming services and downloads doesn't help the  
3           user who has particular movies that are not  
4           available.

5           Individual films to the consumer aren't  
6           interchangeable commodities in which one title can  
7           substitute for any other for the ones that they have  
8           put in their collection.

9           We have shown evidence that the proportion  
10          of movies released on DVD and other physical formats  
11          is far larger than the number available through the  
12          various online and download services combined.  
13          Respondents have not indicated to the contrary.

14          Nor can we trivialize the cost of  
15          rebuilding this catalog through subscriptions to  
16          multiple, sometimes incompatible services,  
17          especially when the availability of titles on these  
18          services will change from day to day depending on  
19          licensing agreements between different services and  
20          copyright holders.

21          Also, use of these services is dependent  
22          upon having a substantial broadband connection,  
23          which with many American don't have.

24          With regard to the statutory factors, I  
25          think I will want to make a quick note that the  
            question of availability in the statutory factors

1       refers to the availability for use of -- for the use  
2       and not necessarily the general availability of a  
3       particular work for access or for sale.

4               And this -- I think the question is  
5       whether or not these works are available for the  
6       legitimate use for which we are questioning the  
7       exemption.

8               But with regard to the effect on the  
9       market, which I expect to spend a lot of time  
10      discussing, if we accept that the space -- shifting  
11      is a fair use as a non-infringing use under the  
12      first prong, as courts have decided, then the effect  
13      on the market for the use, the space-shifting,  
14      itself, won't rise to the level of overcoming the  
15      adverse effects of the circumvention.

16              Basically, if it is a fair use, then the  
17      effects upon the market have been accounted for in  
18      that analysis.

19              The fact that the consumers who  
20      space-shift will be less inclined to rebuy the same  
21      moves or subscribe to the same programs online was  
22      accounted for by the court in Dish and in every case  
23      permitting the time-shifting, as well.

24              MS. CHARLESWORTH: You raised the Dish  
25      case a couple of time. I think we have some

questions about that.

1 MS. SMITH: Yes. I wonder if you can talk  
2 about whether the technologies at issue in the Dish  
3 case are similar to what you are proposing.

4 It seemed like the court there relied on  
5 different restrictions in the Dish technology.  
6 There are limitations on where it can be copied,  
7 temporal limitations. It wasn't in the clear.

8 So how does affect the application of  
9 Dish?

10 MR. SIY: I don't believe that that  
11 actually affects the application of Dish.

12 The question is whether or not the use,  
13 itself, the intent by the consumer was paradigmatic  
14 fair use. In this case, it was.

15 I don't think that it was dependent upon  
16 the amount of protections placed upon it in the  
17 technology of the case.

18 MS. SMITH: It would have no effect on the  
19 application.

20 MR. SIY: I think it doesn't have any  
21 direct effect upon the application.

22 MS. SMITH: Does it matter that in Dish it  
23 was subscribers who were recording it?

24 MR. SIY: No, it does not.

25 Whether or not you are a subscriber to a

1 cable service or not doesn't have any effect upon  
2 your lawful access to that particular work.

3 The subscribers -- whether or not they  
4 were a subscriber, they have lawful access to the  
5 work. In this case, the person has lawful access to  
6 the work by being the owner of that copy.

7 MS. SMITH: So your proposed exemption  
8 does say lawful access and doesn't say owner. So  
9 what if, for example, you were to rent a DVD from  
10 Redbox or something.

11 Would you be able to store it  
12 indefinitely?

13 MR. SIY: No, I don't believe that  
14 somebody should be able to get a DVD from Netflix  
15 and make a copy of it and send it back without  
16 infringing copyright.

17 MS. SMITH: So could we limit the proposed  
18 language, exemption language, to saying something  
19 you owned or lawfully acquired?

20 MR. SIY: If we can do that, my only  
21 hesitation has to do with how ownership is defined.

22 I believe as understood in the normal  
23 transactions with the purchase of the DVD, that that  
24 should work.

25 I note there has been some discussion on

1 the record about what a person is buying. I want to  
2 make sure that we are clear that the person has  
3 purchased a copy of the copyrighted work.

4 We certainly are not claiming that they  
5 have licensed specific uses to the copyrights  
6 underlying it, but they do own, in fact, own that  
7 disc and the copy of the work that is embodied by  
8 that disc.

9 MS. SMITH: And I think we may discuss  
10 that issue later, but while we're still in the  
11 production phase, I will ask one more follow-up  
12 question about the Dish case.

13 What the Dish court also said is that Fox  
14 had not shown there was a more than a speculative  
15 risk on the other markets.

16 I think one of the things that we are  
17 interested in hearing is whether that same showing  
18 might be true for this exemption or whether the  
19 effects on these new markets such as you have here  
20 might be the same.

21 MR. SIY: Yes. In fact, I think the  
22 potential effect on the markets in this case and in  
23 the case of this exemption are less than they would  
24 be in the case of Dish.

25 In the case of Dish, we're talking about  
conversion from a -- I am going to use the term

1 loosely -- but sort of a streaming interaction or a  
2 broadcasting interaction, again, using the term very  
3 loosely, into a more permanent medium here. We are  
4 simply talking about the transfer of location of one  
5 permanent medium owned by the consumer to another.

6 MS. SMITH: In the case of the Dish case,  
7 the Court said that Fox had shown that it was going  
8 to be a tradeoff to the other distribution streams  
9 that Fox had for similar content.

10 In the example of a market, for example,  
11 to digital, that seems to be something pretty  
12 similar to what the exemption would provide.

13 Why would that not just substitute for the  
14 other?

15 MR. SIY: I think the question of  
16 substitution there is analogous and I think overcome  
17 by the fact that, yes, the ability for a consumer to  
18 claim the value of the copy they own, to exercise  
19 their rights over that particular piece of chattel  
20 may actually -- may in some cases be a zero sum game  
21 with the producer.

22 If that is so, I don't believe that that  
23 obviates the grant of an exemption and it doesn't  
24 mean that any time that there is a potential -- a  
25 potential for a lost sale, that it means that you're

1 going to have a -- that you are going to be in a  
place where the user is infringing or that the

2 effect on the market will rise to the level of  
3 overcoming the adverse effect on the consumer.

4 MS. CHARLESWORTH: But doesn't the test  
5 talk about the potential impact on the market, the  
6 Campbell test?

7 MR. SIY: It does. It does not require  
8 that any effect on the market be cognizable -- rise  
9 to the level of swapping the rest of the test.

10 MS. CHARLESWORTH: It says if the use  
11 becomes widespread, the Court is to look at  
12 potential impact on the market.

13 And I think to my colleague's questions,  
14 the Dish is sort of a very narrow, specific set of  
15 facts where there is a finding that it really did  
16 not have a displacing effect on the market, but what  
17 you are proposing -- I mean where is the evidence to  
18 show, I guess -- where is the showing that you made  
19 that it wouldn't -- looking at that, just looking at  
20 that one fair use factor, which is, of course,  
21 extremely important, I think, as you acknowledged  
22 earlier in this case -- looking at that, what is  
23 your evidence that this wouldn't displace the market  
24 for paying, streaming of the same content.

25 MR. SIY: It doesn't displace the market



1       because of the limitations of the exemption  
2       requested.

3               People who are going to be able to take  
4       advantage of the exemption have already purchased  
5       the media. This is not going to spread beyond them.

6               MS. CHARLESWORTH: But they purchased the  
7       media -- at least in the environment they purchased  
8       it in -- and as you know, we have rejected this  
9       exemption before finding that fair use law has  
10      not -- it's not clear that the fair use doctrine  
11      embraces the broad space-shifting and  
12      format-shifting of the kind you proposed. That's  
13      what we found in the prior proceedings.

14              And you have -- there is a new case which  
15      you have been discussing, Dish, but I mean setting  
16      aside that case which applies to a narrow set of  
17      circumstances -- not these particular  
18      circumstances -- the question is over -- what I am  
19      suggesting is people bought DVD's in a legal regime  
20      where at least at the very least, you could say it  
21      certainly wasn't clear they were entitled to  
22      space-shift them.

23              You know, that is the Copyright Office  
24      view.

25              So I mean so then you get back to the

1 question on the impact on the marketplace that is  
developed around that fact.

2 And the question I am asking you is sort  
3 of what can you point me to that shows that this  
4 wouldn't have a negative impact under that fair use  
5 factor for the people who are distributing that  
6 content through different pay channels.

7 MR. SIY: I think -- well, first of all, I  
8 think to address the point about what the  
9 expectations are of the consumer, certainly, you  
10 don't want to frustrate the expectations of the  
11 consumer, but the loss in value to them, whether or  
12 not they are aware of the contours of the law, is  
13 still present if the law denies them the ability to  
14 make a fair use.

15 Again, since we are talking about the  
16 impact on the market, apart from the fair use  
17 analysis, if we are, then I presume for this purpose  
18 that it is in fact lawful.

19 The other thing I do want to address is --  
20 and this is a point that I think we will likely  
21 discuss further -- is there is a lot of discussion  
22 about whether or not a consumer is entitled to the  
23 format of their choosing.

24 I think to say that a consumer isn't  
25 entitled to the format of their choosing is somewhat

1 equivalent to saying a consumer isn't entitled to  
2 skip commercials. It's not exactly accurate because  
3 neither of those activities is covered by copyright  
4 law except insofar as one of the exclusive rights in  
5 Section 106 is affected.

6 So only if I am infringing the  
7 reproduction right in the first instance will a  
8 copyright owner be able to exert a right against my  
9 ability.

10 If somebody is making a fair use and  
11 making a reproduction -- a library is authorized to  
12 make copies under Section 108. A computer user can  
13 make archival copies of software under Section 172.  
14 They have the choice of the form and format that  
15 they want to create, that they want to use in making  
16 that lawful copy.

17 Once that preproduction is deemed lawful,  
18 then the copyright owner can no longer specify what  
19 terms are preferred.

20 With regard to effect on the market, just  
21 generally, again, it's possible for there to be a  
22 market for selling multiple DVD's from multiple  
23 locations, simply selling multiple physical media  
24 for home office or in the case of audio car use.

25 The fact that I am able to move physically

1 a physical disc from one place to another certainly  
affects the market for those works.

2 Having regional coding internationally,  
3 for example, creates separate markets for separate  
4 geographic regions. There is no reason that that  
5 couldn't be applied in a more granular context.

6 And yet simply because that market is  
7 predated because of this doesn't mean that that use  
8 becomes more infringing or that any effect upon that  
9 attempt at price discrimination becomes cognizable  
10 harm.

11 MS. CHARLESWORTH: Let's hear from  
12 Mr. Williams.

13 MR. WILLIAMS: Thank you for having me.  
14 Again, I'm here for MPAA, ESA and RIAA today.

15 And as you know, we posed this proposed  
16 exemption. I think the office has been wise in the  
17 past to take the approach that this is not the right  
18 place to break new ground on fair use.

19 Cases like Dish take years and years to  
20 litigate. There is extensive discovery. At the  
21 end, you have a case-specific result that comes out  
22 of all that.

23 MS. CHARLESWORTH: Just a quick question,  
24 what is the posture of that case right now? Do you  
25 know?

1 MR. WILLIAMS: There has been a summary  
2 judgment ruling at the district court level and it's  
3 currently stayed.

4 MR. DAMLE: Stayed pending what?

5 MR. WILLIAMS: I think the parties are  
6 negotiating currently and it's stayed, I believe,  
7 until October of this year.

8 MS. CHARLESWORTH: So there is no --

9 MR. WILLIAMS: There could be further  
10 developments.

11 MS. CHARLESWORTH: Could be further  
12 developments, we don't know.

13 MR. WILLIAMS: Correct.

14 I'm going to defer to Bruce Turnbull on a  
15 number of aspects of the Dish case today because I  
16 know he's going to cover those and I don't want to  
17 duplicate his effort, but I did want to say that I  
18 don't see how that case is any reason to change  
19 course based on your prior rulings and it doesn't  
20 have any real reasoning on this issue. It only  
21 cites one inapplicable case. And it's also  
22 distinguishable, as you mentioned, because of the  
23 limitations at issue.

24 I do want to point out there is one thing  
25 in the opinion that I do think we should take note

1 of and that's what it states explicitly that Sony's  
2 holding is not absolute, that not all personal  
3 copying is fair use under the Sony case.

4 And so I would say we're falling in this  
5 class of works on the side of something that is not  
6 fair use and that Sony does not deal with and Dish  
7 does not deal with.

8 The Ninth Circuit Opinion in Dish also was  
9 careful to note that when one attempts to apply Sony  
10 in today's context, the market harm analysis under  
11 the fourth fair use factor must be somewhere  
12 different than it was in Sony in the 1980's because  
13 of the secondary market not existing in the 1980's  
14 that clearly exists today.

15 And we're going to hear about some of the  
16 more exciting things that the studios are doing  
17 right now to get into those secondary markets.

18 I think one thing I wanted to note is that  
19 unlike in the past, the exemptions being proposed  
20 now apply to not only traditional DVD's, but also  
21 Blu-ray disc and digital downloads.

22 And I am not sure that I have seen  
23 anything in the proponent's content as to why,  
24 especially digital downloads, would need to be  
25 added, but even then, I would like to point out in  
all three of these examples, consumers do go into

1 the transaction understanding there is an encryption  
2 on the disc and that the digital downloads have  
3 limitations on the number of copies that can be  
4 made.

5 And so I think that they are getting the  
6 benefit of the bargain that they signed up for when  
7 they purchased those products.

8 Under --

9 MS. CHARLESWORTH: I'm going to interrupt  
10 you again.

11 Some of the comments pointed out that  
12 music -- and you represent the RIAA, so I thought I  
13 would direct this to you -- there is now sort of --  
14 or at least the RIAA, as I understand it, has taken  
15 a sort of general position that they're not opposed  
16 to people transferring things from CD's to their  
17 personal computers.

18 Can you comment on how that plays into  
19 this discussion and whether it's relevant or not to  
20 this discussion.

21 MR. WILLIAMS: I think for the most part,  
22 that is accurate, the way you described it. And I  
23 think public knowledge is just not correct when they  
24 say that all works distributed in all different  
25 types ways should be treated the same when you apply

any aspect of the copyright law, really.

1           And here, the motion picture industry has  
2 throughout the process of distributing digital goods  
3 always used encryption and other forms of TPMs to  
4 basically create specific products and tailor the  
5 price point of those products to the types of uses  
6 the consumers would be able to engage in, including  
7 moving the copies around onto multiple devices.

8           MR. DAMLE: So just to follow up on that  
9 question, is it your view that or is it RIAA's view  
10 that ripping a CD is a fair use or is it -- what is  
11 the sort of legal theory that justifies it?

12           MR. WILLIAMS: Sure. And I mean I am  
13 representing RIAA but I did come to talk about  
14 movies today. So I am not trying to bind them to  
15 anything that I say here today, but no, I don't  
16 think they have ever gone as far as to say this is a  
17 fair use. I think what they have said is it's an  
18 use that they are not objecting to.

19           Getting back just very briefly to the law  
20 on this, under the four factors, I don't see how  
21 this is transformative in any regard. There is no  
22 comment or criticism here.

23           It's complete copies for the exact same  
24 purpose that they were purchased for in the first  
25 place.



1           It does directly compete, as you will  
2       hear, with the services that the studios are rolling  
3       out -- the digital services that the DMCA was really  
4       intended to incentivize. So there are reasonable  
5       alternatives here too circumvention and to copying.

6           Contrary to what Sherwin said, I don't  
7       think that they have established there is a specific  
8       content that's not available for download or  
9       streaming that is available on disc. I haven't seen  
10      that in their comments. If there are specific  
11      titles, I overlooked it.

12           My understanding from the studios is that  
13      they are aggressively pursuing digital downloads and  
14      streaming. So anything that is on disc, they would  
15      be working to try to also monetize through digital  
16      properties.

17           And, you know, I think Sherwin's position  
18      boils down to basically that no one should ever have  
19      to pay more than once for a copy of the same motion  
20      picture once you have purchased the DVD.

21           The idea is that you should always be able  
22      to make more copies so that you can access it  
23      wherever you want and I don't think that that is how  
24      the copyright law is intended to work.

25           I think the entire system is premised on

1 the notion that you do have an exclusive right to  
2 make copies unless there is an exception that is in  
3 the statute or can clearly be shown.

4 And otherwise, we would only need the  
5 distribution right. We wouldn't really need the  
6 reproduction right to be in the statute if all the  
7 personal use copying was fair.

8 When you buy one copy of a book, you don't  
9 expect to get two. And I really don't believe  
10 someone who bought one copy of a DVD in the year  
11 2000 expected to get all the types of the uses that  
12 the studios are making available now in 2015.

13 They are really aggressively trying to  
14 meet consumer demand and they're using access  
15 controls to do that.

16 It's not just as simple as paying twice for  
17 something. There is no inappropriate windfall as  
18 the proponent claims there is.

19 The revenues from these services are being  
20 used to generate value for the consumers. New  
21 products are being rolled out that would not  
22 otherwise be rolled out.

23 Incentives would be reduced to create them  
24 if there was no way to monetize them.

25 And on that point, I just wanted to quote  
something from Public Knowledge's comments quickly

1 before I wrap up.

2 I think they acknowledge that it takes  
3 investment to roll out these new services that  
4 everyone, I think, agrees are a good thing. And  
5 they say that digitizing and converting video  
6 content to a format suitable for online distribution  
7 is a time consuming process and it may be difficult  
8 for private company to invest the time to make a  
9 given work available in a new media.

10 And I would submit that is exactly correct  
11 and that is what my clients are doing, is they are  
12 trying to build up new services that people want.  
13 And in order to do that, they need to recoup their  
14 investments.

15 Just as a conclusion, because the  
16 procedure has changed a little bit this cycle, we're  
17 a little bit corned that maybe if we fail to talk  
18 about something today at the hearings that was in  
19 reply comments and you are interested in it but we  
20 don't know you are interested in it, we will miss  
21 our chance to comment on it.

22 So I would just appreciate that anything I  
23 don't cover that you think is important, I would  
24 appreciate the question or a follow-up letter on  
25 that.

1 And I would also just ask that because I  
2 think what Mark and Jamie have to say is going to be  
3 relevant to some of the other panels that will come  
4 next week in DC, that the presentations they have  
5 submitted and their testimony be considered when you  
6 are considering these other classes of works, as  
7 well, just because scheduling it make it impossible  
8 for them to come to all the different panels I am  
9 able to come to.

10 Thank you very much.

11 MR. RUWE: So next, we want to go to Mark  
12 because we have your cued you --

13 MS. CHARLESWORTH: Mr. Voris, do you also  
14 have a presentation?

15 MR. VORIS: I do. I have introductory  
16 comments and a presentation.

17 MS. CHARLESWORTH: So we are going to go  
18 back to you.

19 MR. TEITELL: Thank you very much for  
20 having me here today.

21 Again, I am Mark Teitell. I am the  
22 general manager of an organization that is made up  
23 of a number of both Hollywood studios and other  
24 content owners, but also companies from across the  
25 industry that represent companies that do  
distribution of video who run stores where discs are

1 sold, who run cable and access TV networks, who rely  
2 on Internet-based distribution and also a lot of  
3 technology companies that make something called  
4 digital video work. I will get into more detail on  
5 that in a minute.

6 That group has designed, launched  
7 developed and now operates UltraViolet in a market.  
8 I will run through a brief presentation about how it  
9 works in the moment, but at the highest level,  
10 UltraViolet makes it easy to access content that  
11 they have purchased on devices they have.

12 And that includes TV screens, includes  
13 smart phones and tablets and other mobile devices  
14 they might have in the future and computing. And I  
15 will go through some more details there.

16 My role here is absolutely only as a  
17 business person. So I not an attorney. I will  
18 answer all questions that everyone has before us  
19 about how it works and then also what my  
20 businessperson's view and the marketplace view might  
21 be for consumer alternatives, but, please, refrain  
22 from asking -- I can't answer questions about case  
23 law or litmus test or things like that.

24 So with that, I will direct -- I think  
25 everyone has a view of one screen or another here.

1 I will just do a short presentation telling a little  
more about UltraViolet and our background and

2 personally how it works.

3 We fundamentally have been responding to  
4 four underlying needs we think consumers have.

5 MS. CHARLESWORTH: I am going to stop  
6 here.

7 This would be hearing Exhibit 1 we're now  
8 hearing about, for the record.

9 Continue.

10 MR. TEITELL: Fundamentally, we see four  
11 things that consumers in the market who collect  
12 movies and TV shows want, and I will just speak  
13 briefly.

14 One is people say if I have a collection  
15 but I have rights to the things I have put in the  
16 collection or recorded on an Internet or cloud-based  
17 account, that let's me watch across a lot of  
18 different devices.

19 And also, I don't have to worry about  
20 losing it, as opposed to a disc which can be lost or  
21 scratched or broken.

22 In fact, I would go further than talking  
23 about UltraViolet or Disney Movies Anywhere, but I  
24 would say even some of those services today that  
25 don't participate in either of the services that we

1 are talking about today but just operate their own  
2 video services -- people like Amazon Instant Video  
3 or perhaps Comcast -- even they within their own  
4 services offer lots of flexibility and alternatives  
5 for consumers to actually log into an online system,  
6 see a list of the things they have purchased, their  
7 collection and press play, stream or download to  
8 download and that encompasses television screens and  
9 mobile and computing.

10 So I think the industry all across the  
11 industry has gone a long way toward what within this  
12 context is being discussed as space-shifting.

13 UltraViolet -- and I think also this is  
14 the last time I will mention DMA because we already  
15 talked about it, but DMA also provides three other  
16 benefits on top of that.

17 One is that quite oftentimes a consumer  
18 may feel there are certain aspects of different  
19 video distributors that are strong suits in that  
20 particular one, but others have other strong suits  
21 and I would like to be able to take advantage for  
22 content I have purchased of kind of the best of all  
23 the words.

24 So I would invite you to think of a bank  
25 ATM network. That's an example so where my son goes

1 to the school in the Bay area, there might be a  
2 certain bank's ATM near there that is convenient for  
3 me but near my office is a different bank ATM  
4 network, but the bank ATM network lets me take  
5 advantage of both of those banks' location.

6 Similarly, UltraViolet would let a  
7 consumer, as my presentation will demonstrate, say  
8 gee, that one particular video service has a IOS ap,  
9 for example, that my kids like to use on their iPads  
10 to watch that movie collection, but that other  
11 service has an op on our game console which is  
12 connected to our big TV in our living room. So we  
13 can access our UltraViolet collection from there,  
14 also. That is an important benefit.

15 It's also important to consumers to be  
16 able to collect things they can see in one library.

17 In the physical word of DVD's and  
18 Blu-rays, you were allowed within the confines of  
19 your own house to store your discs wherever you  
20 wanted to.

21 When you start to have a disc collection,  
22 what UltraViolet let's you do, is even if you might  
23 have acquired these titles from different  
24 participating retailers, to be able to log in and  
25 view all of these things that your family has in  
their collection at one place.



1                   And then finally, there is an aspect, I  
2                   think, to any multi-retailer system and UltraViolet  
3                   is as DMA that is similar to the idea of a wireless  
4                   number portability and wireless business in which a  
5                   consumer can know yes, I may have purchased movies  
6                   and TV show from retailer A or B or C over time but  
7                   I actually know this is a widely-honored industry  
8                   system and that even for any number of reasons I  
9                   don't use retailer A or B or C in the future, there  
10                  are also other participating companies that would  
11                  allow me to log into my family's account and press  
12                  "play" to stream or "download" to download.

13                  MS. CHARLESWORTH: I will interrupt.

14                  We have probably five more minutes before  
15                  we will have to move on. So I want to make sure we  
16                  are able to hear about some of the more  
17                  controversial issues.

18                  MR. TEITELL: Happy to.

19                  This is a partial list of companies. I  
20                  mentioned the idea that this spans a large number of  
21                  the biggest content owners, but also companies from  
22                  across the technology spectrum and big retailers.

23                  I am afraid it doesn't display  
24                  particularly well on this projection. I think you  
25                  will see major device manufacturers, major

1       retailers, major technology companies like Microsoft  
2       Intel, in addition to the other five MPA studios  
3       that so not include big providers like Lions Gate  
4       and HBO.

5               How does UltraViolet work. Just if I  
6       could to get a sense, do any of the five of you have  
7       an UltraViolet account or are any of you users?

8               MS. CHARLESWORTH: I don't have time to  
9       watch movies.

10              MR. TEITELL: So UltraViolet starts --  
11       really, it revolves around the idea of there being a  
12       free UltraViolet library for consumers. Let me  
13       stress that.

14              Today, all across the U.S. and other  
15       countries, people are acquiring movies either by  
16       buying discs or buying things via websites and aps  
17       online at no extra charge above that purchase price.  
18       They are getting to have the fact they have acquired  
19       that collection noted in a free UltraViolet account  
20       and multiple different retailers.

21              The examples given here are a little bit  
22       hard to see on screen, but Walmart's Vudu service,  
23       M-Go, which is a joint venture of technicolor and  
24       Dreamworks and then Flixster. Multiple different  
25       retailers are integrated into that system.

      And so when the consumer might purchase a

1 movie or TV show from one of those retailers that  
2 comes with UltraViolet rights, that will be  
3 automatically deposited into that free UltraViolet  
4 library.

5 And when they are using that service --  
6 for example, if you are using Vudu and you click on  
7 the "my movies" tab, that shows you the things in  
8 your collection.

9 Vudu will have been checking to see all  
10 the things that I have in my UltraViolet library,  
11 even things purchased from other retailers. And  
12 they would show me into my listings that I could  
13 download or I could stream.

14 So that is kind of the basic idea.

15 Currently, they are nine retailers in the  
16 U.S., 18 worldwide, but nine in the U.S. who are  
17 integrating into this system but we expect others.

18 How I do get things into my UltraViolet  
19 library? Three ways. One is there are Blue-rays  
20 and D-V-D for sale all other that come fundamentally  
21 at no extra charge with UltraViolet rights.

22 So inside the package, there is a disc  
23 insert -- I see, Jamie, you have one -- that will  
24 direct to you to a website where you have a code.

25 MS. CHARLESWORTH: I was going to ask

1           if -- I don't know if you are the right person to  
2           answer this question -- but I am curious to know  
3           whether that changes the price to the DVD to the  
4           consumer.

5                       MR. TEITELL: I think that is entirely a  
6           decision that every studio and retailer together  
7           when they make decisions about how the price would  
8           be to the retailer and how the retailer prices it.

9                       MS. CHARLESWORTH: Maybe some of the  
10          others can comment on that.

11                      MR. TEITELL: By the way, I also -- and I  
12          am speculating, I don't have historical detailed  
13          pricing data -- but I don't believe that any price  
14          bump was suddenly seen in typical sales prices when  
15          UltraViolet and things like DMA began to be  
16          introduced to the market, but again, I can't  
17          directly answer that question.

18                      Buying discs that come with UltraViolet,  
19          online movie stores, and that is other websites and  
20          aps, and that is also increasingly coming into the  
21          program guide, itself where paid TV operators,  
22          people like Verizon Fios and others will integrate  
23          that so I can buy online.

24                      And also, someone referenced Disc to  
25          Digital. Disc to Digital is a service by which you  
          can take titles that you already own -- typically on

1 disc, although there are some history of customers  
2 having bought electronically before the advent of  
3 UltraViolet -- and you essentially can upgrade to  
4 have UltraViolet rights which would give you  
5 downloaded streaming capabilities across all the  
6 retailers.

7 I should acknowledge that typically in the  
8 market today, there has been a \$2 service fee to do  
9 that, but I think when we measured satisfaction in a  
10 variety of ways -- and I will comment on that in a  
11 moment -- that consumers view that as essentially a  
12 nominal service fee to give them a far greater range  
13 of access alternatives to space-shift all over the  
14 place than they had when they bought the DVD.

15 MS. SMITH: So what if I buy a DVD today  
16 and I just use my UltraViolet code. Can I get a new  
17 code? Do I have to go to disc digital and pay \$2 or  
18 is there a way to get that for free?

19 MR. TEITELL: I can comment a bit on that,  
20 and typically what would happen there, people are  
21 contacting either studio customer service or ours  
22 which we operate. And ultimately, there are  
23 judgment calls that get made. It is oftentimes the  
24 case if people can show a receipt for a disc, they  
25 get issued a new code, but it's really made on a

case-by-case basis.

1           For example, we know someone that said,  
2           gee, this is the 30th time that you have purchased  
3           the disc and lost your code. Policy starts to say  
4           you don't.

5           MS. SMITH: So you may sometimes be  
6           charged for it.

7           MR. VORIS: I can tell you from Disney's  
8           standpoint, we actually have a pretty formal process  
9           where we do actually provide a code for people who  
10          have lost their code and we have a whole customer  
11          service group built around that.

12          MS. SMITH: I think this goes to the  
13          question Mr. Siy was saying that consumers are  
14          seeing a loss of value because they not able to  
15          shift to a different format. And the question is  
16          what is the value of what they originally purchased.

17          And so Mr. Williams is saying they got the  
18          benefit of the bargain but I think we are interested  
19          in that there may be an additional charge.

20          MS. CHARLESWORTH: In other words, the  
21          economics of this are interesting to us, and in  
22          terms of what is the market and how is the consumer  
23          paying if they're paying additional value to the  
24          copyright owner in using UltraViolet and so how that  
25          transaction happens and what they are paying for in

1           that.

2                       MR. TEITELL: Understood. And that's a  
3           good question.

4                       Let me just mention a couple of facts. I  
5           am not constrained to legal interpretation.

6                       I mentioned a service fee. The typical  
7           service fee is \$2. So if I had a DVD that I could  
8           have bought as early as 2000 or even before that,  
9           you said, and I want to have UltraViolet rights  
10          which would let me download, stream, all of those  
11          different types of screens that I talked about, I  
12          can pay a \$2 fee -- and this talks about both space  
13          and format-shifting by the way -- and now I have a  
14          standard def version of my movie which is akin  
15          essentially to what DVD quality was.

16                      MS. CHARLESWORTH: Does a portion of that  
17          go back to the movie studio?

18                      MR. TEITELL: That would be something that  
19          would be as agreed in a bilateral business  
20          relationship between whatever retailer is  
21          administering the program and the studio.

22                      MS. CHARLESWORTH: I mean is the idea that  
23          some part of that compensation compensates the  
24          copyright owner or does it just all go to the -- you  
25          are calling it a service fee which suggests it's

1 just for the actual service of the customer's  
account and not the content.

2 MR. TEITELL: I understand. I didn't mean  
3 to suggest any knowledge of how the split of that  
4 money might happen between the retailer and the  
5 content provider.

6 Let me say commonly, typically, consumer  
7 money is finding its way some kind of a proportion  
8 to the retailer and the underlying content owner. I  
9 don't know whether that is the case in every single  
10 situation.

11 The thing I also did want to point out, I  
12 mentioned disc to digital for a DVD and paying a \$2  
13 fee. That results in having standard definition  
14 rights to space-shift across all of these places and  
15 also do streaming and downloads within that, but  
16 there is also is typically a second alternative  
17 which is to pay -- what the market typically has  
18 been so far -- \$5, which would let you, for example,  
19 take a DVD and now receive a high definition right  
20 to your movie.

21 And I think that also talks a little bit  
22 to what perceived consumer value is to be able to do  
23 a format-shift.

24 I think probably as the panel is aware,  
25 there are two in the past that have been DVD to



1 Blu-ray upgrade programs that consumers also pay  
2 something far less than it would be to reacquire  
3 that movie, but they paid something to move from a  
4 DVD to a Blu-ray. So this is similar but in the  
5 digital realm.

6 MR. CHENEY: May I ask a question,  
7 Mr. Teitell.

8 We have been hearing about UltraViolet now  
9 for a while at these hearings.

10 Are the consumers taking up this  
11 opportunity that you provided them? Can you give us  
12 some sense of how this is being taken up by the  
13 consumer.

14 MR. TEITELL: Absolutely.

15 And by the way, rather than being a slave  
16 to these slides and the presentation, let me answer  
17 your question. We might just skip past some things,  
18 but you have it on the record.

19 Yes, I think they are. We have at most  
20 recent count nearly 23 million household accounts.  
21 Almost 20 million of those are in the U.S.

22 Those accounts in total now have in their  
23 UltraViolet collections an aggregate over  
24 130 million movies and TV shows.

25 There are third-party credentialed

1 research companies that have done research on  
2 UltraViolet, one called the NPD Group, for example,  
3 that issued a press release just in the last several  
4 days about research they have done and found over  
5 90 percent satisfaction rate with UltraViolet and  
6 other good things about intent to continue using  
7 UltraViolet.

8 So to your question, yes, I understand the  
9 UltraViolet has been around in the industry for a  
10 few years.

11 You all probably started hearing about it  
12 before it even launched into the consumer  
13 marketplace. That launch in the consumer  
14 marketplace was in very late 2011.

15 And in fact, 2012 is the first year when  
16 the real ramp-up started in terms of lot of titles  
17 available from lots of studios and also mainstream  
18 retailers.

19 So by that measurement, we are about three  
20 years into trying to grow UltraViolet.

21 The one important thing I guess I would  
22 say is I think consumers know -- those consumers  
23 especially to whom collecting movies and TV shows is  
24 most important -- know about UltraViolet as an  
25 alternative and they can choose to use retailers  
that support UltraViolet or they can choose not to

1           if they don't want to, but I think we're succeeding  
2           at least to that degree.

3                       And I think you said these are triennial  
4           hearings. So it would be my expectation that at the  
5           next one, UltraViolet would be very substantially  
6           larger both in terms of consumer base that used  
7           UltraViolet and also in terms of the number of  
8           retailers that have plugged in.

9                       MS. CHARLESWORTH: Do you hear that,  
10          Mr. Siy? You are coming back.

11                      I think we're going to go on.

12                     MR. DAMLE: This is a general question to  
13          address, which is to Mr. Siy's point that the  
14          availability of the movies on UltraViolet and DMA,  
15          the sense of like where are we now in terms of the  
16          number of movies that are on these services, what  
17          are the plans for the next three years for how many  
18          more movies are going to be put onto it, not just  
19          movies that are being produced in the future but  
20          also going into the back catalog.

21                      Do you have any -- can you give us any  
22          information about that?

23                     MR. TEITELL: I can and obviously, I will  
24          forward you to Jamie.

25                      So among the -- if I could, I am just

1 going to advance through -- I am going to -- unless  
2 you direct me to, I am going to skip over that, how  
3 it works. A lot of you understand that.

4 So if you look on the left-hand slide of  
5 this exhibit, there are -- this is the 13 content  
6 providers that currently make content available  
7 through UltraViolet. There are something like  
8 16,900 -- and I don't remember the number -- so  
9 nearly 17,000 titles available in UltraViolet right  
10 now.

11 So to your point, to get to that number,  
12 you actually have to be going backward also into  
13 things that were first issued into home  
14 entertainment in DVD and Blu-rays before UltraViolet  
15 came along.

16 The composition of that is almost half and  
17 half. It's slightly over half movies.

18 And now the other half which is growing  
19 much more rapidly for a reason I will explain in the  
20 moment is television episodes. And the reason is  
21 really when you look at it, amongst the studios that  
22 are represented up here in this exhibit, 9000  
23 movies, give or take, is a very, very large  
24 proportion of the movie database ever made available  
25 in any digital format at all.

And so while they do continue to do some

1 kind of cleanup and completion of the transfer of  
2 catalog and UltraViolet rights, fundamentally, that  
3 movie number has grown because new releases have  
4 come along. And I am using "saturation" in the good  
5 sense here. There a very high saturation of  
6 UltraViolet in the catalogs of all of the studios.

7 Clearly, they have things from their past  
8 many decades of work that they have never made  
9 available digitally at all in any form.

10 They occasionally also have certain things  
11 with complicated rights structures to. There were a  
12 lot of deals done in the pre-digital age that didn't  
13 contemplate very cleanly about who could make  
14 decisions about how the work is distributed, but  
15 with those exceptions, by and large, all of the  
16 movies that these studios bring to market in digital  
17 are also available with UltraViolet, which is an  
18 enhanced form of digital.

19 MR. DAMLE: So that we're talking about  
20 the five studios for UltraViolet. And do you have a  
21 sense -- that leaves out other independent studios.

22 Do you have a sense of sort of the market  
23 share of the people in the UltraViolet system for  
24 movies, perhaps.

25 MR. TEITELL: I have a general sense.

1 Jamie might have a better one, but my sense is it  
2 would be somewhere well north of 75 percent, perhaps  
3 into the low 80's percent. And clearly, Disney is  
4 an important player in the market and there are some  
5 others, as well in the market.

6 One thing I emphasize to respond in a  
7 different way to your question is inherently because  
8 UltraViolet is an open industry standard system,  
9 there are literally no entry impediments to other  
10 content providers deciding they want to join  
11 UltraViolet.

12 We operate a service that they need to  
13 license in certain ways, can technically integrate,  
14 but any content provider that wants to that becomes  
15 technical complaint can add UltraViolet to the way  
16 they market content. So HBO is a relatively recent  
17 example of that.

18 MR. VORIS: There are probably two answers  
19 here. One is about what is available digitally and  
20 one is about what is available in UV or DMA.

21 And the question of what is available  
22 digitally is in many ways a pure economic one. If  
23 there are people who want to buy our movies, we  
24 would like to make them available digitally.

25 We have right now about 450 titles. We  
have, of course, a much smaller library than the

1 combined UltraViolet entity. We are only film, not  
2 TV, and so that represents a pretty significant  
3 portion of our library.

4 And I would say the titles that are not in  
5 DMA largely are available digitally already. And  
6 the only reason they are not in DMA is DMA has a  
7 very specific brand promise. It is nothing in DMA  
8 is above PG-13. It's targeted around Disney, Pixar.

9 We recognize we have people who would like  
10 sharing on titles that not currently in DMA. So we  
11 would like to accommodate them.

12 MS. CHARLESWORTH: So when you say  
13 available digitally, you mean streaming.

14 MR. VORIS: Through retail partners.

15 MS. CHARLESWORTH: You don't mean  
16 literally like --

17 MR. VORIS: So, for instance, we have a  
18 brand called Touchstone that Disney has produced  
19 movies under in the past. We don't have those  
20 movies in DMA because they don't necessarily fit the  
21 brand for that product. You can buy those movies  
22 through the digital retailers like Apple iTunes or  
23 Google Play.

24 MS. CHARLESWORTH: You can buy copies of  
25 them or you access them through streaming?

1 MR. VORIS: You can buy the rights to  
2 access those films on Apple iTunes or any of the  
3 retailers. And then it depends on the retailers'  
4 usage rule of whether you are downloading or  
streaming.

5 MS. CHARLESWORTH: But your point is not  
6 all Disney movies are made available through DMA.  
7 You have other outlets for them, as well.

8 MR. VORIS: Correct.

9 MS. CHARLESWORTH: Do you want to go ahead  
10 with your presentation, Mr. Voris.

11 MR. VORIS: So I am going to make a quick  
12 introductory and then I have to run over to switch  
13 the projection.

14 So good morning and thank you for inviting  
15 me.

16 As I said earlier, I am Chief Technology  
17 Officer for the Walt Disney Studios. And in the few  
18 minutes I have, I'm going to give you an overview of  
19 how Disney is working to enable consumer access to  
20 movies across platforms and devices and through the  
21 Disney Movies Anywhere ecosystem to do so in ways  
22 that are both authorized and secure.

23 So Disney makes movies available in  
24 downloadable and portable formats in connection with  
25 purchases of DVD's.



1 THE COURT REPORTER: I'm going to have to  
2 slow you down.

3 MS. CHARLESWORTH: When people read, it  
4 can get really fast. It happens to all of us.

5 MR. VORIS: So for years, Disney has made  
6 movies available in downloadable and portable  
7 formats in connection with purchases of DVD and  
8 Blu-ray discs through our Disney Digital Copy and  
9 Digital Copy Plus services.

10 This is in addition to being the first  
11 studio to make full-length feature films available  
12 for direct download and transfer to portable devices  
13 through Apple iTunes.

14 Through our Digital Movies Anywhere  
15 products and underlying KeyChest technology, we  
16 sought to address the challenge of how to make our  
17 movies available in a high quality, downloadable  
18 digital format via a one-time purchase across  
19 multiple retail platforms and devices.

20 So in just a second, I will do the  
21 overview presentation, but I will end my  
22 introductory statement with stating products and  
23 services like Disney Movies Anywhere are making it  
24 easy for consumers to access their movies across  
25 formats and platforms and they represent the very

1 type of innovative digital solutions the DMCA's  
2 anti-circumvention protections were intended to  
3 encourage.

4 As my good friend Mark says, I am not a  
5 lawyer, either. So I am going to defer lawyer  
6 questions to more qualified folks, but I am happy to  
7 talk about anything about DMA or KeyChest.

8 I know we are short on time. So very  
9 quickly.

10 MS. CHARLESWORTH: Is this Exhibit 2?

11 MR. VORIS: Exhibit 2.

12 MS. CHARLESWORTH: So for the record,  
13 we're now taking a look at hearing Exhibit 2 for  
14 Class 8.

15 MR. VORIS: Thank you.

16 So Disney Movies Anywhere, as Mark said,  
17 like UltraViolet, is a cloud-based digital movie  
18 locker service we launched February 25 of last year.

19 And we have been up a little over a year  
20 now. And in DMA, you can collect and watch your  
21 Disney, Pixar, Marvel and Star Wars digital movies  
22 in a safe, simple and seamless way.

23 It's available by the Disney developed  
24 KeyChest platform and DMA distributed collection  
25 across digital providers.

So in our world, one of the big

1 differences between UltraViolet and Disney Movies  
2 Anywhere is that we have this app and website  
3 ecosystem. So you can go to  
4 DisneyMoviesAnywhere.com or you can download the  
5 Disney Movies Anywhere on your IOS device or your  
6 Android device.

7 And you actually can key your locker and  
8 we're adding increased functionality on top of the  
9 digital movies that you add to your collection.

10 So let me just talk a little about how it  
11 works.

12 So kind of a day in the life. So for my  
13 family, I have daughters that are nine and twelve.  
14 And our family, like many of our guest families, is  
15 a multi-device family. So we have some Apple devices, we  
16 have Android devices, we have Kindles.

17 And over time, we have acquired movies  
18 from lots of different retailers. So maybe we're  
19 trying to consolidate our library on a single  
20 retailer, but my daughter sometimes buys movies from  
21 a different retailer and maybe we redeemed a digital  
22 copy -- we will talk about that in a minute.

23 You can see we have movies in all  
24 different places and I kind of have to remember  
25 where I got them and how I can watch them and it's a

1 little frustrating. And so that is the problem that  
2 Disney Movies Anywhere is intended to resolve.

3 So we have this KeyChest entitlement  
4 locker, like UltraViolet locker, and when you create  
5 an account -- your created account is free and in a  
6 one-time process, we ask you to do two things. One  
7 is to create or log into your Disney account. So if  
8 you don't have an account already with Disney, we  
9 just take a couple of pieces of information.

10 Many millions of people already have  
11 accounts with Disney, either from going to our parks  
12 or maybe you have a fantasy football league at ESPN.  
13 So you just log into your account. Also, we can let  
14 us set your locker for you.

15 The second thing we ask you to do through  
16 this one time, very easy process, is link your  
17 retail account.

18 So when you do that -- you can't really  
19 see it here -- but between each of these retailers  
20 listed in my account, all of the movies from that  
21 retailer come into my central Disney Anywhere  
22 locker. And then at the same time, that entire  
23 collection goes out to each of the individual  
24 retailers.

25 So what you see here is all of the movies  
that you have added to your collection live not only

1 in DMA but also at all of the retailers.

2 So I think a question came up earlier of  
3 what happens if maybe a retailer goes out of  
4 business, what happens.

5 The great thing about this model or about  
6 UltraViolet is you still have your movies in lots of  
7 places. And so that allows you really the best of  
8 all of the different ecosystems.

9 If you like Disney Movies Anywhere -- and  
10 again, we provide lots of functionality through our  
11 ap and website ecosystem, then great, consume there.

12 If you don't, feel free to do it at a  
13 retailer, as well.

14 So just trying to provide a lot of  
15 functionality for consumers.

16 MS. CHARLESWORTH: And what is the service  
17 retail for consumers? What is the cost to  
18 consumers?

19 MR. VORIS: Sure. So our price point is  
20 typically for high def titles is around \$19.95.

21 MS. CHARLESWORTH: A year?

22 MR. VORIS: So this is talking about  
23 purchase. So it's electronic sell-through. And  
24 so --

25 MS. CHARLESWORTH: And then you get rights

to the --

1 MR. VORIS: Yes.

2 So the notion here is really to deliver on  
3 this promise of shop anywhere, enjoy everywhere.

4 So when I talk about the shop anywhere,  
5 who do I mean. So last February, we launched in  
6 partnership with Apple, which brought DMA to iTunes,  
7 which is the largest digital content ecosystem in  
8 the world and across the entire IOS and Mac  
9 equipment.

10 And then in November, we launched our  
11 partnership with the Google which brought DMA to  
12 large devices and Android and are now available on  
13 millions of Android phones and tablets, as well as  
14 having the ability to broadcast over your TV.

15 And at the end of the year, we launched  
16 our partnership with the largest physical retailer  
17 in the world in Walmart. So adding Walmart to Vudu  
18 to the DMA ecosystem further expanded our efforts to  
19 increase the value to consumers, digital movie  
20 collections, making it easier than ever for  
21 consumers to access their Disney, Pixar, Marvel and  
22 Star Wars movie collections from the comfort of  
23 their living room and across multiple mobile  
24 devices.

25 Vudu can be accessed on virtually any

1 device or Xbox One, PlayStation 4. So this means  
2 consumers can now watch their digital copy on more  
3 devices than ever in their living room.

4 Also, it's worth mentioning is that we  
5 also participate in the UltraViolet ecosystem, so  
6 it's one place where you can get all of your movies  
7 from all of the studios.

8 And so as you can imagine, we're hard at  
9 work on rolling out new device platforms and  
10 retailers and we mean to make new announcements very  
11 soon.

12 And then one last thing -- I will touch on  
13 this that Mark mentioned about code redemption.

14 So very similar to the UltraViolet world,  
15 we sell combo packs that include a code like this.  
16 It's a little insert that comes in the clamshell  
17 packages.

18 And so what you can do here -- we have a  
19 copy of "Frozen" -- you take the insert out and I  
20 can take that code and just type it into the app or  
21 the website and that movie will automatically get  
22 added to my locker.

23 MS. CHARLESWORTH: And is there a price  
24 differential to the consumer when you are buying on  
25 something with that code in it versus a DVD without

it?

1 MR. VORIS: Yes, for us, there is, yes.

2 MS. CHARLESWORTH: And roughly what is  
3 that?

4 MR. VORIS: So it differs by film, but  
5 generally we sell it in a -- it comes in our combo  
6 pack, which includes DVD, Blu-ray and the digital  
7 copy.

8 So I don't know that if we talked publicly  
9 about what the breakdown within that is, but it's a  
10 premium on top of just buying the physical film.

11 MS. CHARLESWORTH: Thank you.

12 Mr. Turnbull, you have been very patient  
13 and we want to give you your turn.

14 And then we also do want to circle back.  
15 I think Mr. Siy probably has some thoughts he would  
16 like to share in response to the four of you.

17 So if you can go ahead with your opening  
18 remarks, then we will debate some of the issues and  
19 hopefully keep us roughly on schedule.

20 MR. TURNBULL: Sure. Thank you.

21 I think it was important to see the  
22 demonstration because it illustrates in a way that  
23 the words and the lawyers can't, what is going on in  
24 the marketplace. I think that is obviously one of  
25 our major points.



1                   Again, I am Bruce Turnbull. I am here  
2                   representing the AACCS LA and the DVDCCA. Those are  
3                   the two groups that provide the content production  
4                   to TVM, in this case for DVD and for Blu-ray.

5                   Rather than rehash what was in our  
6                   remarks, written statement, I wanted to make four  
7                   points today.

8                   First, I wanted to talk some about the  
9                   Dish case. And here, there was -- some of this came  
10                  out in the earlier questioning, but I think it's  
11                  very important to understand that, first of all,  
12                  there were five decisions in that case and only one  
13                  of them involved any analysis of -- I hesitate to  
14                  call it analysis -- but any decision on the actual  
15                  copying of content.

16                  First, when the case was filed, the Hopper  
17                  transfer function did not exist. And so the  
18                  original preliminary injunction decision by the  
19                  district court involved time shifting. And the  
20                  Ninth Circuit decision upholding that district court  
21                  finding also involved time shifting.

22                  Neither of those decisions had the Hopper  
23                  transfer copying function before them. So you could  
24                  time shift and you could in a sense space-shift but  
25                  it was a streaming. It was not an actual copy that

was being made through the other functionality.

1           And so when you read the Nine Circuit  
2 decision, you have to understand they are not  
3 talking about the copying function that really is  
4 the heart of our dispute here.

5           And then the Hopper transfer function was  
6 introduced by Dish and there was a preliminary  
7 injunction request made by Fox that was turned down  
8 by the district court and that was appealed to the  
9 Ninth Circuit. Both of those cases, the legal issue  
10 that was involved was irreparable harm.

11           Neither case -- neither of those decisions  
12 analyzed the fair use element of the Hopper transfer  
13 functionality. They simply denied the preliminary  
14 injunction based on a lack of irreparable harm.

15           It's notable that the Ninth Circuit  
16 decision is unpublished, unprecidential and all of  
17 that, but when you read it, that is what is there.

18           So the only discussion in the sequence  
19 that involved any discussion, let alone analysis and  
20 holding, let alone any discussion of the Hopper  
21 transfer copying function as fair use is the  
22 district court's decision on summary judgment that  
23 came out in January of this year.

24           And that decision -- the only discussion  
25 of that is in a single paragraph where there is a

1       conclusory statement made that this is paradigmatic  
2       fair use, which is actually a misquote of the real  
3       case which talked about paradigmatic noncommercial  
4       use and that is -- there is a distinction because  
5       the Rio case was analyzing the terms of the Audio  
6       Home Recording Act. It was not analyzing fair use.

7               So the only case that was cited in support  
8       of the district court judge's decision was not a  
9       fair use case and was analyzing a different statute  
10      and actually using different words than the judge  
11      used in her decision.

12             And so I think the ability of -- Public  
13      Knowledge made a significant point out of this is  
14      big land shift in the law. It's not.

15             There is one decision with one paragraph  
16      which may or may not hold up, may or may not be  
17      appealed, may or may not be get settled. We don't  
18      know at this point, but it was one decision on  
19      summary judgment with that single case cite  
20      supporting the judge's decision.

21             So I wanted to be clear that I really  
22      don't think that the law has changed from three  
23      years ago when you took a look at this same request,  
24      or for that matter, nine years ago when the 2006  
25      decision on a similar request was made.

1           So that is the first point I wanted to  
2           make.

3           Second, I wanted to sort of clarify a  
4           point that came up in the Public Knowledge reply  
5           comments and was raised a little bit this morning  
6           and that is the licensing versus the copy.

7           Our comments were intended to simply  
8           reference the point that was made in 2012 and that  
9           was made earlier here this morning, which is that  
10          what is purchased is a copy of a particular work on  
11          a particular form factor in a particular format that  
12          is then usable in relationship to that form factor  
13          or format on a variety of devices. And both AACCS  
14          and DVDCCA have operated their system to promote the  
15          proliferation of those devices.

16          Both of the organizations operate on a  
17          cost recovery basis. It's not something where they  
18          are trying to tighten down but rather to enable the  
19          market for those. And there are thousands and  
20          hundreds of thousands, millions of devices that can  
21          play this form and form factor. And so that was the  
22          point they were making there.

23          So I also wanted to talk for a minute  
24          about harm. Both of these organizations have been  
25          involved in cases, one that was decided right at the  
26          time of the 2012 hearings, and one for AACCS that was

1       decided where there was a written decision a little  
2       earlier this year.

3               Both of these organizations exist solely  
4       for the purpose of enabling their technology. An  
5       exemption like the exemption that has been requested  
6       here was similar to what was going on in the DVD  
7       case with the CollidEscape system. They were  
8       space-shifting, in effect, and enabled by the  
9       circumvention tool called DVDFab which was the case  
10      for AACs.

11             In both of those cases, the judges took a  
12      look and said this would completely eviscerate the  
13      business of these two organizations.

14             And so to us, to my clients, the harm  
15      would be very real and very immediate and very  
16      devastating for the kind of broad exemption that has  
17      been described by Public Knowledge.

18             MS. CHARLESWORTH: Do you see that as a  
19      copyright interest?

20             MR. TURNBULL: It is a copyright interest  
21      in that -- well, I see it in two ways.

22             One is I see it as a copyright interest in  
23      that what is being done is a protection of the  
24      copyrighted material using these technologies. That  
25      was the very purpose of the DMCA, was to enable the

1 kind of it technologies that DMCA and AACS have  
brought forward.

2 Deep in the legislative history, you will  
3 find the DVD referenced in some of the Congressional  
4 materials as the kind of thing they were talking  
5 about.

6 And the second thing is the DMCA was  
7 intended also to protect not only copyright  
8 interests but also the interests of those who  
9 provide those TPMs. And in representing two of  
10 them, that is important to us.

11 MS. CHARLESWORTH: Do you think that if an  
12 exemption were allowed for shape shifting, it would  
13 impact the value of -- I think you partially  
14 addressed this but I just want to be very quick --  
15 would it impact the value of the AACS, for example,  
16 TPMs.

17 MR. TURNBULL: Yes, because here --

18 MS. CHARLESWORTH: How, exactly?

19 MR. TURNBULL: Basically, because it would  
20 undermine the trust in that system.

21 The whole system was designed to limit and  
22 protect against access to the work, and then in so  
23 doing, to enable the protection of the underlying  
24 copyrights.

25 And you would -- we would wind up having

1 people going off to alternative -- I mean Blu-ray  
2 particularly has faced a very different economic  
3 environment than DVD did.

4 DVD was the digital format when it came  
5 out and was the most successful new format as a  
6 result of the that.

7 Blu-ray is existing in a market that has  
8 all kinds of competition for the high definition  
9 form.

10 And so people would -- the content owners  
11 would say wow, if Blu-ray can be hacked and copies  
12 made -- and part of the problem here is that if you  
13 enable the use of the tools that would be necessary  
14 in order to do what Public Knowledge has requested,  
15 then it creates a market for a circumvention tool  
16 that would otherwise be prohibited. And that, it  
17 seems to me, is a very significant point from the  
18 TPM perspective. And so, yeah.

19 MS. CHARLESWORTH: Even notwithstanding  
20 the anti-trafficking provisions of 1201?

21 MR. TURNBULL: Well, the anti-trafficking  
22 provisions -- I mean either you wind up with -- we  
23 have been very successful in the DVDFab case in  
24 keeping -- in basically shutting down a  
25 circumvention tool there.

1           So either you are going to have an  
2           exemption for which there is no way to actually  
3           accomplish the exemption or you are going to enable  
4           the use of a tool that then somebody will claim has  
5           some substantial use that is not for the purpose.

6           MS. SMITH: I'm wondering if there is a  
7           difference between what Mr. Siy has proposed where  
8           the exemption is limited to personal use and the  
9           DVDFab case so the CollidEscape cases where maybe  
10          it's due to the market.

11          MR. TURNBULL: The issue is how is the  
12          consumer going to actually accomplish the personal  
13          use.

14          MS. SMITH: That might be a problem in  
15          Mr. Siy's proposal, but is limiting it to personal  
16          use alleviating some of the concerns that maybe the  
17          courts in granting the injunction found to undermine  
18          the trust of the Blu-rays?

19          MR. TURNBULL: No, I think that an  
20          exemption that is as unbounded as -- I understand  
21          personal use -- but is as broad as what has been  
22          proposed here would be a substantial undermining of  
23          the overall business.

24          MS. SMITH: So currently is Blu-ray being  
25          circumvented?

          MR. TURNBULL: I believe there are tools



1       that can be circumvented. The ones that I know of  
2       are all ones that are professionally offered and  
3       available in the market today.

4               MS. CHARLESWORTH: I'm sorry --

5               MR. TURNBULL: In other words, you can --  
6       DVD, basically, you can go on the web and there are  
7       thousands of websites from which you can get a  
8       circumvention tool.

9               Nevertheless, DVDCCA has managed to  
10       maintain the licensing system because its license  
11       has been viewed as a -- has been upheld by the  
12       courts.

13              But in the Blu-ray context, if you go look  
14       for ways to circumvent and you actually dig deep to  
15       find out whether the tool that says that is  
16       circumvent actually does or whether it sends you off  
17       to something else, there is a handful. And to my  
18       knowledge, they are all available only if you pay  
19       for them.

20              MR. CHENEY: May I ask, Mr. Turnbull, have  
21       you gone after these tools to try to shut down?

22              MR. TURNBULL: We have gone after DVDFab,  
23       which was one of the major ones. We have also  
24       cooperated with the Antiguan government in the  
25       conviction of SlySoft, the background work, which is

the probably largest of the tools.

1           And so yes, we have gone after them and we  
2 expect to continue to.

3           I have one final point, which is that if  
4 you are looking for the alternative for  
5 circumvention, I note, and it was noted in the 2012  
6 recommendation, that there are a number of  
7 authorized outputs from DVD and Blu-ray players.

8           And so if within the confine of your own  
9 home, you want to watch on a variety of different  
10 screens, you can do that using the authorized  
11 outputs.

12           And so you can -- two of them, both the  
13 HDCP and the DDCP outputs have wifi enabled  
14 connections. So you don't need to have it wired to  
15 your TV. It's something that you can watch on a  
16 tablet or a phone that is enabled with those  
17 connections and there are connections.

18           MS. CHARLESWORTH: So the point is you can  
19 play, for example, a DVD and wirelessly transmit it  
20 to a tablet in your home.

21           MR. TEITELL: Right.

22           MS. CHARLESWORTH: Mr. Siy.

23           MR. SIY: I think the fact that you don't  
24 want to create a market for certain circumvention  
25 tools is what 1201(a) and 1201(b) are for.

1           The difficulty of a authorized  
2       circumventer to acquire those tools or to develop  
3       them themselves is not trivial, but it's not  
4       necessarily the -- saying that an exemption  
5       shouldn't be granted because it is difficult to  
6       accomplish, I don't think is a good rationale for  
7       making these decisions, I mean in the context of  
8       circumventing these TPMs on these media for other  
9       purposes.

10           I think the office and the library have  
11       gone ahead with those regardless of the difficulty  
12       faced by the legitimate users.

13           I think it's clear that granting the  
14       exemption doesn't create the circumvention. It  
15       doesn't create the ability for that circumvention,  
16       either.

17           And also -- so there is several other  
18       points that I think I would like to address over the  
19       discussion that happened over the past hour or so.

20           I think what the opponents of the  
21       exemption have been saying with regard to fair use  
22       is attempting to characterize this as some sort of  
23       sea change in, and an invitation for the office to  
24       upset the status quo with regard to what fair use  
25       is. I don't believe that that is the case.

1 I think it would be more upsetting to the  
2 status quo if we saw suddenly a Supreme Court  
3 decision come down that said that space-shifting in  
4 the audio context, in the video context, was in fact  
a copyright infringement.

5 MS. CHARLESWORTH: Are you saying the  
6 extreme court is above the Copyright Office?

7 No, but I mean going back to my -- we very  
8 much respect the opinions of the Supreme Court, but  
9 this goes back to my earlier comment. We have said  
10 repeatedly we don't read the law as saying this is  
11 clearly a fair use.

12 So if we were to come out with an opinion  
13 here that said wait a minute, we have changed our  
14 mind, it's fair use, that would at least in the view  
15 of some probably have some impact, and maybe not  
16 Supreme Court type of impact, but it would carry  
17 some weight in terms of, again, and in particular,  
18 the impact would be a basis for an exemption.

19 So I mean that is the part where I am  
20 losing, is why wouldn't you see this as a major  
21 departure from what has gone before.

22 MR. SIY: A major departure, perhaps, from  
23 earlier circumvention proceedings, but I don't see  
24 how it would be a departure from anything that is on  
25 the record in legal precedent or in legislative

1 history.

2 It represents -- I think a decision upon  
3 this exemption request would reflect an evolution of  
4 the Copyright Office's analysis and a recognition of  
5 case law that has evolved over the past three years,  
6 or has developed over the past three years.

7 MR. CHENEY: So can I ask a question.  
8 This is a hypothetical I have been turning over in  
9 my head.

10 So just to take it out of the digital  
11 realm, I have got a shelf in my office, bookshelf.  
12 It has reference books, my own reference books. And  
13 I use them during the day, this dictionary,  
14 thesaurus, copyright treatise, what have you.

15 It's great to have them there ready at  
16 hand. When I go home and work from home as I often  
17 do, they're not there. And so can I -- is your  
18 theory they these are my copies and because it would  
19 be more convenient for me to have them at home, as  
20 well, that I could make a copy -- make a photocopy  
21 of those books? Is that your theory? I just want  
22 to see the limits.

23 MR. SIY: I think if your use is personnel  
24 and noncommercial, if you are not making a photocopy  
25 in the sense of the Texaco case, then yes, I believe

you can.

1           MR. DAMLE: A photocopy for my own  
2           personal use.

3           MS. CHARLESWORTH: So we can just copy our  
4           books. I mean so I could just make a entire copy of  
5           a copyrighted book because I want another copy --  
6           that is your position -- and for my personal use.

7           MR. SIY: For your personal use where it  
8           doesn't hit the stream of commerce, it doesn't  
9           displace another copy, but for one that you would  
10          have redundantly.

11          MS. CHARLESWORTH: It displaces the copy I  
12          might buy for my imaginary vacation home.

13          MR. SIY: I think that would that qualify  
14          in exclusively the same way a person makes how many  
15          records --

16          MR. DAMLE: Is there case law about that?  
17          Now we are talking about books.

18          MR. SIY: I think this is what is  
19          interesting, that we don't see any case law  
20          indicating that would be an infringement. And we  
21          don't see any case law indicating that is an  
22          infringement. In fact, quite the opposite in the  
23          audio context or in the video context. And I think  
24          those two are very closely analogous.

25          If you look at the ways Mr. Williams

1       referred to, you know, what the potential  
2       consequences were if we started talking about all of  
3       those sorts of media, but we are not talking about  
4       other sorts of media. We are certainly not talking  
5       about software where people might engage in some  
6       sort of question, is this based in the cloud, is it  
7       not, have I leased this versus have I bought this.

8               In these cases, we are talking about the  
9       media embodied in physical objects where somebody  
10      has bought a particular copy.

11             MR. RUWE: What about Mr. William's point  
12      that that point of view obviates the need for the  
13      reproduction right and you could just have  
14      distribution rights and that would be sufficient?

15             MR. SIY: Far be it from me to want to  
16      rearrange Section 106 right now.

17             MR. RUWE: Right now.

18             MR. SIY: But I think the fact that you  
19      can have multiple causes of action based upon  
20      different 106 rights isn't a -- sort of doesn't  
21      defeat the purpose of the statute.

22             I think clearly, you will have many cases  
23      where somebody making the reproduction is not the  
24      person engaging in the illicit distribution. And  
25      therefore, it's much easier to enforce the

1 distribution right against somebody, you know, when  
2 they can't necessarily be traced in sort of the  
3 chain of intent, chain of custody to the original  
4 reproduction.

5 MR. WILLIAMS: Just very quickly, because  
6 I know we are almost out of time, I agree that we  
7 are talking about movies and that movies are a  
8 case-specific instance. And so other areas of the  
9 law that have discussed other types of media are  
10 distinguishable.

11 I think the reason Sherwin mentions  
12 software being distinguishable whereas a bunch of  
13 other types of media, he does not want to be  
14 distinguishable, if you looks at cases like Wall  
15 Data versus L.A. County Sheriff, in the Ninth  
16 Circuit, they very clearly say that making a copy in  
17 order to avoid having to buy another copy that you  
18 might want to have is not a fair use.

19 And that case is somewhat distinguishable  
20 not only because it's software but it's arguably  
21 commercial use because it's a sheriff's department,  
22 but if you look at the opinion, the Ninth Circuit  
23 says in response to arguments from the defendant  
24 that even though it's kind of a municipal body  
25 engaging in this that is arguing that it's closer to  
a kind of personal use, you still can't make copies



1 in order to avoid buying more copies.

2 MR. SIY: And but the software in that  
3 case was explicitly conditioned and installed upon  
4 the limitation of this many copies being allowed for  
5 this many users.

6 It was much more of a contractual  
7 arrangement between the vendor and the installer,  
8 not a question of the ownership of one particular  
9 copy and the uses that come along with that.

10 I don't want to interrupt you. There are  
11 a couple of points I did also want to address.

12 MS. CHARLESWORTH: And then I think we  
13 have a couple of more questions here. So why don't  
14 you finish your couple points and we will make sure  
15 that Ms. Smith has time to ask.

16 MR. SIY: And with regard to the number of  
17 titles available, I remain curious as to the number  
18 of titles available on DVD that consumers may have.  
19 This sort of information is not very easy for us to  
20 develop without cooperation of those who are making  
21 them.

22 However, our initial check on this just in  
23 terms of what is available on Amazon in hard copy  
24 format comes to 810,000. So that suggests a  
25 considerable number of works that are not going to

be available.

1 MS. CHARLESWORTH: Can I just ask a  
2 question.

3 There was a lot of discussion of this in  
4 the prior proceedings, why can't you just go get a  
5 DVD player and play the DVD's. Why is that? I  
6 think they cost like \$20 or something. Why is this  
7 not a completely good alternative for a consumer if  
8 he wants to play a DVD?

9 MR. SIY: Again, I think it comes to the  
10 question -- and granted, this is premised on the  
11 fact that the space-shifting is a fair use.

12 MS. CHARLESWORTH: Well, no, I am  
13 saying -- but now we're talking about a 1201  
14 question, which is one of the things we evaluate is  
15 whether there is a reasonable -- whether you can  
16 have access to the work in a reasonable way, even if  
17 you want to add that embellishment on it, although  
18 but the point is -- I mean why can't you just get a  
19 DVD player that can plug into your computer or TV or  
20 whatever and play the work on a DVD player.

21 MR. SIY: I think there are fewer and  
22 fewer ways in which that is actually useful per  
23 device.

24 MS. CHARLESWORTH: I mean are you saying  
25 they don't -- that DVD players don't plug into every

1 device?

2 MR. SIY: For example, somebody who is  
3 using a tablet as their primary computer may lack  
4 the ability to connect an external DVD player with  
5 it.

6 MR. DAMLE: Do you have any evidence that  
7 is a significant -- I mean if I just think about  
8 where do I watch most of my television or movies,  
9 it's on my television where I have a DVD player  
10 hooked up to it.

11 So you are taking what may be an edge case  
12 and I don't know if you have data about this,  
13 watching things on your tablet or laptop, and  
14 suggesting that that is a justification, that that  
15 sort of overwhelms the kind of main use, the main  
16 use, the main way that people watch DVD's, which is  
17 on a DVD player hooked up to their television.

18 MR. SIY: I think the inability to do that  
19 even for a smaller number of people is still a  
20 recognizable adverse effect and that is only one of  
21 several recognizable adverse effects.

22 MS. CHARLESWORTH: Because they would  
23 rather watch it on their tablet instead of on their  
24 TV. Are you saying that is an adverse effect that  
25 you do not have your preferred screen?

1           MR. SIY:  Somebody who hasn't purchased  
2           every single -- who hasn't purchased a television in  
3           addition to a DVD player, in addition to the  
4           computer.

5           I don't think that in terms of providing  
6           alternatives, it should be a requirement that  
7           somebody have the full panoply of consumer  
8           electronic devices necessary.

9           MS. CHARLESWORTH:  But under your theory,  
10          they need a tablet.  They need some device to watch  
11          it on.

12          MR. SIY:  The use case that I am referring  
13          to is somebody who has a device that is capable of  
14          transmitting video, someone who has DVD's and has no  
15          way of getting that data from one to the other.

16          MR. DAMLE:  How would they rip it?

17          MS. CHARLESWORTH:  When I was reading your  
18          papers, I was like if they don't have a DVD player,  
19          how are they going to do this anyway.

20          MR. SIY:  This is about shifting their  
21          ability to view that on the device they're  
22          displaying.

23          MS. CHARLESWORTH:  If you are ripping a  
24          DVD and you don't have a DVD player, how do you do  
25          it?

26          MR. SIY:  So to take the example, I have a

1 fairly extensive DVD collection, all lawfully  
2 purchased, and I have a tower computer that has a  
3 DVD ripper -- that has a DVD drive. I have  
4 ripped -- well, I have ripped CD's on that,  
5 certainly, and put of them in storage and that tower  
6 computer has now died and I now have devices that  
7 have no drives.

8 In the alternative and now in order to if  
9 I were to make use of things that I haven't reached  
10 in my library, I would need to go out and purchase  
11 more.

12 MS. CHARLESWORTH: But I mean if you  
13 wanted to take a DVD -- so are you saying you can't  
14 play a DVD because you don't have a DVD player?

15 MR. SIY: Lack of a DVD player.

16 MS. CHARLESWORTH: So how would you  
17 space-shift a DVD?

18 MR. SIY: That would require a drive.

19 MS. SMITH: I just have a couple of  
20 questions. The first I think is probably for  
21 Mr. Siy or Mr. Turnbull.

22 I am wondering if either of have you any  
23 sort of sense of the data as to what the effect of  
24 the current prohibition is having, whether people  
25 are not ripping their DVD's or is that deterring or

1 preventing the development of circumvention tools  
like DVDFab or the cases you need to enforce against  
2 because we do not have this exemption.

3 MR. TURNBULL: Well, I think the success  
4 of both the DVD legitimate market in terms of  
5 buying, the number of discs that are purchased, the  
6 number of DVD players that are purchased, the number  
7 of consumers says to me that the system overall is  
8 working.

9 Now, in the DVD context, the ability to  
10 get the ripper is pretty ubiquitous. There is no  
11 question about that.

12 Having said that, I think that you have a  
13 very large percentage of people who are perfectly  
14 happy if they want to watch a DVD, to rent it for a  
15 dollar from Redbox or whatever. I think that the  
16 market has adjusted and I think the vast majority --  
17 that's how the vast majority of people actually  
18 watch their DVD's.

19 MS. SMITH: Exactly. Because they don't  
20 want to violate Section 1201 or --

21 MR. TURNBULL: Well, I don't know that the  
22 consumer in the grocery store in front of Redbox  
23 thinks about Section 1201, but they understand, I  
24 think, that there is a general understanding that  
25 making a copy for your entire -- making 50 copies

1       for your entire neighborhood is not the right thing  
2       to do. I think there is that general understanding.

3               And I think in the Blu-ray context, yeah,  
4       I do think that the ability to get the means of  
5       ripping the Blu-ray is something that is an  
6       impediment to people.

7               MR. CHENEY: May I add that it may not be  
8       for their neighborhood, but themselves. They may  
9       not understand that. So just a thought.

10              What do you think about that?

11              MR. TURNBULL: Yeah, I think that most  
12       people -- I mean I think that people are -- the  
13       success of the services that you have heard about  
14       here, the success of Netflix -- I mean Netflix,  
15       I think, has gone largely out of the DVD rental  
16       business totally into the streaming business.

17              The migration of all of this is a  
18       marketplace migration and I think that's how people  
19       get -- I think the vast majority of people, again,  
20       are not ripping from their DVD to their tablet.  
21       They're downloading from iTunes, they're downloading  
22       from Amazon, downloading from -- they're taking  
23       advantage of UltraViolet or Disney Movies Anywhere.  
24       That is how they are doing it.

25              So yeah, I think most people are not

ripping their DVD's.

1           MR. SIY: I think that the fact that -- I  
2 think that the existence of alternatives doesn't  
3 necessarily say anything dispositive one way or the  
4 other about what the effect of this circumvention --  
5 what the granting of an exemption would be.

6           I think there is so many factors in play  
7 that I think either of us can pick particular trends  
8 and pick and choose among them to say it supports  
9 our particular argument.

10           That being said, I would want to know in  
11 terms of the question of the value offered, when you  
12 have a bundle, for example, to pick and choose, I  
13 think the prices of audio CD's have not increased  
14 appreciably despite fact that people now widely  
15 recognize they can rip their audio CD's.

16           MS. SMITH: Thank you.

17           So my last question is actually for  
18 Mr. Voris and Mr. Teitell.

19           I do take Mr. William's point that we are  
20 not going to have the benefit of your presence in  
21 Washington, DC. So this is actually about a  
22 different set of exemptions classes. There is four  
23 classes. Classes 1 through 4 relate to educational  
24 uses of audiovisual works. And UltraViolet in  
25 particular came in discussion for Class 2. This



1 involves kindergarten through twelfth grade teachers  
2 would be able to rip a DVD for use in the classroom.

3 And so the point suggested is that maybe  
4 using UltraViolet to key up multiple clips might be  
5 an easy way for teachers to use this in their tools.

6 So I wondered if you could comment on how  
7 that might work, whether you could use it. I was  
8 unsure of reading it whether if I was a teacher and  
9 I had, you know, ten clips I wanted to play, could I  
10 get them all sort of paused in my locker and show it  
11 in the classroom or not.

12 MR. TEITELL: One of the aspects of  
13 UltraViolet is a pretty flexible system. And when I  
14 say "system," I am talking about yes, technically,  
15 but also from more of a business or licensing  
16 perspective.

17 And so really, I think the use case or the  
18 use cases that you were describing would be decided  
19 upon an enabled between the content owner and  
20 whoever the distributor was of that content.

21 And in the case of your example, the  
22 UltraViolet system by which those parties may confer  
23 a right to a user or set of users and make note of  
24 it. From a technical perspective, there is  
25 something called a rights token that gets deposited

1       inside our system. And that rights token can have  
2       different information on there. And depending upon  
3       what that information is -- I would say, for  
4       example, if your family owned a standard def version  
5       of something or high def or in the future we are  
6       going to get to ultra high definition and things  
7       like that.

8               We also can support other types of what I  
9       would call usage models, but fundamentally, your  
10      question still is one, I think, that would be  
11      defined between the content owner of the licensing  
12      content being produced, be it either an individual  
13      acquirer, or in this case, it may be a school  
14      district or a state or something like that and then  
15      whoever is doing the distribution.

16             So I think ultimately, the UltraViolet  
17      system is neutral, kind of agnostic to that use  
18      case. It supports it but it still would actually  
19      have to be something to be enabled by the licensing  
20      party that owns the content right.

21             MR. VORIS: I would say from a DMA  
22      standpoint my interest is similar.

23             From a technical standpoint, absolutely,  
24      you can do what you described. The question is --  
25      and I don't have a good answer for you, but I would  
26      get you an answer and send a letter afterwards on

1       whether in terms of the use permits that specific  
2       use.

3                   MS. SMITH: But in terms of use permit,  
4       use in the classroom, you are saying?

5                   MR. VORIS: Yeah, I just don't know as I  
6       sit here.

7                   MS. CHARLESWORTH: Your question is more  
8       technological.

9                   MS. SMITH: Yes. The license question is  
10      just say theoretically, I am teaching Hamlet and I  
11      have three versions of Hamlet. And let's say it's  
12      permitted by the licensor using UltraViolet, or DMA  
13      as it applies, can I have it all cued up. So let's  
14      look at this version of Hamlet and let's look at  
15      this version of Hamlet.

16                  MR. VORIS: Yes, we can do that but you  
17      would have to have three versions of Hamlet.

18                  MS. CHARLESWORTH: You could preselect  
19      clips, cue up like ten clips very quickly --

20                  MR. VORIS: And jump between them, yeah.

21                  And also, you could do it across device.  
22      You could actually cue them, as an example, on a  
23      tablet and then when you go into your DMA account on  
24      your computer, they're cued in the same spot that  
25      you left them.

MS. SMITH: Is that true for UltraViolet?

MR. TEITELL: Yes.

MR. VORIS: It is actually pretty cool.

MS. CHARLESWORTH: So thank you very much.

And this, again, was very informative,  
educational.

And we are breaking for lunch now. We're  
going to be back at 2:00 o'clock for Class 21, more  
on automobiles and tractors I think.

So as I mentioned there is a place to grab  
lunch, the snack bar across the courtyard.

For those of it you coming back, we will  
see you at 2:00.

(The proceeding was concluded at  
12:36 p.m.)

P R O C E E D I N G S

WESTWOOD, CALIFORNIA; TUESDAY, MAY 19, 2015

2:00 P.M.

MS. CHARLESWORTH: Welcome again.

For those of you who are just joining us  
now, this is the Sixth Triennial Section 1201  
Rulemaking Proceedings, and we're going to be  
hearing from witnesses with respect to Proposed  
Class 21, which involves vehicle software and the

1 diagnosis, repair and modification of that software.

2 And this includes agricultural equipment.

3 I think many have heard this lecture  
4 before, but we don't want to talk over one another.

5 If you have something you wish to add to  
6 the conversation, feel free to put your placard on  
7 its side and we will call on you.

8 There are a lot of you on this panel and  
9 we do allow people to make opening statements we're  
10 going to be a little stricter with the three-minute  
11 rule. We're going to time them a little bit because  
12 frankly, a lot of the value of this proceeding for  
13 us is actually engaging on the issues where there is  
14 disagreement areas, where perhaps questions can be  
15 narrowed and things like that.

16 So we want to make sure we have plenty of  
17 opportunity to talk to you about these things.

18 We have all read the comments and the  
19 written submissions, so that we're familiar with  
20 what you put in there. So there is no need to  
21 restate that.

22 The most beneficial thing for us is having  
23 you focus on the areas, as I said, of conflict,  
24 disagreement or things that aren't clear in the  
25 record.

1 Do any of you have exhibits that you  
brought with you? When I get to you, we can talk  
2 about those.

3 MR. METALITZ: Okay.

4 MS. CHARLESWORTH: But have they been  
5 premarked?

6 MR. METALITZ: No, I would like to offer  
7 them, though. It really is the written testimony  
8 that Mr. Douglas submitted along with three  
9 attachments.

10 MS. CHARLESWORTH: So when we -- is it you  
11 who are offering them, Mr. Metalitz?

MR. METALITZ: Yes.

1 MS. CHARLESWORTH: When we get to your  
2 statement, we can discuss it.

3 MR. METALITZ: I will share that I have  
4 shared them with all the other witnesses.

5 MS. CHARLESWORTH: And they're still here.  
6 So that is good.

7 So we will discuss that when we get to  
8 your part of the opening discussion.

9 Any questions?

10 I am going to reintroduce myself. I am  
11 Jacqueline Charlesworth, general counsel for the  
12 Copyright Office.

13 MR. RUWE: Steve Ruwe.

14 MR. DAMLE: Sy Damle, Deputy Counsel.

15 MS. SMITH: Regan Smith, Assistant General  
16 Counsel.

17 MR. CHENEY: Stacy Cheney, Senior Attorney  
18 at MTIA.

19 MS. CHARLESWORTH: So for two to three  
20 minutes, Mr. --

21 MR. NABEL: Nabel.

22 MS. CHARLESWORTH: Actually, you should  
23 introduce yourselves, too. Just quickly state your  
24 name and who you represent.

25 MR. NABEL: Dan Nabel, USC Intellectual

1       Property and Technology Law Clinic. I currently  
2       direct the clinic. This is my colleague, Mark  
3       Hilkert, who also works with me in the clinic on  
4       this project.

5               MS. GELLIS: I am Catherine Gellis. I am  
6       a solo attorney in private practice and I am here on  
7       behalf of my Digital Age Defense Project.

8               MR. WALSH: Steve Walsh and I am staff  
9       attorney at the Electronic Frontier Foundation.

10              MR. SMITH: Craig Smith. I run Open  
11       Garages, an open community for mechanics.

12              MR. WIENS: Kyle Wiens. I'm here  
13       representing the million members of iFixit and  
14       Digital Age Repair Company.

15              MR. DOUGLAS: I am Steve Douglas with the  
16       Alliance of Automobile Manufacturers and also here  
17       representing the Association of Global Auto Makers.

18              MR. LIGHTSEY: Harry Lightsey with General  
19       Motors.

20              MR. METALITZ: Steve Metalitz with  
21       Mitchell, Silberberg and Knupp, representing the  
22       Alliance of Automobile Manufacturers.

23              MS. CHARLESWORTH: So, Mr. Nabel, the  
24       floor is yours.

25              MR. NABEL: I will try to keep it quick



1 and I will try to yield some of my time to my  
2 colleague, Mark Hilkert, who is going to talk about  
3 some of the attacks on the prima facie case we have  
4 made and the specific evidence.

5 One of the things I'm here to talk about  
6 is the specific differences between the evidence as  
7 it affects the agricultural part of this, tractors,  
8 transplanter, whatnot, as opposed to automobiles.

9 Especially as we get into concept of  
10 ownership, who owns the copy, the viable  
11 alternatives argument, because those are markedly  
12 different. We have talked about that in a reply  
13 brief but I am here to answer any questions about  
14 that.

15 I do want to take a minute to talk about  
16 how we got involved in the project. It was because  
17 of the particular adverse effect, I ended up talking  
18 with Mr. Wiens, who sitting over there, about a  
19 friend of his in the central coastal area of  
20 California.

21 A transplanter that was sitting on his  
22 property, he wasn't able to repair it. It was going  
23 to be too expensive to have persons from the  
24 mechanic fly out and actually fix the thing and  
25 Mr. Wiens wanted to help his friend fix the  
transplanter but he couldn't. He knew he couldn't

1       because of the DMCA. To repair it, he knew he would  
2       have to circumvent the TPM that was preventing  
3       access to the ECU system.

4               That's how we got involved in that and  
5       that was the very first adverse effect. And we  
6       found more which we submitted in our papers. I will  
7       let Mr. Hilkert talk a little bit about that.

8               Because my time is limited, I just wanted  
9       to make one another point in my opening remarks,  
10      some observations about non-copyright interest which  
11      was discussed in the panel this morning.

12              And the former litigator in me is feeling  
13      a little ambushed by the document I was just given,  
14      but maybe that's how these things work.

15              I sort of put to the end the conclusion  
16      and saw the summary which said permitting this  
17      extension could put lives at risk.

18              And in my mind, that is very much what a  
19      lot of these non-copyright interests are trying to  
20      get at with no evidence, whatsoever. It's pure  
21      speculation.

22              I also find it interesting that just  
23      yesterday in the Garcia versus Google opinion, the  
24      Ninth Circuit actually just opined on when you are  
25      looking at copyright interests, and one of the

1 remedies that flow from copyright interests, what  
2 are the sorts of things you can look at.

3 And it's interesting because this language  
4 "putting lives at risk" was exactly what the court  
5 rejected in reversing Judge Kazinski's opinion in  
6 2014.

7 The en banc opinion from yesterday, that  
8 it may be harmful to life, we don't know. It may be  
9 speculative. Whether there is or isn't, that has  
10 nothing to do with copyright interests.

11 Copyright interests are concerned with the  
12 marketability and the value of the work. And when  
13 you think about what the work is here, what the  
14 market value is -- the marketability, rather -- that  
15 really has nothing to do with the environment. That  
16 has nothing to do with public safety.

17 We have laws and regulations for those  
18 things. It does not have anything to do with  
19 copyright law. I think that's why it's not in the  
20 five statutory factors that we see in the statute.

21 And we also make a point, lastly, of  
22 course, that there is no evidence. So I will leave  
23 it at that for now.

24 MS. CHARLESWORTH: Just a quick question.

25 You briefly touched upon the idea that you  
saw distinctions between the agricultural class and

1 the other highway vehicle class, however you want to  
2 call it.

3 I would be very interested to know very  
4 briefly how you distinguish those, including whether  
5 the regulatory regimes are different.

6 I hear what you are saying. You are  
7 saying that is beside the point, but it's very much  
8 a part of the record here. So we're going to be  
9 talking about it.

10 And so if you can just quickly give us  
11 your view of what distinguishes you from  
12 automobiles.

13 MR. NABEL: Well, the two things that I  
14 think of as most important are ownership at issue,  
15 but that is not really the regulatory scheme, that  
16 is more are there written license agreements with  
17 the owners. There is no evidence of any kind that  
18 there are.

19 Just very briefly --

20 MS. CHARLESWORTH: So are you talking  
21 about the owner of the software.

22 MR. NABEL: Correct. Ownership of the  
23 copy.

24 John Deere was in the best position of any  
25 opponent to actually submit even one example. And

1 John Deere said well, there may be license  
2 agreements that John Deere is subject to when it  
3 develops its software using its third parties, we  
4 don't really know.

5 John Deere didn't even really know whether  
6 it had license agreements. So there is really no  
7 evidence, whatsoever.

8 And all the farmers that we talked to that  
9 are part of the video submissions that we sent in,  
10 none of them were aware of any license agreements  
11 they ever had to sign for any of their equipment.

12 MS. CHARLESWORTH: So the legal --

13 MR. NABEL: The other thing, we are  
14 talking about seeing significant differences, in. In  
15 terms of evidence, that is the viable alternatives,  
16 particularly that the automakers have referenced.

17 The first one, the Right to Repair Act,  
18 the Memorandum of Understanding expressly applies  
19 only to highway vehicles. It doesn't apply to  
20 off-road things like tractors, combine harvesters,  
21 that sort of thing which is what we have got  
22 involved in this process. That is the stuff we  
23 wanted to fix, the things that Mr. Wiens' friend had  
24 a problem with.

25 So on its face, that evidence has no value

1       when you are talking about viable alternatives.

2               Also, John Deere specifically raised some  
3       diagnostic information that would be  
4       available ostensibly to everyone. That is simply  
5       not case. We have specific evidence from the Tally  
6       Farms -- I can't remember which exhibit it was, but  
7       Mr. Hilkert can talk in a little bit more detail  
8       about that and why it's not sufficient.

9               So those are really the two areas that I  
10       see as being significant differences, the ownership  
11       issue and the 117 analysis and also the viable  
12       alternatives analysis.

13              The only evidence against vetted ones was  
14       really on personal automobiles that has really no  
15       relevance to farm equipment.

16              MS. CHARLESWORTH: Is farm equipment  
17       regulated by NHTSA?

18              MR. NABEL: I don't know.

19              MS. CHARLESWORTH: We can talk about that  
20       with maybe another witness down the line and discuss  
21       it. I think there was a comment from the audience  
22       indicating that perhaps it is not.

23              Is it regulated by the EPA in terms of  
24       emissions or any other standards?

25              MR. NABEL: Yes, there are EPA regulations

1       which do exist which will regulate those emissions,  
2       as far as I know.

3               MS. CHARLESWORTH: Thank you very much.

4               Mr. Hilkert.

5               MR. HILKERT: Thank you very much.

6               So I am going to change my summary a  
7       little bit to fit within the three minutes.

8               And then also, Professor Nabel spoke a  
9       little bit about some of the things I was going to  
10      talk about, but so because none of the opposition  
11      addressed any of the evidence that we provided to  
12      you specifically, I want to talk about -- I wanted  
13      to highlight some of that evidence for you and also  
14      to answer any questions that you have about our  
15      evidence.

16              So first thing I will jump into is in  
17      relation to whether farmers have the expertise to  
18      circumvent TPMS. No one has disputed that farmers  
19      can circumvent TPMS, but in John Deere's comments,  
20      they implied that farmers wouldn't be able to do so  
21      safely and in compliance with the regulations that  
22      you are talking about.

23              I will read a quick quote from page three  
24      of John Deere's opposition which is,

25              "Circumvention of TPMS for Class 21 is

1                   against the public policy because  
2                   individual vehicle owners do not have the  
3                   technical resources to provide safe,  
4                   reliable and lawful software for repair,  
5                   diagnostic or some dubious aftermarket  
6                   personalization, modification or other  
7                   improvement that is not directed toward  
8                   repair or diagnosis."

9                   Now, we talked to Jeff Buckingham who has  
10                  a cattle ranch. And he, in addition to having a  
11                  cattle ranch, he is also COO of a telecommunications  
12                  company.

13                  And we asked him if he thought that  
14                  farmers had the expertise to do so and we asked him  
15                  what he thought about arguments that farmers  
16                  wouldn't have the expertise and they thought that  
17                  that was ridiculous and commented that his actual  
18                  expertise that qualified him to be in the  
19                  telecommunications industry was through his  
20                  experiences a dairy farmer and in managing systems.  
21                  He thought that it translated very well.

22                  We already talked about, or Professor  
23                  Nabel talked about, ownership issues.

24                  So I'll move forward to adverse effects,  
25                  where we have demonstrated or we submitted evidence



1 of eight adverse effects, but in the interest of  
2 time, I will only talk about one. And that's the  
3 farmers' livelihoods are being put at risk, by being  
4 unable to circumvent the TPMs. And when farmers  
5 can't circumvent TPMs in order to repair and  
6 diagnose their own equipment, their livelihoods are  
7 put at risk because being put at the mercy of the  
8 dealerships' scheduling could have critical  
9 implications to a farmer who needs to plant their  
10 crops before a rainfall.

11 They could lose -- as Jeff Buckingham  
12 said, the same cattle rancher -- he knows of his  
13 neighbors who have had to plant within a couple of  
14 days. And if they aren't able to plant within those  
15 days, rains could destroy their ability to harvest  
16 and they could lose as much as 100 percent of the  
17 crops if they are at the mercy of dealers'  
18 scheduling to fix something that if they were able  
19 to circumvent TPMs, they could fix themselves.  
20 They could lose their entire crop.

21 I think that does it for me. Thank you.

22 MS. CHARLESWORTH: Thank you.

23 Ms. Gellis.

24 MS. GELLIS: Thank you.

25 As I discussed in my testimony for

1 Class 22, the item at issue in this class is a  
2 computer. It may be a computer on wheels of varying  
3 sizes, but as a piece of hardware that runs  
4 software, it's a computer, and we are talking about  
5 how people can use the computer.

6 As I also talked about before, there are  
7 two statutes that stand to govern computer use, the  
8 DMCA and the Computer Fraud and Abuse Act or CFAA.

9 This would suggest a redundancy because as  
10 I also discussed previously, there is fundamental  
11 differences between the two statutes. The biggest  
12 difference is that the DMCA is a copyright statute.  
13 Section 1201 governs computer use only insofar as  
14 those uses implicate a copyright interest.

15 More specifically, Section 1201 governs  
16 computer use only insofar as they implicate a  
17 copyright interest in a way that would be  
18 deleterious to the availability of copied works.

19 Section 1201 is not nor does it appear to  
20 have been intended to be an all-purpose law to  
21 govern all computer uses. And the point I want to  
22 make sure is that it does not need to be.

23 To pick up on what Professor Nabel said,  
24 the concerns that opponents raise about how, for  
25 instance, lives could be at risk or other terrible

1 outcomes is not something that we need to worry  
2 about in the context of how people are -- in the  
3 context of copyright.

4 What we are still talking to is this still  
5 involves an exception for how people can use the  
6 computers they own or otherwise have legitimate  
7 access to.

8 And when we want to address those harms,  
9 there are two points to make in response.

10 The first is that even if we find them  
11 compelling, there is no need for the Copyright  
12 Office to respond by denying the exemption.

13 As has been pointed out by the EFF and  
14 others, there are other laws and regulations  
15 governing those outcomes, including the CFAA, which  
16 is an extremely potent statute, perfectly capable of  
17 addressing those harms.

18 And I want to make another point about the  
19 CFAA. Its origin was to deal with a particular  
20 terrible harm. It got passed in the mid 1980's in  
21 response to the movie "War Games," where in that  
22 movie, Matthew Broderick had accessed the computer  
23 that was running the nuclear weapons arsenal for the  
24 United States of America.

25 And in response to the potential

1 realization that there may not have been any law to  
2 govern that sort of harmful outcome or harmful  
3 computer use, they passed a law.

4 And I think if we have got a law that was  
5 designed to govern that sort of negative effect on  
6 people's lives and it's a law that has been  
7 discussed earlier that has also been amended where  
8 now it can reach forms of computing that was  
9 described in the mid 80's, I think we can rest  
10 assured that there are other forms of regulations to  
11 take care of the types of harms that have been  
12 raised by opponents here.

13 It's not something we need copyrights  
14 to --

15 MS. CHARLESWORTH: Let me ask, is it your  
16 view the CFAA would prohibit circumvention of TPMs  
17 on vehicles to repair them?

18 MS. GELLIS: It is not my view that it  
19 would.

20 The issue at stake is the way the CFAA is  
21 currently drafted, it creates a lot of uncertainty  
22 in and of itself. I have no doubt in terms of its  
23 potency of could it reach any potential harm they  
24 are worried about.

25 What I anticipate speaking about in the

1 context of some other classes later is whether it  
2 might actually -- it's a very effective weapon that  
3 may go off too often.

4 And there is a question of whether it's  
5 appropriate for the copyright office to push  
6 back against that tendency, but in terms of the  
7 issues raised here, all of the harms that have been  
8 raised are not copyright harms. These are different  
9 types of harms that other forms of regulation are  
10 capable of -- very capable of dealing with.

11 And when we look at the underlying harms,  
12 Professor Nabel is exactly right that these are not  
13 harms that are found in copyright.

14 And I want to bring it back to this idea  
15 that we're still talking about a computer and how  
16 people can use their computer. And this is  
17 exactly -- and the innovative uses that proponents  
18 will be discussing are exactly the sort of  
19 innovative uses that copyright laws were intended to  
20 protect.

21 MS. CHARLESWORTH: Thank you.

22 Mr. Walsh.

23 MR. WALSH: Section 1201 is now  
24 interrupting a decades-long tradition of vehicle  
25 tinkers that is part of the American ethic and can

1 lead to innovations like air bags, cruise control,  
2 catalytic converters and hands-free bluetooth  
3 telephony.

4 Now, computerization has brought DMCA  
5 concerns into this mix and it's called into question  
6 a wide range of legitimate activities that tinkerers  
7 have otherwise been engaging in for decades and  
8 decades.

9 The record is now overflowing with  
10 accounts of how 1201 is adversely affecting  
11 individual vehicle owners as well as aftermarket  
12 businesses and independent repair people.

13 In the interest of time, I will refer you  
14 to the briefing for the many examples of this.

15 None of these activities infringe  
16 copyright. They are fair uses and they're within  
17 the rights granted by Section 117.

18 Since it was raised, to reiterate, vehicle  
19 owners do own copies of the software that is in  
20 their computers.

21 As we explained, we investigated. There  
22 are a handful of copies of vehicle software that are  
23 transferred in association with the document that  
24 calls itself a license.

25 Otherwise ECU's are transferred without

1 specific language reserving rights.

2 And even the manufacturers were in the  
3 best position to come forward and say there are  
4 other ECU's that are subject to more restrictive  
5 licenses. And that has not happened.

6 And even the few times that we have found  
7 our ECU's where there is a document that calls  
8 itself a license, these relate to specialized  
9 systems like the entertainment system.

10 And even in those cases, they don't meet  
11 the criteria to strip a vehicle owner of their  
12 Section 117 rights.

13 In particular, one illustration of this  
14 fact is people are free to resell their cars and  
15 often do. There is not a restraint on alienation of  
16 the copies of vehicle software that are sold in  
17 cars.

18 MS. CHARLESWORTH: What about like -- you  
19 may have referred to this -- telematic OnStar. A  
20 system like that, what is your view in terms of the  
21 ownership of that software as it resides in a  
22 vehicle?

23 MR. WALSH: When you buy a vehicle, you  
24 are also purchasing a copy of that software and you  
25 may have contractual obligations, assuming that

1       there is an enforceable contract relating to that  
2       use, but for the purposes of Section 117, in the  
3       three-part analysis, the factor that is most clearly  
4       not present in any of the licenses is restraint on  
5       the ability to resell your copy.

6               MS. CHARLESWORTH: But that's one factor,  
7       right?

8               MR. WALSH: It's one of the three elements  
9       that Burner said if you have all three, then you are  
10      not an owner for purposes of for sale.

11              And just as these aren't an infringement  
12      of copyright, similarly, there is no copyright harm  
13      here. We can actually go back to the old rights  
14      holder law.

15              You wouldn't download a car. And in fact,  
16      you can't download a car. The copies are only  
17      meaningful in connection with the vehicle and the  
18      copies are sold with the vehicle and there is not an  
19      independent market that can be harmed.

20              There has been no evidence introduced of  
21      an independent market for ECU software that could be  
22      harmed and there is no issue of proliferation of  
23      copies because, again, you need the vehicle.

24              And similarly, there is no copyright right  
25      to restrain competition that is based on reverse



1 engineering of non-copyrightable information.

2 MS. CHARLESWORTH: I want to go back to  
3 something you said about the harm, potential harm.  
4 And I understand what you are saying. You don't  
5 sell the software separate from the vehicle.

6 But if it were true, as has been posited,  
7 that allowing circumvention would potentially impair  
8 the software, make it risky -- and I am not saying I  
9 necessarily agree with that -- don't you think that  
10 actually impacts the value of that particular  
11 version of the software in terms -- because if it's  
12 unable to power the car correctly or act correctly,  
13 doesn't that also -- does not that impact the value  
14 of the software in the marketplace in the sense that  
15 someone might have to go and rewrite software.

16 MR. WALSH: So I don't think it impacts  
17 the value of the original software. I think what  
18 you are saying is that modified software might be of  
19 lesser value.

20 MS. CHARLESWORTH: Let's say a hack became  
21 really well known. And this is very hypothetical.  
22 Again I am not -- I know there is a lot of  
23 difference of opinion about whether this is  
24 harmful -- but very well known and the software was  
25 viewed by public as widely vulnerable and, in fact,

1       there had been accidents reported and the sorts of  
2       harms that have been alleged by the opponents. So  
3       doesn't that actually impact the value of that --  
4       not that particular copy of software but that  
5       version of the software in the sense that it's no  
6       longer viable as a reliable mechanism to drive cars.

7               MR. WALSH: So there are some bodies of  
8       law that deal to harms to reputation, including  
9       trademark law --

10              MS. CHARLESWORTH: I am not talking about  
11       reputation. I am talking about the market for that  
12       software.

13              MR. WALSH: So the concern is essentially  
14       that if someone modifies software and it's  
15       incorrectly viewed as being the original software?

16              MS. CHARLESWORTH: No, I am saying if  
17       people were allowed to -- I mean as I understand the  
18       argument on the other side, if people are allowed  
19       to -- random people, you know, are allowed to modify  
20       the software, it may not always function very well  
21       and perhaps then the car company would have to put  
22       out a new version an improved, less hackable  
23       version of software, whatever the response would be.

24              Doesn't that -- in other words, you are  
25       suggesting that the software has no intrinsic value,

1 but the software has people pay money and invest in  
2 it to develop software to do certain things. And if  
3 that is compromised, doesn't that impact the value  
4 of the software?

5 MR. WALSH: I am not saying that the  
6 software has no intrinsic value. I am saying in  
7 evaluating the effect of the conduct within the  
8 proposed class, that it doesn't cause  
9 copyright-related market harm.

10 MS. CHARLESWORTH: They're disagreeing  
11 with -- I don't want to put words in their mouth --  
12 but that is your view, in other words, even if  
13 software became sort of impaired or through various  
14 activities became dangerous or whatever, these sort  
15 of harms alleged by the other side, that that is not  
16 a copyright-related harm in your view.

17 MR. WALSH: And I would also say that  
18 there is not evidence of that taking place, that  
19 that is a speculative concern.

20 And it's an example of concerns that  
21 become even more speculative as we range into issues  
22 of safety and environmental impact where we have  
23 introduced specific evidence of improvements to  
24 vehicles and ways in which the prohibition on --  
25 rather, granting the proposed class would have

1 improved outcomes for the state of repaired vehicles  
2 for safety requirements as opposed to speculation  
3 that it might have negative consequences.

4 MR. DAMLE: So that bridges a point that  
5 has been troubling me about your position, which is  
6 your position regarding -- and we have heard it  
7 several times now. The opponents have raised sort  
8 of non-copyright risks of circumvention. And what  
9 you have just said is what we have put forward --  
10 essentially non-copyright benefits of circumvention  
11 or non-copyright risks of not allowing  
12 circumvention, so you say -- in your submissions,  
13 you say at one point the prohibition on  
14 circumvention make vehicles less safe. And in  
15 another point you say the prohibition on  
16 circumvention harms the environment.

17 So what I am trying to puzzle over is why  
18 is it okay for us to consider those harms or  
19 benefits, depending on your perspective, but not  
20 consider the harms and benefits sort of on the other  
21 side?

22 MR. WALSH: The statutory standard is  
23 whether there are adverse effects on non-infringing  
24 uses. So the question here is are there adverse  
25 effects. And the countervailing interest that can

1 militate against granting the exemption is a  
2 copyright interest. So are the uses infringing.  
3 All of the enumerated statutory factors relate to  
4 copyright doctrines.

5 MR. DAMLE: There is also a catch-all  
6 factor, which is sort of an open-ended factor. So  
7 we can't consider -- I mean, it's a little bit odd  
8 because you are talking about safety benefits and  
9 environmental benefits but we can't consider the net  
10 effect? We can sort of only consider one side of it  
11 but not -- if they're right that it does create also  
12 the risks of harms to the environment, that we just  
13 have to ignore that? We can't sort of balance the  
14 two?

15 MR. WALSH: I think the issue is if you  
16 determine that there are non-infringing activities  
17 that are adversely affected by the Section 1201  
18 prohibition on circumvention, then non-copyright  
19 concerns cannot supersede that finding. That is not  
20 the role of this ruling.

21 MR. RUWE: How is does that work? How is  
22 that taken out of the considerations as you  
23 understand it.

24 MR. WALSH: So the issue is essentially --  
25 it's partially one of what is the role and expertise

1 of the Copyright Office but it's also what does the  
2 statute say. And the rest of the analysis is  
3 specifically referring to copyright-related  
4 concerns.

5 And in prior rulemakings, the Copyright  
6 Office has pointed out that you have the power and  
7 the expertise to evaluate the copyright implications  
8 of activities, you have the sole ability to remove  
9 the prohibition on circumvention as a barrier to  
10 legitimate activity.

11 And it's worth recognizing that this is a  
12 space where there are other regulators who are  
13 looking at other harms and can address them to the  
14 extent --

15 MR. DAMLE: I guess my point is what is  
16 good for the goose is good for the gander.

17 You say we don't have the authority to  
18 sort of evaluate the risks to the security, the  
19 risks to the environment and the risk to safety that  
20 the opponents raise, but I think by that same logic,  
21 we don't have the ability to evaluate the benefits  
22 that you have pointed to in terms of the benefits to  
23 the environment, the benefits to security of  
24 allowing circumvention.

25 Why would we have the expertise in your

1 view to evaluate those?

2 MR. WALSH: I think you have the ability  
3 to evaluate whether the conduct that the potential  
4 users of the proposed class would engage in is  
5 infringing or non-infringing. And that is not a  
6 question that turns on what the consequences are for  
7 the environment or for vehicle safety.

8 MR. DAMLE: That portion of it is not  
9 necessarily doing a lot of work for you other than  
10 the point is that you can repair and the benefits  
11 are just there but they're not actually -- the only  
12 real question for us is the activity of repair,  
13 diagnosis, modification, are those non-infringing  
14 activities. In terms of whether that is good or bad  
15 for the environment or for safety, that is not  
16 really a relevant to our inquiry.

17 MS. CHARLESWORTH: Well, except I just  
18 want to -- I mean under a fair use, you do look at  
19 the purpose of the activity, right? You don't -- in  
20 other words the question of whether something is  
21 infringing can turn on what you're trying to achieve  
22 with the use of the work.

23 So how do you eliminate that from -- I  
24 guess this is sort of building on this conversation.

25 So the purpose is -- if your asserted

1       purpose is to improve on safety and they're saying  
2       no, it doesn't -- I mean if you were just looking at  
3       that the first factor of fair use, is that something  
4       we should be looking at or not?

5               MR. WALSH: So there are two ways to look  
6       at the purpose as it relates to the fair use.

7               And to respond to your question, the first  
8       is to what extent the purpose of the subsequent use  
9       is different than new and adds onto the original.  
10       So that is one way in which the first factor can  
11       weigh in favor of a fair use.

12              And the second way is a public good  
13       aspect, which is what you are referring to.

14              So there is also a way to evaluate the way  
15       in which conduct, when you are evaluating fair use,  
16       is having a public benefit.

17              And so here, we have both different and  
18       transformative purposes, as well as, I think you  
19       would be right and we will argue a positive effect,  
20       on the auto safety and the environment.

21              I would agree does weigh in favor of the  
22       first factor. So I wouldn't shy away from  
23       considerations --

24              MS. CHARLESWORTH: But they're saying it's  
25       a public bad. And that's where we get into --



1       that's why I mean the weighing -- I mean as I said  
2       earlier, this is unusual for us to be talking about  
3       auto safety in the Copyright Office, but I mean here  
4       we are and we have all of you weighing in on this  
5       issue, but that's why there is a sort of  
6       sauce-for-the-goose, sauce-for-the-gander aspect to  
7       it because both sides are basically asking us to say  
8       this is a good thing, this is it not a good thing.  
9       That's why we are exploring it.

10               It's a very interesting question, I think.

11               MR. WALSH: And I think if you look at the  
12       evidence in the record, as I have said, we have  
13       specific evidence in terms of our discussion of  
14       those consequences.

15               And we also -- I would say that they're  
16       trying to make the other factors consideration do a  
17       whole lot of work in the analysis when the rest of  
18       the considerations and that one weigh in favor of  
19       the grant of the exemption.

20               MS. CHARLESWORTH: Did you have anything  
21       else? I know we interrupted you quite a bit.

22               MR. WALSH: I would just like to also  
23       mention the stack of papers that Mr. Metalitz handed  
24       me this morning. It appears to be more of the  
25       speculative concerns about non-copyright risks, but

1       having just read it, I would like to reserve the  
2       right to respond to it in the future.

3               MS. CHARLESWORTH: Fair enough.

4               Mr. Smith.

5               MR. SMITH: My name is Craig Smith. I am  
6       a founder of group called "Open Garages." It is a  
7       series of people that get together across the nation  
8       to share information and elaborate to make  
9       modifications to vehicles. We do different things  
10      like repairs, performance tuning, security research.

11              I want to try and summarize my statements,  
12      kind of address some of the questions that have come  
13      up so far, hopefully, deal a little bit with the  
14      safety issues that I have seen, as well as like the  
15      reasons we have to modify the firmware as I  
16      understand it.

17              So in the past when you make modifications  
18      to older vehicles, the difference between that and  
19      now is that now there is just a network on wheels.  
20      It's all mainly software.

21              So in order to do tinkering and make  
22      modifications, you have to be personally know that  
23      software in order to make the modification safe.  
24      You can't guess your way through it anymore. You  
25      can't look at a car and do it.

1                   So because that is actually the part that  
2                   does make it safe and the part that is difficult  
3                   that I think we having this argument about -- maybe  
4                   I am wrong, I'm not a lawyer -- but for us, when we  
5                   find out the right answer, like what do we need to  
6                   implement, to make these things work and make them  
7                   safe, we are afraid to share them publicly for fear  
8                   of a lawsuit. Nobody is sure if it's legit or not.

9                   If like we were to post it, somebody might  
10                  come up and say you violated our copyright, you have  
11                  to take this information down.

12                 Even if the information is helping, nobody  
13                 wants to take the time to reverse engineer. We  
14                 would much rather get the answers, make our repairs  
15                 or modifications or whatever it is we're trying to  
16                 do, but right now, we are at the place where we have  
17                 to kind of reverse engineer. And I can kind of talk  
18                 a little bit about how we reverse engineer things  
19                 but we can't give the answers because we are not  
20                 sure if this is an okay thing, if this is within the  
21                 law, without the law.

22                 It would be definitely be helpful for us  
23                 to be able to share this information. To us, it  
24                 isn't so much a safety thing, are we going to make  
25                 the vehicle safe, but, you know, I hear sometimes is

1 just we can't talk about it. So we all have to  
2 guess did we do it right. We can't share and  
3 collaborate.

4 MS. CHARLESWORTH: Can you give me just  
5 some specific examples of repairs that have been  
6 accomplished through, say, reverse engineering or  
7 something that you would consider not sharing  
8 because of 1201 but just the kinds of repairs that  
9 you make.

10 MR. SMITH: So maybe like you take a big  
11 axle and you put it into a pickup truck to carry  
12 heavier weights. You are going to have to make  
13 modifications so that you can get speedometer  
14 readings correctly. And we talked about this this  
15 morning. It's like a brain in the vehicle and it  
16 defines that vehicle. If you take a new one and you  
17 put it into an older vehicle, you going to have to  
18 take out a bunch of software because the newer  
19 vehicle that it was made for had a bunch of new  
20 sensors and components. And if you don't analyze  
21 that firmware and remove that stuff, that newer  
22 vehicle won't work right.

23 And these aren't things you can just do by  
24 changing parameters and doing diagnostics. You have  
25 to actually get in there, look at the firmware and

1 make those modifications.

2 And if you were to previously do those  
3 modifications and you took all of time to do that  
4 work, posting that firmware online is where people  
5 don't do it. That's where the sharing stops.

6 And also going onto the network, it's a  
7 very simple protocol that the vehicle communicates  
8 with. It's very, very easy to know. It changes for  
9 every make, model and year of vehicle.

10 So every time you make a modification, you  
11 have to almost redo this process of looking up like  
12 what does this speedometer reading look like, where  
13 is that at.

14 You can see this in the aftermarket  
15 radios. When you buy a vehicle that has a radio in  
16 it, it can do things like when you accelerate, the  
17 volume goes up. And an aftermarket one can't do  
18 that because they don't have that information as to  
19 what that packet is.

20 They can buy it sometimes through means,  
21 but a normal person, a normal mechanic, doesn't have  
22 the resources to do that kind of stuff.

23 And that they're not -- if you do multiple  
24 makes and models of vehicles to get just that make  
25 and model year, it's like to 25 grand, for what those

1 packets are.

2 And I know there is this whole kind of  
3 gray market area where people can kind of sell it on  
4 the side and it eventually trickles out and it's  
5 just not talked.

6 If you really cared about safety, in my  
7 opinion, we would just publish those. There is no  
8 reason not to know how your vehicle communicates.  
9 It's a private, non-public thing other than trying  
10 to make some extra money on the side and it makes it  
11 less safe to not be able to talk about it.

12 MR. CHENEY: So just to be clear, so you  
13 are saying that -- you mentioned safety a couple of  
14 times. In your view, if you have to -- for  
15 instance, to use your example -- put in a larger  
16 axle in a pickup truck to carry a heavier load, that  
17 you have to -- that it's a safety issue for you to  
18 be able to go in and make the computer recognize  
19 that larger axle because otherwise, there is not --  
20 can you explain that.

21 MR. SMITH: You want the speedometer to  
22 work right. You want the shifting to work right.  
23 So if you can't just go and look it up and copy  
24 those enhancements somewhere, you have to go through  
25 the sharing process or else you guess.

1 MR. CHENEY: If you didn't do that, what  
2 would be sort of the consequence?

3 MR. SMITH: It won't shift right, your  
4 speedometer is going to be way off.

5 You can't have a speedometer off. It's  
6 one of the rules. You just can't do that.

7 You are not intentionally tampering but if  
8 you don't fix it, you will be.

9 MS. CHARLESWORTH: How did you develop  
10 this expertise?

11 MR. SMITH: I actually come from a  
12 security background. So I am a reverse engineer by  
13 trade.

14 It just so happens that when I kind of got  
15 into security, like you guys dealt with this  
16 morning, I started this group thinking there is a  
17 huge problem there where things just haven't kept up  
18 to speed with other things created on the Internet,  
19 but when I created this group, I realized a lot  
20 people have this problem, mechanics, performance  
21 tuners.

22 These people are coming and saying I want  
23 to reverse engineer because I am running into these  
24 problems with the tractors and stuff where I have  
25 these issues and I can't afford to pay these other

1 channels and I'm trying to work on people's car and  
2 it's not that hard, so help me out.

3 So that's why I changed the meaning of the  
4 group to not be about security but just to kind of  
5 help anybody out who wanted to share and  
6 collaborate, but we are still at this point where  
7 even if it would be relatively easy for us to  
8 document what the network packets are, nobody is  
9 sure if we can post it.

10 We are afraid of take-down notices.  
11 Nobody has the resources to the fight it. So it  
12 doesn't happen.

13 MS. CHARLESWORTH: Thank you.

14 Did you have anything to add or is that --

15 MR. SMITH: No, I think I rambled.

16 MS. CHARLESWORTH: That was helpful.

17 Thank you very much.

18 Mr. Wiens.

19 MR. WIENS: Thank you very much for having  
20 me.

21 I started iFixit a little over ten years  
22 ago in an attempt to get more information out there  
23 in the world about how to repair things. And I will  
24 share what I have in a moment, but I thought I would  
25 respond to a question that you asked Mr. Walsh, if



1       there was -- if you knew that there was the ability  
2       to make a modification to a vehicle, would it  
3       enhance the value of the software on the vehicle.

4               And in a case study perhaps you could  
5       study is the example of phone jailbreaking or phone  
6       unlocking, because you have a situation where phone  
7       jailbreaking in the past maybe was not legal; now  
8       there is an exemption for jailbreaking phones.

9               So when I go out there and I buy a phone,  
10       I know whether that operating system has a jailbreak  
11       available or not.

12              In the case of unlocking, the moment that  
13       I know that I can unlock a phone, whether I do it or  
14       not, that phone's value has increased. The value of  
15       the software on the phone has increased whether that  
16       particular phone software can be modified or not.

17              And we have seen in the marketplace, there  
18       are a lot of examples of increased value of these  
19       phones once the ability to unlock them is legal.

20              I just mention that as that is analogous  
21       and I think that is revealing.

22              You see this in the automotive world.  
23       Cars that are easy to modify and enhance like the  
24       Honda Civic tend to be worth a lot more over time  
25       than certain other cars because, particularly in

1       this region we are in, Honda is known to be very  
2       easy to modify. And hence, there is a market for  
3       the same things allowed to the software that applies  
4       to hardware.

5               iFixit is a community of over a million  
6       people who are teaching each other how to repair  
7       things. And our objective is to do it well, to do  
8       it effectively, to do it safely and to enhance the  
9       value of our products and to prolong how long they  
10      last.

11              I got involved in the agricultural realm  
12      because I have friends that kept coming to me with  
13      problems they were having. And if you think of  
14      yourself -- if you put yourself in the shoes of a  
15      farmer, even in the central coast of California  
16      where they are at, there are relative few options  
17      for the dealers that they go to.

18              And the dealers have the ability to  
19      provide a lot of perks to the farmers. They can  
20      give them a loaner tractor. They can prioritize  
21      going to a specific farm before they handle another  
22      one.

23              And for the farmers, the ability to get  
24      service immediately is really critical. If I get my  
25      tractor fixed today versus tomorrow, that could be

1       whether I hit the plant deadline or whether I can  
2       get things ready to go before the rain happens.

3               I have a friend that is a farmer that had  
4       a sensor fail on his tractor and he called the local  
5       dealer. They sent the technician out and technician  
6       said the software that we have does not allow him to  
7       bypass that they particular sensor, so we have to  
8       get a new sensor overnighted from Illinois, it's  
9       going to take 48 hours to get here.

10              He said that is not acceptable, I have to  
11       make this thing work again the next day.

12              This is the situation where it would be  
13       very possible to modify the software on the tractor  
14       to bypass the sensor, but even Deere's technicians  
15       can't do it in the field.

16              So repair is something that is a  
17       fundamental capability for those farmers. And it  
18       goes beyond yes, we have these regulatory frameworks  
19       to improve the safety, but none of those matter if  
20       you can't do the job the device has been designed to  
21       perform.

22              And being able to modify new equipment or  
23       modifying the software so that you can enhance the  
24       functionality or do a temporary fix in the field is  
25       fundamental to why farmers buy the equipment in the

1 first place.

2 We are seeing trends in the marketplace  
3 where newer equipment is also valued less than older  
4 equipment.

5 There have been articles in farm journals  
6 where agricultural equipment from the 70's and 80's  
7 is increasing in price now because farmers are very  
8 eager to get the equipment they can repair  
9 themselves. They are feeling disenfranchised by the  
10 digital revolution and it's not because they are not  
11 smart enough.

12 One of my mentors, one of the people I  
13 look up to, is also a farmer in eastern Oregon and  
14 he has his master's degree in electrical engineering  
15 and he runs that alfalfa farm like a pristine  
16 factory. He is very, very good at making alfalfa  
17 and applying engineering principles to everything he  
18 does.

19 And he is absolutely capable of doing any  
20 modification on his farm equipment that he needs to  
21 very safely and keeping regulations in mind, but  
22 he's not going to be able to do that because he is  
23 making modifications and he can't adjust the  
24 software to keep up in pace with -- I mean if the  
25 repairs can't follow along in software what he is

1       doing in hardware, he is not going to be able to do it  
2       safely, as Craig was referring to.

3                   MS. CHARLESWORTH: Thank you.

4                   Mr. Douglas.

5                   MR. DOUGLAS: Thank you very much. It's a  
6       pleasure to be here.

7                   I am Steve Douglas with the Alliance of  
8       Automobile Manufacturers. And in the testimony  
9       package, you will see I have supporting letters from  
10      the National Automotive Dealers Association  
11      representing 16,000 franchise new car and truck  
12      dealers, as well as from the Automotive Service  
13      Association, the largest independent repair shop  
14      association in the country representing over 5000  
15      independent repairs shops.

16                  So in essence, I am speaking on behalf of  
17      those who make the vehicles, those who sell the  
18      vehicles and those who repair the vehicles.

19                  So the proponents have stated three  
20      activities related to vehicles that they would like  
21      an exemption for, diagnosis, repair and  
22      modification.

23                  Diagnosis and repair, there is absolutely  
24      no need to circumvent the ECU access control.

25                  Modification, the third activity they

1 propose, puts drivers, used vehicle buyers and the  
2 general public at risk. It undermines the national  
3 goals for energy security, for pollution control and  
4 for safety.

5 Before continuing, I would just like to  
6 distinguish between the vehicle software and smart  
7 phone software. Unlike smart phones, which have one  
8 ECU, one software package, vehicles have 20, 30, 50  
9 ECU's all operating different versions of software  
10 and they're carefully optimized for pollution,  
11 they're optimized for efficiency and they're  
12 optimized for safety.

13 Unlike the one-owner, three-year life of a  
14 smart phone, vehicles virtually always have multiple  
15 owners over their 10- to 30-year life.

16 Vehicles software modifications from a  
17 previous owner are virtually impossible for a  
18 subsequent owner to detect. So a subsequent owner  
19 might find air bags deactivated, sensors bypassed,  
20 warning lights disabled without ever knowing it  
21 until there is a problem.

22 I would suggest that the only way that you  
23 as a consumer can be confident that your vehicle's  
24 safety and pollution control system are operating as  
25 designed is because of the TPMs that the proponents

1 seek to bypass.

2 So let me go to the diagnosis.

3 MS. CHARLESWORTH: Can I ask a question.

4 This came up in an earlier panel, but as a  
5 representative of the auto industry, have you  
6 consciously relied upon Section 1201 in designing or  
7 thinking about your software or is this a new issue  
8 that arose sort of out of the blue for you?

9 In other words, when you looked out at the  
10 regulatory framework that governs it, were you  
11 thinking we can put a TPM on here because it's  
12 protected by 1201 and is there any history there or  
13 is this a new thing?

14 MR. DOUGLAS: It's appropriate that we are  
15 in Los Angeles from a lot of perspectives.

16 In the good old days, it was tinkering  
17 with your car. And it's here that there was the  
18 worst air quality in the country. You couldn't see  
19 the mountains, you couldn't breathe the air and that  
20 was the vehicle.

21 And so the Air Resources Board has  
22 tightened and tightened and tightened the vehicle  
23 pollution control environments. And one of the  
24 things the Air Resources Board did was they put  
25 mandated technology protection measures in vehicle

1 software.

2 So in the 90's, we went from programmable,  
3 and so you had a hardware and then you went to  
4 software.

5 So when you started going to software,  
6 they actually mandated we include TPMs --

7 MS. CHARLESWORTH: Who is the "they"?

8 MR. DOUGLAS: California Air Resources  
9 Board.

10 MS. CHARLESWORTH: Right.

11 So but you weren't thinking the Copyright  
12 Office has this weird statute to circumvent. You  
13 were thinking the California people who regulate  
14 cars say we have to put anti-tampering measures in  
15 there.

16 MR. DOUGLAS: So the Air Resources Board  
17 required encryption and they required some other  
18 things and they were pretty onerous. So we talked  
19 to the Air Resources Board and we said we don't need  
20 those. We will put TPMs in vehicles and we have  
21 protections. And as a result of that, they took  
22 that out of their regulations.

23 MS. CHARLESWORTH: So you volunteered to  
24 put TPMs in, but my question is in doing that, were  
25 you at all conscious or even knowledgeable about



1       that part of the Copyright Act that we're debating  
2       today.

3               MR. DOUGLAS: Let me say just me  
4       personally, I haven't been involved in --

5               MS. CHARLESWORTH: As a representative. I  
6       know you can't speak for everyone.

7               MR. DOUGLAS: Right, absolutely. They  
8       mandated TPMs and we said you don't need to do  
9       that, we will do of our own accord.

10              And they said okay and that's what they  
11       wrote when they changed that requirement. They said  
12       manufacturers will install TPMs and will encrypt  
13       the data so that the public doesn't modify the  
14       vehicle performance, because they recognize it's  
15       impossible to do monitor 20 million vehicles in  
16       California or 200 million vehicles nationwide.

17              Therefore, they have to have strict  
18       certification. And those vehicles have to operate  
19       as certified throughout the life, which is 15 years,  
20       20 years, 30 years.

21              So yes, I think it has been a part of that  
22       all along.

23              MS. CHARLESWORTH: Though the regulation  
24       you are talking about, which is a specific  
25       regulation affecting your industry and the voluntary

1        efforts of your city -- and I don't mean to ask the  
2        question so many times -- but what I am asking is  
3        did the automobile industry rely on the  
4        anti-circumvention provisions in Section 1201 in  
5        any of this.

6                    In its thinking, in the way it developed  
7        software, in thinking about who could tamper with  
8        cars or how they might tamper with them, was there  
9        any conscious thought to the Copyright Act?

10                   MR. DOUGLAS: I can't speak to that  
11        conscious thought of the Copyright Act.

12                   I know that they do believe -- they did  
13        believe that they would be able to install TPMs and  
14        that those would not be circumvented, that they  
15        could be confident that the vehicles they were  
16        building would operate as designed throughout the  
17        life and that they would have protections to do  
18        that.

19                   MR. CHENEY: Mr. Douglas, does the State  
20        of California have a separate testing? Do vehicles  
21        have to get tested every year? For example, if  
22        somebody goes and modifies their vehicle and if they  
23        go in for a test, will that show up on that test as  
24        a violation if they have not done that correctly  
25        within the code?

1 MR. DOUGLAS: That is an excellent  
2 question.

3 Yes, we have it. It's every two years.  
4 And when I say California, by and large EPA adopts  
5 California verbatim. So anything that applies to  
6 California applies nationwide.

7 The inspection program is every two years  
8 in California. So one of the things that you could  
9 do with the engine modifications that are being  
10 talked about to make it go faster to greater  
11 acceleration or even greater fuel economy, these are  
12 not state secrets. Auto engineers know how to make  
13 cars go faster with engine software changes but that  
14 comes at a price of increased pollution.

15 So you could make a modification to a  
16 vehicle for better performance and then you could  
17 archive the original software and then when you go  
18 in for your inspection every two years, you  
19 reinstall the archived version of the software.

20 The State would be none the wiser.

21 And this is not just California. We meet  
22 routinely with the 40 states which have inspection  
23 programs. And it's always a concern of theirs that  
24 people are doing things to bypass the inspection  
25 programs, to modify cars for increase improved

1 performance perhaps, but do so at the price of  
2 increased pollution.

3 So you could have it running clean for one  
4 day a year and then the other 364, it's a race car.

5 MR. RUWE: Do manufacturers cooperate with  
6 authorized facilities to make those modifications?  
7 Just as you said, you could have it 364 days a year  
8 as a race car and then mod it back for the  
9 inspection.

10 I understand that they do offer their own  
11 proprietary ways to do those modifications.

12 MR. DOUGLAS: I am not familiar with those  
13 and I don't think it would be widespread. There are  
14 some like AMG -- you know, Mercedes has AMG, Toyota  
15 have Toyota Racing Division and sometimes that have  
16 special cars designed for that.

17 MR. RUWE: I am not talking about cars. I  
18 am talking about devices that allow modifications of  
19 generally available cars, not special cars. It's a  
20 device that is offered under authorization of the  
21 manufacturers to do similar modifications as you  
22 just described.

23 MR. DOUGLAS: I am not familiar with  
24 anything like that. There are people who modify it  
25 but they -- you know, like there is one BMW program

1       that puts a component on the outlet of the ECU. So  
2       it is modifying the signal going to the fuel  
3       injectors, the timing, things like that.

4               MR. RUWE: And that would accomplish  
5       similar results?

6               MR. DOUGLAS: It could accomplish. I  
7       believe they say it does and I think that's actually  
8       been certified by the Air Resources Board, but it  
9       doesn't modify the ECU software. It moves it  
10      downstream of that, but it's not something that BMW  
11      put together for them.

12              MR. RUWE: But was this in cooperation  
13      with them?

14              MR. DOUGLAS: I don't know what -- but I  
15      am not aware of any. Again, it's possibly just me,  
16      but I'm not sure.

17              MR. RUWE: Thank you.

18              MR. DOUGLAS: So let me just touch on  
19      diagnoses and repair.

20              The arguments that the proponents have  
21      made for this exemption are simply unfounded. We  
22      have federal regulations, we have state regulations.  
23      We have the 2002 Dorgan letter and the 2014 Right to  
24      Repair MOU that all guarantee the information and  
25      tools needed to diagnose and repair vehicles is

1       available to the independent repair shops and it's  
2       available to every consumer.

3               There is a competitive market and  
4       aftermarket market for both tools and information.  
5       So just to be clear, every piece of information,  
6       every tool that the franchise dealers use to repair  
7       vehicles is available to every consumer and every  
8       independent repair shop. It's been that way for the  
9       last 12 years.

10              Moreover, all of these regulations, all of  
11       these agreements, the manufacturers are required to  
12       provide that information and tools at a fair and  
13       reasonable price. And in the last two years, no one  
14       has disputed that fact.

15              Turning to modifications --

16              MR. DAMLE: Could I ask a question.

17              Just give me a sense so I understand,  
18       there is for some of the information like a yearly  
19       subscription you have to pay for some of the  
20       diagnostic information.

21              How much are we talking about here? I  
22       think proponents suggest that the cost of some of  
23       these, either the tools or information, are  
24       prohibitive, but I don't have a good sense from the  
25       record for what exactly the costs are.

1                   So can you talk to that.

2                   MR. DOUGLAS: Absolutely.

3                   So what we have established and what most  
4                   of the companies do is they have three tiers of  
5                   access or three periods for subscription. So you  
6                   can get a one-day subscription. And some  
7                   manufacturers offer one day, some offer three days  
8                   and they're around 20 bucks.

9                   For like a Toyota, I think it's 7.95 or  
10                  maybe less, but in any event, it's around \$20. And  
11                  you can get any service information, any wiring  
12                  diagrams, repair manuals, for any vehicle that is  
13                  sold by Toyota or GM all the way back to 1996.

14                  And that was the agreement that is in the  
15                  regulations. That is the way we have been doing it.  
16                  Most of them go back further, but certainly from  
17                  1996 on, all of that information is available. So  
18                  you pay your \$20 and you can go to Toyota's website  
19                  and get everything.

20                  MR. DAMLE: That is for any model year.

21                  MR. DOUGLAS: Any model year. And I think  
22                  it might go back to 1988. The requirement was at  
23                  least 1996.

24                  MR. DAMLE: What agreement was that,  
25                  again?

1                   MR. DOUGLAS: It was a California Air  
2 Resources Board Regulation, also a U.S.  
3 Environmental Protection Agency. That is for  
4 environmental.

5                   So the 2002 Dorgan letter, we agreed to  
6 provide the exact same information for both emission  
7 and non-emissions. And so there was three elements  
8 to that.

9                   We said we will provide all the service  
10 information, which is what I was just describing; we  
11 will provide all of the dealer tools -- so that's  
12 the manufacture tools -- and we will also provide  
13 all the information that a tool company would need  
14 to produce an aftermarket tool that has the exact  
15 same functionality as the dealer tool.

16                  That was the agreement. And again, that  
17 has been in place for 12 years. And it was for the  
18 emission related was what the regulation was, but we  
19 extended that to emission and non-emission. So it  
20 applies to everything.

21                  MR. DAMLE: So there is a competitive  
22 market for the tools, are you saying.

23                  MR. DOUGLAS: Absolutely.

24                  MR. DAMLE: What is sort of range in terms  
25 of the cost of the tools.



1                   MR. DOUGLAS: It varies and it's what you  
2 would respect it to be you can refine tools from  
3 tens of dollars, \$10, \$20, \$30, \$40, and they range  
4 up to thousands of dollars.

5                   So, you know, a tool that costs \$45  
6 might -- say you have got a check engine light on  
7 and it'll show it's code P023. And that is related  
8 to the system or an O2 sensor that is bad or  
9 catalyst that is bad. That is it.

10                  The more expensive tools add more  
11 functionality. So maybe they will guide you through  
12 the repair or maybe it has faster communications.  
13 Sometimes that is an advantage.

14                  So if you are a high tech shop or if you  
15 specialize in one manufacturer -- you are a BMW --  
16 you might want to get the BMW because it may have a  
17 higher speed protocol. And it's a more expensive  
18 tool, but the aftermarket also provides these tools,  
19 as well.

20                  And so typically -- like I say, it  
21 depends. Usually, I think they're around a couple  
22 of thousand dollars for the high end.

23                  So you could get the Ford tool for a  
24 couple of thousand or you could get an aftermarket  
25 tool that may cover Ford, GM and Chrysler for a

1 couple of thousand dollars.

2 MR. DAMLE: So these tools would allow you  
3 to do diagnosis and repair, not necessarily the  
4 kinds of modifications that Mr. Smith was taking  
5 about, if you want to have a larger axle on your  
6 pickup truck to carry a heavier load, carry a ton of  
7 bricks. So tools won't let me know that.

8 MR. DOUGLAS: Well, they will let you  
9 reprogram the vehicle but reprogram it with factory  
10 or manufacturer engine calibrations on things like  
11 that. So it's from the factory. And when they do  
12 it, they do find problems, I think everyone would  
13 agree.

14 So let's say you have a truck and it's a  
15 hot day and the temperature is over 90 degrees and  
16 it's pulling up a steep grade at 60 miles an hour.  
17 Maybe it has a momentary stall. So it doesn't  
18 happen very often but the manufacturer finds out  
19 about it and they develop a fix for that and a new  
20 engine calibration.

21 And once they have determined that  
22 calibration, they do a lot of tests. Once they  
23 determine that calibration won't affect emissions  
24 and won't affect the durability -- and I stress  
25 durability is critical because it's great if you

1       have a super clean vehicle for two years, but what  
2       happens when it starts polluting very heavily in  
3       year three, four, five. Look around. There is a  
4       lot of older vehicles and they have to perform as  
5       designed for a long time.

6               MR. DAMLE: So did anyone issue that in  
7       any way, that you could reprogram and anyone can  
8       reprogram their vehicle with the tools that are  
9       available and that is available and it has been for  
10      a while?

11             Thank you.

12             MS. CHARLESWORTH: So just to be make sure  
13      I am clear on this, circumvention then is a  
14      alternative to accessing the tools that you have  
15      been referencing -- is that in some cases -- to make  
16      the repair?

17             How do tools relate to circumvention.

18             MR. DOUGLAS: I guess all the tools that  
19      you need to repair a vehicle are available without  
20      circumvention.

21             MS. CHARLESWORTH: Without circumvention,  
22      but the people who are seeking the exemption here --  
23      it may be a question for Mr. Smith -- are looking  
24      for a way, perhaps, around having to access and pay  
25      for those tools.

1                   And so I am just trying to understand the  
2                   relationship between a high tech tool that diagnoses  
3                   an auto problem and the sort of circumvention  
4                   alternative and are they just a circumvention  
5                   alternative to obtaining the tool or do you still  
6                   need the tool?

7                   MR. DOUGLAS: I guess what I would suggest  
8                   is circumvention, at least the way I view it, is  
9                   about changing the fundamental software of the  
10                  vehicle.

11                  And let me give you a couple of examples.  
12                  You do have people who say, you know what, I don't  
13                  trust air bags, I don't think air bags are safe and  
14                  I am certainly not going to pay \$1500 to repack air  
15                  bags because I bump a curve in a fender bender.

16                  So circumvention would allow you to go in,  
17                  disable the air bag, turn off the warning light.

18                  And then you know what, a few years later  
19                  that person sells the vehicle to someone else a few  
20                  years after that. They sell it to a third party.  
21                  Those subsequent owners would have no idea or could  
22                  have no idea that their air bags would never deploy.

23                  MS. CHARLESWORTH: But that's not an  
24                  example of like -- I mean I assume you think that is  
25                  an illegitimate modification.

1 MR. DOUGLAS: I mean that --

2 MS. CHARLESWORTH: That is not  
3 something -- you guys wouldn't be offering tools to  
4 do that, I assume.

5 MR. DOUGLAS: That is circumventing the  
6 system and that would be -- you might use a  
7 diagnostic tool or reprogramming tool.

8 So basically, you have a program that you  
9 have rewritten and you might use a programming tool  
10 to get that into the vehicle. So the circumvention  
11 actually changes the software on the vehicle, the  
12 thing that control the engine transmission.

13 MS. CHARLESWORTH: So the tools -- when  
14 you say -- at least one kind of tool is a tool that  
15 allows you to preprogram software in a car. And that's  
16 one of the tools that is offered through -- under  
17 this letter and so forth, and that certain repair  
18 shops, at least, will pay for access to that tool so  
19 they can reprogram software.

20 So just really quickly back to Mr. Smith,  
21 do you use tools like that or do you do that in a  
22 different way?

23 MR. SMITH: It depends what you are doing.

24 So first, there are multiple tools that,  
25 to give you an example, the \$20 where you pay for

1 day, it's wiring diagrams, it's stuff they said,  
2 hardware related, software.

3 When you are talking about the tools that  
4 go through \$40 on up, those are typically diagnostic  
5 communications stuff. So some of the circumvention  
6 isn't always modifications of the firmware.  
7 Sometimes it's understanding the impact of the  
8 tools.

9 So for instance, one of guys that I work  
10 with, he had an issue where he is using diagnostic  
11 tools and trying to fix the power window on a  
12 client's car. And he is hitting the button, the  
13 diagnostic said it was working fine, but, obviously,  
14 the window is not working.

15 So what we had to do, we had to reverse  
16 engineer the non-diagnostic packet, the one that  
17 actually makes the car do stuff to figure out which  
18 one did the windows. And it turns out it's product  
19 cannibus. So essentially, the cannibus for the  
20 window unit was bad.

21 Some of these tools identify that and some  
22 identify a part so you could buy it, but we had no  
23 way of knowing what was wrong in using that  
24 diagnostic tool. We had to figure out what the  
25 vehicle actually uses. And that's the part that

1 we're concerned with the copyright issue on, because  
2 that is the part that is it not talked about, that  
3 is not published information.

4 So some circumventions are just  
5 understanding how the vehicle is really working, not  
6 just the tools they provide, like use this safety  
7 zone kind of area.

8 And I get it from a driving vehicle  
9 perspective, but from a repair perspective, that  
10 doesn't always cut it.

11 So sometimes you have to circumvent  
12 something besides the firmware.

13 MS. CHARLESWORTH: But can you also just  
14 use circumvention in lieu of obtaining a tool from  
15 the manufacturer?

16 MR. SMITH: Yeah, because a lot of these  
17 tools are being sold and they don't really need to  
18 be that expensive. They are actually the same tool.  
19 It's just some people are sold more rights than  
20 others, but once you know how the vehicle works, you  
21 can actually --

22 MS. CHARLESWORTH: So your point is -- I  
23 understand there are two points -- sometimes the  
24 tools that are available don't actually allow you to  
25 diagnose or repair the problem. That is the window

1 example.

2 And sometimes you just don't actually need  
3 an authorized tool because you can circumvent it or  
4 use an unauthorized tool to make the repair.

5 MR. SMITH: That would be one use. I mean  
6 once you understand how it works, you don't need to  
7 pay someone else.

8 MS. CHARLESWORTH: So it's a correct  
9 understanding.

10 MR. SMITH: Yes.

11 MS. CHARLESWORTH: Mr. Douglas, if you  
12 want to conclude your remarks.

13 MR. DOUGLAS: Thank you very much.

14 I know that the Copyright Office is  
15 reluctant to base its decision on non-copyright  
16 factors and that you refused to do so in the past,  
17 but I would ask that you consider that this  
18 situation is vastly different. It's different in  
19 degree, it's different in kind and it's different in  
20 consequence.

21 In sum -- and I think Mr. Nabel summed up  
22 our remarks -- this exemption -- permitting this  
23 exemption could put lives at risk.

24 And in that regard, I have also attached a  
25 letter from the National Network to End Domestic



1 Violence and they raise yet another possible  
2 unintended consequence of granting this.

3 So I would just summarize and ask that you  
4 consider the real world consequences of a decision  
5 to permit circumvention.

6 Thank you.

7 MS. CHARLESWORTH: Thank you Mr. Douglas.

8 Mr. Lightsey.

9 MR. LIGHTSEY: Thank you very much.

10 In light of those discussions and the  
11 discussion earlier this morning, I am going to  
12 attempt to edit my remarks on the fly so that we can  
13 give you the opportunity to ask more questions.

14 So I think we have established today that  
15 today's modern automobile is not your father's  
16 Oldsmobile.

17 With due respect, comparing today's car to  
18 the car that people tinkered with in their garage in  
19 the 1950's and 60's is like comparing a slide rule  
20 to a laptop computer.

21 And today, the proponents of exemption  
22 would have you believe that a car can be freely  
23 modified by an owner but this is just a false  
24 premise.

25 Today's cars are subject to regulatory

1 requirements, including those relating to the safety  
2 emissions and fuel economy of the car.

3           Allowing circumvention of TPMs to modify  
4 vehicle software would not just affect the current  
5 owner of the vehicle but future purchasers of the  
6 vehicle would have no way of knowing if their  
7 vehicle will be altered by a previous owner or third  
8 party.

9           The concerns expressed here are not made  
10 out of anti-competitive concerns as suggested by  
11 certain of the proponents. Indeed, since the  
12 beginning of car manufacturing, there has been a  
13 robust automobile aftermarket for goods and  
14 services. That will not change if the proposed  
15 exemption is denied.

16           The concerns being expressed here today  
17 are born out of a real threat to safety, security  
18 and regulatory compliance, all of which have been  
19 carefully considered.

20           Proponents have also failed to meet their  
21 significant burden to show that TPMs and the  
22 prohibition on circumvention have had a substantial  
23 adverse impact on diagnosis and repairs, as well as  
24 modification.

25           Importantly, GM does not contend that

1 owners should not be able to diagnose and  
2 repair their cars. If done properly, diagnosis and  
3 repair doesn't create safety and security  
4 vulnerabilities or regulatory compliance issues and  
5 does not modify critical functionality of the  
6 vehicles.

7 As such, GM has endorsed the participation  
8 of the MOU as discussed and participates in it. And  
9 we incorporate that into our testimony as presented  
10 to the panel.

11 And thank you very much for your  
12 attention.

13 MS. CHARLESWORTH: The MOU is in the  
14 written record.

15 MR. METALITZ: Yes.

16 MS. CHARLESWORTH: I just wanted to make  
17 sure.

18 MR. DAMLE: Can I ask a question about the  
19 MOU.

20 So one of the points that the proponents  
21 make is that it only applies to model years 2002 and  
22 afterwards. And I imagine you can sort of look  
23 around on the freeway here and see there are a lot  
24 of cars that predate that.

25 So just in terms of the sort of bounds of

1 the MOU, so if I -- let's say hypothetically you're  
2 going to limit it to vehicles before 2002.

3 Do you have a concern about the repair and  
4 about circumvention provision that is limited to the  
5 things to which the MOU did not apply?

6 MR. LIGHTSEY: So thank you very much.

7 So the Dorgan letter that was in effect  
8 before the MOU actually goes back to 1996. So we're  
9 actually talking about 1996 where there is actual  
10 agreement, but as indicated by Mr. Douglas, the  
11 manufacturers can make this information available  
12 for all of the cars in their portfolio.

13 And significantly, I don't think we have  
14 ever received a complaint from the aftermarket that  
15 the information is not available or that the cost of  
16 the tools or the information is excessive.

17 MS. SMITH: I will note for the record,  
18 the MOU is the Auto Alliance Exhibit A. The Dorgan  
19 letter is Exhibit B of which was filed in the second  
20 round. So we can go refer to these.

21 MR. DAMLE: The other limitation on it is  
22 that it only applies to automobiles. It doesn't  
23 apply to, I think, motorcycles. Ducati is an  
24 example of that.

25 MR. LIGHTSEY: It doesn't apply to

1           motorcycles or to farm equipment.

2                   MR. DAMLE:   Okay.

3                   MS. CHARLESWORTH:   Mr. Metalitz.

4                   MR. METALITZ:   Thank you very much.

5                   I guess the first thing I should do is --  
6           I will be brief, but the first thing I should do is  
7           ask to have entered as an exhibit in this proceeding  
8           the full statement of Steve Douglas along with three  
9           letters that he referenced that are attached to it.

10                   And I have provided copies to all the  
11           witnesses.   And I believe the members of the panel  
12           have that, as well.

13                   MS. CHARLESWORTH:   We have not made  
14           provision for additional documentary evidence but I  
15           will receive them and we will post them on the  
16           website, but we will also give you -- I think  
17           someone mentioned an opportunity to respond.   Let's  
18           say two weeks from today, if you care to.   And  
19           please, limit your response just to the new material  
20           because we want you to have that opportunity.

21                   You can -- shall we set up a special  
22           portal or just -- you can E-mail the responses.

23                   MR. RUWE:   Can we limit it to these  
24           witnesses.

25                   MS. CHARLESWORTH:   I think we can make it

1       general. We will put a note on the website with  
2       specific instructions, but most likely it will be an  
3       E-mail to Steve Ruwe's E-mail. And I think we will  
4       put the public on notice, as well, that they can  
5       review and respond to these briefly.

6               We will probably put, you know, a  
7       five-page limit or something on it, but we will try  
8       to do that promptly so you can respond.

9               MR. METALITZ: Thank you. I appreciate  
10      that very much.

11              And I will just note that the letters are  
12      basically responsive to statements about the MOU and  
13      other issues that are in contention here that were  
14      first seen in the reply comments, which, of course,  
15      were not published until two weeks ago and which we  
16      had to make our witness requests and so forth even  
17      before they were published.

18              So that is --

19              MS. CHARLESWORTH: Hopefully, I assume you  
20      agree that we will have come up with a reasonable  
21      way to --

22              MR. METALITZ: Thank you very much. I  
23      appreciate that.

24              MS. CHARLESWORTH: -- and allow these  
25      folks to respond, as well.

1 MR. METALITZ: Thank you very much.

2 I'm not going to go into a lot of detail  
3 about the copyright issues and whether the  
4 proponents have met their burden to meet their uses.  
5 I think there are a number of issues on the fair use  
6 side.

7 In contrast, I would say to the  
8 discussions this morning on number 22, I think in  
9 terms of the dialogue that occurred here about the  
10 sauce for the goose and sauce for the gander, that  
11 raised a very good question.

12 And I would just like to ask the panel to,  
13 as I am sure they will, to look very closely at the  
14 wording of the statute.

15 This proceeding is not about adverse  
16 effects of the prohibition, that bad things happened  
17 because we have Section 1201 apply to these class of  
18 works. It's not -- people who are adversely --  
19 persons removing copyrighted work were adversely  
20 effected by the prohibition in their ability to make  
21 non-infringing uses of particular class of  
22 copyrighted works.

23 And then there are five factors that  
24 the -- it's a non-exhaustive list, obviously, since  
25 is the fifth is such other factors as are

1 appropriate -- five factors that the office and the  
2 librarian would take into account in determining not  
3 whether the prohibition is bad or causes adverse  
4 effects but whether the users are unable to make  
5 non-infringing uses.

6 We contest that these uses, particularly  
7 the modification area, are non-infringing. We don't  
8 think they met their burden on fair use or even on  
9 Section 117, but that is really the standard and it  
10 applies to both sides.

11 So there is -- you know, one through  
12 five -- and five is such other factors as a  
13 librarian considers appropriate.

14 So I would courage you to have equal sauce  
15 for the goose and the gander if we are talking about  
16 the issues. Let's not make it a one-way ratchet  
17 where proponents can talk about safety problems and  
18 the opponents cannot.

19 And I understand that -- the reluctance of  
20 the office to get involved -- rather to weigh  
21 heavily some of these factor five issues.

22 The office has relied on factor five in  
23 the past and particularly with regard to security,  
24 but it is -- and it is part of the mix here. And  
25 the office also made it clear in the last go-round



1       that it was concerned about the real-world  
2       consequences of granting an exemption.

3               I think what the proponents are asking for  
4       here -- and by the way, just as I said this morning,  
5       the proponents are asking for a change in the law  
6       here. The proponents are asking for a new  
7       government regulation in this field.

8               And they want to prove circumvention for  
9       the purpose of modification. And that risks making  
10      our air less clean, our vehicles less efficient, our  
11      road says less safe.

12              I don't think there is any contest that  
13      they would overall reduce the level of compliance  
14      with these standards. I think we see strong  
15      evidence of that on the record.

16              The statements in the reply comments said  
17      well, other agencies enforce these and some of these  
18      don't apply to individual car owners, for example,  
19      the individual owner who sells a used car is treated  
20      differently than someone who is in the business of  
21      someone selling used cars, which is appropriate, I  
22      think.

23              The issue is not here who the authority to  
24      prosecute somebody, who has the authority to sue  
25      somebody. It's whether -- what the broad social

1 cost is when these important national policies are  
2 undermined and when a government agency is perceived  
3 as giving its blessing to that type of activity.

4 And I think we all know this is how the  
5 public to a great extent will view the decision that  
6 the librarian ultimately makes.

7 We already have seen wide spread confusion  
8 and we have got these submissions that say I support  
9 the EFF, keep the DMCA the way it is. So we want to  
10 keep the DMCA the way it is. They want to change it  
11 but the public thinks that we're trying to make some  
12 change here.

13 Anyway, the consequences we are talking  
14 about -- I know the office has dealt with this  
15 before, but I would just submit that the  
16 consequences are much different in kind and in the  
17 breadth of their impact as previous witnesses have  
18 said and anything in the record on the smart phone  
19 jailbreaking and some of the other areas where these  
20 non-copyright interests were brought in.

21 So the office can turn a blind eye to  
22 these and pass the problem off to somebody else, but  
23 what I think the statute fully authorizes you to do  
24 it take these consequences into account.

25 And what you said in the NOI in the

1 previous round, the harm identified by a proponent  
2 of an exemption must be balanced with the harm that  
3 will result from an exemption.

4 So I think on diagnosis and repair, our  
5 position, the Automobile Alliance position, would be  
6 that the harm demonstrated from the prohibition on  
7 circumvention is pretty near zero. The diagnostic  
8 and repair tools are available. Everything that can  
9 be achieved through circumvention can be achieved  
10 without circumvention.

11 And this system has been in place for a  
12 long time. There are plenty of mechanisms in that  
13 for people to complain about what they view as  
14 unfair pricing and no one has ever used any of those  
15 mechanisms that we are aware of. So I think we have  
16 to assume that system is in place.

17 With regard to modification, I am not sure  
18 we can say the harm is zero because people do want  
19 to make modifications to their vehicles, but I think  
20 it has to be weighed against the risks of harm that  
21 I think have been spelled out, particularly by Steve  
22 Douglas.

23 The trade-offs, every time you increase  
24 the performance, modify or increase performance, you  
25 are having impacts on emissions. If you are

1 changing the fuel economy, you are also having an  
2 impact on the emission and the durability of the  
3 emissions equipment.

4 So there are a lot of trade-offs involved  
5 here.

6 MR. DAMLE: Can I ask you about that.

7 There are modifications that could be done  
8 that don't have those consequences, right? Do you  
9 agree with that?

10 MR. METALITZ: Yeah, I don't think we can  
11 say 100 percent of the modifications would have this  
12 effect, but when you see what runs through a lot of  
13 these comments and going back to the first round  
14 when people narrating the history said when I first  
15 got into this, it was because I wanted to make my  
16 car go faster.

17 I think -- and I would defer to  
18 Mr. Douglas who has a lot more hands-on information  
19 about this -- but I think that that is the kind of  
20 modification that would be most commonly made.

21 MR. DAMLE: What about the example of the  
22 larger axle. So there was the example in the record  
23 of somebody putting on snow tires that have a larger  
24 diameter and so you need to calibrate the  
25 speedometer.

1                   And changing to an alternative fuel  
2                   vehicle, there is someone from my wife's hometown  
3                   that runs his car on bio-diesel from French fries  
4                   and fryers and things like that, modifications that  
5                   sort of maybe are neutral or beneficial.

6                   Are there modifications like that?

7                   MR. DOUGLAS: I am certain there are but  
8                   let me just say that things like French fry oil and  
9                   diesel powered vehicles, these vehicles emit  
10                  enormous amounts of pollution. You may be able to  
11                  run on three gallons of McDonald's french fry oil,  
12                  but it's pouring 200 or 300 times as much pollution  
13                  into the air as the vehicle that is operated as it  
14                  was designed.

15                  MR. DAMLE: But what about the other  
16                  example of the larger axles.

17                  MR. DOUGLAS: And, there is undoubtedly --  
18                  and I don't doubt Mr. Smith or Mr. Wiens are  
19                  brilliant engineers and they can formulate ideas on  
20                  windows, to be one, but in general, the kinds of  
21                  modifications that were identified, performance and  
22                  even fuel economy, this industry, the automobile  
23                  manufacturers are going to spend \$200 billion over  
24                  the next ten years to improve fuel economy and  
25                  they're going to put turbochargers on and all of

1           this.

2                       So they know how to change the software to  
3           improve fuel economy. They could do that. They  
4           could make a software fix. That's exactly what they  
5           would do. The problem is it increases pollution and  
6           you can't have clean air, you can't see the  
7           mountains in Los Angeles, if you make changes so the  
8           pollution goes up.

9                       It's a very delicate balance and the  
10          manufacturers try to strike it.

11                      Things like axle ratios, things like that,  
12          may not have an impact on emissions, but before  
13          manufacturers can put those out there, they do a  
14          tremendous amount of -- weeks of testing to  
15          verify -- or months of tests to verify that the  
16          changes to the software don't impact pollution, and  
17          if they don't impact pollution today, immediately,  
18          that they don't impact pollution down the road  
19          because of durability concerns, because again,  
20          vehicles are required -- and EPA and ARV test  
21          vehicles are in use up to, you know, a hundred  
22          thousand miles. They have to meet the requirements  
23          throughout their life. That is how we get clean air  
24          in California and across the country.

25                      MS. CHARLESWORTH: I'm going to go back to

1       this side of the room of the proponents.

2               Mr. Nabel, you had your placard up for a  
3       while. We have some specifics -- at least I have  
4       specific questions for you all, so.

5               MR. NABEL: Let me just address the last  
6       point that was made at the end of table. And I know  
7       very little about geese and sauce and all of that,  
8       but I want to get back to colloquy that was going on  
9       with Mr. Walsh and Mr. Damle.

10              And we're not making the argument that the  
11       Copyright Office shouldn't consider all of these  
12       great and wonderful things that people are doing  
13       that is going to benefit the environment and  
14       anything else. That is absolutely not what we are  
15       saying, that it's inappropriate in both directions.

16              All we're saying is these are  
17       non-infringing uses of copyright. Whether they  
18       improvement fuel efficiency or not what people are  
19       trying to do and that doesn't infringe copyright.

20              We are not making any judgment about  
21       whether it's better for the environment, worse for  
22       the environment. Doesn't matter.

23              MS. CHARLESWORTH: But here is the thing.  
24       And this is very extreme and an overstatement, but  
25       if even for a fact that we create this exemption and

1       that "X" number of people will surely die tomorrow,  
2       is that not something we should even think about?

3               I am not saying that is a fair statement  
4       of record, but in a sense, that is what is being  
5       argued here. They're saying it's our view that if  
6       you grant this exemption, we are going to have --  
7       it's not just a question of can I have an ap on my  
8       cell phone, which is not really a life or death  
9       matter, at least for most, but they are saying you  
10      are going to have potentially accidents, you are  
11      going to have a lot of pollution.

12             And is that truly something that we can  
13      just turn a blind eye to?

14             MR. NABEL: What I would say is that, you  
15      know, at least with respect to where I am coming  
16      from, the agricultural manufacture, we submitted  
17      many, many examples, up to eight, in the video  
18      testimony of the folks who are actually doing some  
19      of this stuff about what they're doing.

20             None of the opposition briefs and none of  
21      the testimony here today has addressed any of those  
22      uses. Instead, what we have is pure speculation  
23      without any evidence of these sort of horror stories  
24      of what might happen. It's this parade of  
25      horribles, which I would submit is entirely



1        unsupported by evidence. Not only that, but it does  
2        not address the actual evidence in the record or at  
3        least make a comment on what that is likely to lead  
4        to.

5                    MS. CHARLESWORTH: Mr. Walsh.

6                    MR. WALSH: So in the context of other  
7        vehicles, I think there are a few facts in the  
8        record that can help you assure yourselves that that  
9        is not an negative consequence.

10                   MS. CHARLESWORTH: When you say "other  
11        vehicles," are you talking about highway vehicles?

12                   MR. WALSH: All motorized land vehicles.

13                   So the specialized agencies that govern  
14        these vehicles have not seen fit to prohibit people  
15        from accessing vehicle software for repair,  
16        modification, diagnosis.

17                   The one example of a regulator that  
18        allegedly did suggest TPMs needed to be introduced,  
19        the regulator subsequently backed off of that  
20        position according to the opponents.

21                   People have been modifying their cars  
22        since the invention of cars. And we have many  
23        examples of ways this has improved safety, how it's  
24        been good for innovation and competition.

25                   And we also have the example of Derive

1 systems in the record. This is a company that  
2 reprograms the computers in fleets of trucks.

3 They have made specialized technology that  
4 does things that original equipment manufacturer  
5 tools cannot. And they improve fuel economy, as  
6 well as emissions. They have been approached by the  
7 Department of Energy and other regulators for their  
8 good work in that field.

9 So that is a concrete example. That is an  
10 example that is in the record of where granting the  
11 exemption would improve outcomes for the  
12 environment.

13 And as my colleague Mr. Nabel said, on the  
14 other side we have speculations, we have fear  
15 stories.

16 MS. CHARLESWORTH: Hold that thought.

17 Other side, do you have concrete examples  
18 of what you are calling the adverse impact of  
19 circumvention in this area, things that -- what  
20 would you point to in the record?

21 MR. DOUGLAS: I mean -- well, I guess a  
22 lot of this, they say well, it's speculation. Well,  
23 of course it's speculation because we have the  
24 protections today. Of course we're speculating  
25 about what happens when you change. We're not

1       advocating a change to the requirements.

2               So I mean we have protections today. We  
3       think they're critically important. There is  
4       numerous examples. The engine manufacturers, the  
5       large engine manufacturers, Detroit Diesel and  
6       Navstar, you know, and other big -- they knew how.  
7       Like I say, it's not state secret modifying fuel  
8       economy on vehicle using software.

9               So that's what they did. So they improved  
10      fuel economy. Great, right, lower emissions, fuel  
11      economy, except they were pouring tons and tons of  
12      pollution into the environment. The EPA fined  
13      them -- I think it was a hundred million dollars  
14      more and they entered a consent decree.

15              So that is an example of making software  
16      engine modification changes that --

17              MS. CHARLESWORTH: This was Navstar?

18              MR. DOUGLAS: It was most of the large  
19      diesel manufacturers over the 18-wheelers. And  
20      again, it's the modifications that the proponents  
21      talk about, look, we can get better fuel economy and  
22      that is good for the environment. Well, not  
23      necessarily.

24              The performance characteristics of a car,  
25      if you increase the acceleration and the speed, it

1 tends to have an emissions impact. It tends to  
2 produce more pollution, pollution that harms the  
3 environment.

4 So in most of those cases -- so again, I  
5 mean this is speculation, but a lot of it is because  
6 we have protections today that prevent this kind of  
7 behavior from flourishing.

8 MS. CHARLESWORTH: Back to Mr. Walsh.

9 One of the issues that I found potentially  
10 troubling is the knowledge of subsequent buyers of  
11 cars and how will they know that something's been  
12 altered in the way that wasn't at least originally  
13 intended by the manufacturer.

14 And that gets into there is the example  
15 the air bags, but I mean really on any level -- I  
16 mean suppose someone circumvented and screwed up the  
17 repair. Maybe the intention was good but it went  
18 bad. Maybe it's just a question that you are buying  
19 a car that you think will perform in a certain way  
20 and it's not.

21 Do have you any thoughts in terms of how  
22 to address that?

23 MR. WALSH: I think that's explains why  
24 it's very important that owners and independent  
25 mechanics be able to look at the software in their

1 car to evaluate it to see what its performance will  
2 be.

3 MS. CHARLESWORTH: I mean if I am buying a  
4 car from my neighbor down the street and you are  
5 saying I have to assure myself that the software has  
6 not been tampered with, I have to take it into a  
7 circumvention specialist, whoever, someone like  
8 Mr. Smith to like run all of these diagnostic tests,  
9 because I am never -- you would be putting that  
10 burden potentially on many, many buyers of used cars  
11 to somehow have the software system completely  
12 evaluated.

13 It switches the burden that -- I mean  
14 probably most people wouldn't assume that that could  
15 occur today.

16 So I am just -- to me that is -- I don't  
17 know. It's a troubling prospect that in your  
18 ordinary used car transaction, you would have to be  
19 worried about whether there had been a dangerous  
20 modification to the software.

21 MR. WALSH: A few different answers to  
22 that. One is that I -- actually, that wasn't a glib  
23 answer. That is a very important reason that the  
24 proposed exemption should be granted, so that you or  
25 your chosen mechanic can assure yourself of the

1 proper function of the car.

2 Another response is that the same concern  
3 has been true for non-software modifications of the  
4 vehicle. And one of the first things that a used  
5 car buyer will typically do is check with a trusted  
6 mechanic to see how the car is functioning.

7 MS. CHARLESWORTH: That's a little more  
8 obvious than the 30 ECU's. In other words, there is  
9 a difference in terms of someone putting a car on a  
10 lift and testing the brakes versus as someone said,  
11 a slide rule versus a computer.

12 I mean I think the point is the things --  
13 it seems to me software issues might not be as  
14 obvious.

15 I mean maybe you can disabuse me of that  
16 idea, but to me, there is a difference of having a  
17 routine mechanical check and having someone have to  
18 check very sophisticated software.

19 MR. WALSH: If you have the ability to  
20 access the software, you can do what is called a  
21 check sum, which is a computer process that  
22 essentially will allow you to figure out if it's in  
23 the state that you trust. That would be the  
24 original state; it could be an aftermarket state  
25 assuming that competition is possible in this case.

1                   So the ability to run a check sum if the  
2                   systems are accessible is one way to be assured of  
3                   the trustworthiness of the software. And there is  
4                   no reason that that couldn't be a part of plugging  
5                   in a tool to the ECU running that test.

6                   You also raised --

7                   MR. CHENEY: With that last test, do you  
8                   have to break an encryption to be able to do that or  
9                   is there a diagnostic tool that allows you to do  
10                  that.

11                  MR. WALSH: So in order to build a tool  
12                  that allows you to compare software that you read  
13                  out of the computer to known software, that requires  
14                  access to the software, itself. So if there are  
15                  TPMs that restrict your access, then it would  
16                  require circumvention.

17                  You also mentioned the case of you are  
18                  buying a used vehicle. That is a transaction that  
19                  is very common. And if you are buying it from your  
20                  neighbor, for example, the factors that go into your  
21                  decision to buy a used vehicle involve interpersonal  
22                  trust.

23                  This isn't a new problem, the risk that  
24                  some of might try to defraud you or harm you with  
25                  something that they are telling you. We have

1 doctrines of tort law around it and it's a problems  
2 that humans as purchasers are accustomed to.

3 MS. CHARLESWORTH: Right. Although I  
4 think, again, the concern would be if someone  
5 modified the air bags and you didn't know it, I  
6 mean, which is a little different from saying you  
7 sold me a lemon. It's a different level of safety  
8 concern potentially, is what is being argued.

9 MR. WALSH: It's not different from the  
10 physical world modifications of the vehicles.

11 MS. CHARLESWORTH: Here is an issue we  
12 haven't really talked about at all -- I'm sorry  
13 Mr. Wiens, I missed you.

14 MR. WIENS: I would just say it's a very,  
15 very common to buy a used vehicle and the previous  
16 owner removed the air bags and didn't tell you.  
17 That's why you take it to a mechanic to get it  
18 inspected.

19 So from someone who does both physical and  
20 digital inspection of products, it's vastly easier  
21 to verify the integrity of software.

22 I recently bought a Honda Civic and the  
23 there was something in the inspection that cost me a  
24 thousand dollars to fix.

25 There is a lot mechanically going on and



1       there is a lot of mechanics talk about your 30-point  
2       inspection. It's very easy to miss something  
3       physically.

4               So we are moving into the realm where the  
5       distinction between physical and digital product is  
6       blurred. This is the whole reason that the 1201  
7       process has become more difficult this time.

8               And we have to develop sophisticated tools  
9       to be able to verify and help owners buy products in  
10      the used market safely. And at the moment, we can't  
11      do that. We can't develop those tools to help  
12      owners buy used cars safely.

13              It could very well be if someone violated 1201  
14      now and modified the software, it would be illegal  
15      for me to verify the car that I am buying had the  
16      original software.

17              MS. CHARLESWORTH: Mr. Smith.

18              MR. SMITH: I'm from a security  
19      background. So 30 ECU's isn't a big deal.

20              You think about the Microsoft Windows  
21      system. The amount of applications that get  
22      checked, it's way more than 30.

23              The challenge is that in the past, there  
24      hasn't been a method with the auto manufacturers to  
25      check it. It is not a pure science issue. It just

1       wasn't done.

2                   And so now we have to go back and figure  
3       out like what are -- we used to have to deal with  
4       this in the security area -- if somebody writes  
5       a virus for your car, there is no way to check to  
6       see if it's changed, but unfortunately, a lot of  
7       that kind of goes with the auto manufactures.

8                   So I am suppose it's not a hard technical  
9       challenge. It's more of a legacy challenge.

10                   MS. CHARLESWORTH: Thank you.

11                   So an issue we haven't really discussed is  
12       Section 1201(a)(2), sort of.

13                   Sorry, Mr. Douglas.

14                   MR. DOUGLAS: Just real quick on this  
15       check sum idea, that you use a check sum. I have  
16       spent -- I work on board diagnostics for the  
17       industry.

18                   We spent about 10, 12 years because the  
19       agencies in all of the states, EPA and the Air  
20       Resource Board, were concerned that people would  
21       modifying their vehicles and they said what we need  
22       is a calibration verification. That is the check  
23       sum they referenced, but it's been 10 or 12 years in  
24       the making to get this CVN so that state inspection  
25       programs can run a test -- and you can run it

1 without circumventing because that is part of the  
2 requirement now.

3 And you get this CVN and you would have  
4 these look-up tables to see if that -- it's anything  
5 but simple and that's just for the OBD calibration,  
6 and I think the engine calibration, as well, and not  
7 the other 18 to 20, 30, 50 ECU's.

8 MR. SMITH: Mr. Metalitz.

9 MR. METALITZ: I will pass because I know  
10 have you more questions.

11 MS. CHARLESWORTH: I want to move into the  
12 sort of trafficking issue and sort of how if we were  
13 to grant some sort of exemption here -- I mean I  
14 certainly am not competent to do any of this stuff.

15 How is it your expectation that people  
16 would do this on their own? Would they -- could  
17 they visit Mr. Smith?

18 I mean how do we get around the -- we  
19 can't grant the exemption to allow third parties to  
20 offer these services. It's limited to what you can  
21 do under (a)(1).

22 So if people want to address that on both  
23 sides of the table, I would be very interested to  
24 hear your thoughts.

25 Mr. Walsh.

1 MR. WALSH: The ability of what you just  
2 mentioned, the idea that you can't authorize  
3 services, doesn't apply if the person is performing  
4 some other service and they, themselves, are  
5 engaging in circumvention in the course of something  
6 that is not a circumvention service.

7 Does that make sense?

8 MS. CHARLESWORTH: Maybe you should  
9 elaborate a bit.

10 Let's take a little bit of a concrete  
11 example here like a garage that is known for being  
12 able to, I guess, modify software.

13 MR. WALSH: Or perform repairs that  
14 require access to the vehicle coding.

15 MS. CHARLESWORTH: How is that legal under  
16 (a) (2) .

17 MR. WALSH: So they're performing an  
18 automotive repair service. They're not performing a  
19 circumvention service.

20 So you go to them and you say my car my  
21 window doesn't work, this warning light is on and I  
22 can't figure out why. These are examples of  
23 diagnoses and repair that have required access to  
24 code in order to figure out what is going.

25 And you take it to the mechanic and the

1 mechanic figures it out. So they, acting on behalf  
2 of the owner of the vehicle, engage in an act that  
3 is arguably circumvention and then they return the  
4 repaired vehicle to the owner.

5 It's not an E2 issue.

6 MS. CHARLESWORTH: I mean I understand  
7 what you are saying, but some of this is -- you  
8 know, if you are saying I'm a garage and I am known  
9 for being very sophisticated and I am able to  
10 circumvent software and modify it in ways that my  
11 customers want, how is that not offering -- and you  
12 are advertising that capability or you're putting  
13 the word out in the community, how is that not  
14 offering a circumvention service.

15 MR. WALSH: So are you not -- so in that  
16 case, you are not offering a service where you take  
17 a TPMs object and strip it of TPMs and provide the  
18 result to a customer. You are, yourself, engaging  
19 in the direct act in the course of providing a  
20 service that is not a circumvention service.

21 MS. CHARLESWORTH: We will leave that  
22 there for a moment.

23 Mr. Metalitz.

24 MR. METALITZ: I think that proves a bit  
25 too much.

1                   This is not that different from someone  
2           saying I am offering my business as a backup service  
3           for DVD's. I am not advertising it, but somebody  
4           strips off the encryption on DVD's, and I am  
5           offering a backup as a result. I am offering a  
6           repair service although I question whether that  
7           repair would require circumvention, but let's assume  
8           it did, or assume are you talking about a  
9           modification that would require circumvention. You  
10          can -- in other words, you can make that argument.

11                   People aren't generally in the business of  
12          circumventing technological protection measures for  
13          its own sake. They are doing it to achieve some  
14          other objective and that doesn't take it out on the  
15          realm of 1201(a)(2).

16                   And I think that was clear in the 321 case  
17          involving backup copy of the DVD's and I don't think  
18          it would be really different here.

19                   MS. CHARLESWORTH: Any other thoughts on  
20          that?

21                   Mr. Nabel.

22                   MR. NABEL: I am just getting back to the  
23          DVD's. I mean that is exactly what this was  
24          originally intended for, was I can't sell a bunch of  
25          tools which are going to be used to make multiple

1       copies of DVD's and share with all of my friends.

2               When you are talking about repairing a  
3       tractor or car, that's not all we are concerned  
4       about.

5               MS. CHARLESWORTH: But the language here  
6       says you can't offer to the public a service that is  
7       primarily designed to produce for the purpose of  
8       circumventing a technological measurement.

9               It doesn't talk about whether you are  
10       helping people pirate CD's. It just says you can't  
11       do this thing.

12              And so the question is from a practical  
13       standpoint, if you write an exemption that says the  
14       individual person who has the car can do it,  
15       themselves -- I mean how does that help -- I mean  
16       how do you address the problem that most people  
17       can't do it themselves and is there -- do you have a  
18       suggestion in terms of how to deal with that issue  
19       or do you concede that issue or --

20              MR. NABEL: I think the language as  
21       drafted it now makes perfect sense. You are going  
22       to have the same thing you have now where all these  
23       chip tuners who are doing one particular thing,  
24       selling one particular service and product that are  
25       all located in Europe and Canada are going to

1       continue to do it. That's where you get that  
2       service and if you are going to try circumvent, you  
3       are not going to be able to get it in the United  
4       States, but if I am just trying to get my car fixed  
5       and this happens to be one things amongst many  
6       things that I am taking my car into my mechanic and  
7       my mechanic says okay, for that fix number four,  
8       your window or whatever it is, I am going to have to  
9       circumvent a TPM, that person is not in the business  
10      of offering you things other than their specific  
11      service.

12               And you did ask to differentiate between  
13      those two things as Mr. Walsh was saying.

14               MR. WALSH: And we discussed the specific  
15      statutory language in our opening comments.

16               And I agree with Mr. Nabel that offering  
17      auto repair is not an activity where your primary or  
18      only commercially significant activity, perhaps even  
19      any activity, is circumvention.

20               MS. CHARLESWORTH: So you are sort of  
21      pinning some of this on the word "primarily" in this  
22      1201 language.

23               MR. WALSH: I think it's pretty clear that  
24      for the most part, the activities that in the record  
25      reflect activities for which 1201(a)(2) would not reach



1       those activities.

2                   MS. CHARLESWORTH:   It's not that clear to  
3       me.   That's why I am asking about it.

4                   I think this has obviously come up in  
5       other contexts with the fact that exemption is  
6       limited in terms of people can take advantage of it.

7                   So here, particularly where you have to be  
8       very technologically sophisticated, it's raising an  
9       interesting point.

10                  Ms. Gellis, did you have something to add?

11                  MS. GELLIS:   This goes back to the larger  
12       point that I have about the difference between why I  
13       regard these Classes 11 through 27 as different from  
14       the other ones, because we are not dealing with  
15       access to underlying copies of media-type works we  
16       dealing with, which is why I used the example of a  
17       computer, whose computer is this and what is  
18       happening under the circumstance of which person  
19       possesses the computer.

20                  And it looks like who drafted the agency  
21       of who has the computer and who is going to do the  
22       work is pretty clear that this isn't happening by  
23       some other.   This is happening with the permission  
24       of whoever has the option.

25                  MR. WALSH:   And Congress in the Unlocking

1 Consumer Choice and Wireless Competition Act  
2 specifically suggested that in alleviating the  
3 negative effects of 1201, permission to  
4 circumvention should be granted to another person at  
5 the direction of the owner or by a provider at the  
6 direction of --

7 MS. CHARLESWORTH: That is my point. They  
8 have to make a statutory change for there that to  
9 occur. That is my very point.

10 MR. WALSH: They suggested in this  
11 rulemaking process that the Copyright Office take  
12 this into consideration.

13 MS. CHARLESWORTH: For those classes that  
14 they allowed that. In other words, the statutory  
15 change was required to clarify for those classes of  
16 works, but we are talking something different here.

17 MR. WALSH: I think this is a matter of  
18 Congress clarifying that it believes the rulemaking  
19 process has the power to authorize circumvention to  
20 take place at the direction or on behalf of an owner  
21 of a device.

22 MS. CHARLESWORTH: Mr. Wiens.

23 MR. WIENS: In addition to the ability to  
24 cover a service, we have over a million members that  
25 are doing repairs, themselves, on an ongoing basis

1 and they're repairing all kind of devices. They're  
2 performing extraordinarily sophisticated repairs on  
3 equipment, whether it's farm equipment, the  
4 community farm hack that submitted comments or  
5 farmers that are in South Dakota that are doing  
6 repairs that are hundreds of miles from any service  
7 center, they have to be able to do these repairs,  
8 themselves, and they're very time sensitive.

9 MS. CHARLESWORTH: Mr. Metalitz.

10 MR. METALITZ: Obviously, if Congress  
11 passes a law, we have to interpret that law that is  
12 passed, but right now, we are dealing with a law  
13 that Congress passed 17 years ago. And it says that  
14 neither the exemption that may come out of this  
15 proceeding nor any determination made in a  
16 rulemaking in this proceeding may be used as a  
17 defense in any action to enforce any provision of  
18 this title other than this paragraph which is  
19 1201(a)(1).

20 So it's clear that this can't have impact  
21 on what 1201(a)(2) covers or doesn't cover. That is  
22 kind of a given of the ground rule here.

23 Yes, Congress could change that but  
24 Congress hasn't seen fit to change that. So in a  
25 sense, this is an academic discussion, but I don't

1 think that by saying that, you know, I am a repair  
2 shop and not a circumvention shop, yes, that is  
3 right, you are a repair/modification shop, not a  
4 circumvention shop, but is what you are doing  
5 primarily for purposes of circumventing. That is  
6 really the test here.

7 And I wanted to say this before that we  
8 didn't respond to Professor Nabel's examples in his  
9 submission because the Auto Alliance doesn't deal  
10 with the agricultural equipment. The MOU does not  
11 apply to agricultural equipment and we haven't even  
12 gone into the regulatory environment and so forth.

13 Our comments are related to passenger --  
14 to the vehicles that are -- the companies produce.

15 MR. DAMLE: So you are not taking a  
16 position on this as it applies to agricultural.

17 MR. METALITZ: That is correct.

18 MR. NABEL: I just want to take a minute  
19 to go back to what Mr. Smith was saying about the  
20 example with the window.

21 That's the perfect example of where you  
22 have a repair shop where you are trying to use the  
23 diagnosis tools you were given from the manufacturer  
24 under the Memorandum of Understanding and all of  
25 that and you are trying to do everything you can,

1 but you may have reached a point where that is not  
2 good enough. And so something incidental to your  
3 business, you actually need to go and do the  
4 circumvention.

5 That's not primarily what you are in the  
6 business of doing, but there are circumstances under  
7 which you do need to do that. And that's a perfect  
8 example of how this exemption will allow that  
9 business to operate legally.

10 MR. DAMLE: Is that something that could  
11 be sort of a -- off the top of my head, some sort of  
12 way we can say if it's necessary, you know, outside  
13 like the MOU is not good enough -- we're going to  
14 put that away -- that only then can you engage in  
15 circumvention if the MOU doesn't give you the tools  
16 you need, only then -- and it's a necessary repair,  
17 only then can you use circumvention.

18 Is that what that --

19 MR. NABEL: My perspective?

20 MR. DAMLE: Yeah.

21 MS. CHARLESWORTH: Mr. Walsh.

22 MR. WALSH: So the MOU really doesn't  
23 speak by its own terms to most of the adverse  
24 effects that we are here talking about, particularly  
25 modifications, but also creating a robust market

1       that includes competition for the tools that are  
2       used for diagnosis and repair.

3               So it's GM's opinion that we have a robust  
4       market. And that's a robust market that consists of  
5       the manufacturers and their licensees, rather than  
6       people who are able to reverse engineer software and  
7       create tools that have additional functionalities or  
8       being based on non-copyrightable information are  
9       able to compete on a level playing field with the  
10      manufacturers' tools.

11             MR. DAMLE: So what Mr. Douglas pointed  
12      out is he suggested that this information is  
13      available -- made available to tool merchandisers  
14      competing and aftermarket tool manufacturers and for  
15      relatively nominal prices. I don't know.

16             Do you disagree with that?

17             MR. WALSH: Yeah, I think the prices that  
18      we have heard have been in the thousands and tens of  
19      thousands range for limited information.

20             So, for example, we have heard about  
21      functions that the manufacturers provided  
22      information that simply can't accomplish, so the  
23      Derive Systems had to create its own tools for  
24      reverse engineering to accomplish its ends.

25             So some of the repairs and diagnoses that

1 Mr. Smith mentioned is tough stuff that is not  
2 supported by the manufacturers' tools.

3 If we want to have innovation, then we  
4 need independent ability to reverse engineer  
5 software to build things that interoperate with it.

6 MS. CHARLESWORTH: Mr. Douglas.

7 MR. DOUGLAS: Just to address this notion  
8 that there is no market, aftermarket, that is just  
9 patently wrong. There is thousands of aftermarket  
10 tools out there. Search Amazon there is 4700  
11 different aftermarket tools out there.

12 Our companies spend -- each year, the  
13 Equipment and Tool Institute gathers up information  
14 from the automobile manufacturers so they can carry  
15 to their members and give it to -- so they can build  
16 tools with the same functionality as the OEM tools.

17 The OEM tools are built by aftermarket  
18 companies in I think virtually every instance.

19 So there is a robust market out there.  
20 And each year, they spend -- Ford, GM and Chrysler  
21 will spend an entire week with the tool companies  
22 not only providing them with the data but explaining  
23 the data because it's very complex.

24 So they will spend a week with the  
25 engineers to exchange data so the aftermarket tool

1 companies can build tools that are functionally  
2 equivalent to the OEM tools.

3 MR. DAMLE: What is the cost of the data?  
4 So we are talking about for a tool manufacturers.

5 MR. DOUGLAS: For a tool manufacturer, I  
6 think most companies have provided it for no charge.

7 Some companies that do provide do have a  
8 license agreement and I don't know the price of  
9 that. Several years ago, it was like \$50,000 but  
10 who knows what it is today.

11 MS. CHARLESWORTH: Mr. Lightsey.

12 MR. LIGHTSEY: If I can just add to that,  
13 I would say that we're not aware of a single  
14 instance where somebody has come to us and said that  
15 they wanted to make a repair but they couldn't  
16 because the tool wasn't available.

17 And there is a formula in the MOU as to  
18 the reasonable cost of these tools. And it  
19 basically covers the cost that is incurred to  
20 furnish the information or to provide the cost the  
21 manufacturers incurred to develop the information to  
22 create the tool.

23 And so we're not aware of a single  
24 instance where we have been -- it's been alleged  
25 that the cost of the tool or the cost of the



1 information was so excessive as to prevent the  
2 access to the information or to the tool.

3 MS. CHARLESWORTH: Doesn't the MOU exclude  
4 certain things like the telemetry systems?

5 MR. LIGHTSEY: The telematics.

6 MS. CHARLESWORTH: Telematics, in other  
7 words, I looked at it. I admittedly didn't spend  
8 hours perusing it, but doesn't it have exclusions  
9 for certain systems that are -- the entertainment  
10 system, I think, may be excluded.

11 So does it cover every possible repair?

12 MR. DOUGLAS: Let me address the MOU.

13 As far as telematics goes, if a  
14 manufacturer provides diagnostic and repair  
15 information to a dealer using telematics and that  
16 information is not available to the aftermarket,  
17 then they're required to provide it to the  
18 aftermarket, as well.

19 So there is not an exclusion for  
20 telematics for the diagnostic and repair of  
21 vehicles.

22 So if the aftermarket can't get that  
23 information from the tools that are available, then  
24 the manufacturers have to provide it. So it does  
25 cover diagnoses and repair.

1 MS. CHARLESWORTH: Mr. Smith, any thoughts  
2 on this? I would be interested to know about your  
3 thoughts.

4 MR. SMITH: That is the first I have  
5 heard. If they can tell me how to get on their free  
6 mailing list of all of the codes.

7 MS. CHARLESWORTH: Maybe you didn't need  
8 to do the circumvention after all and we have solved  
9 the whole problem.

10 MR. SMITH: I had no idea.

11 First of all, if you can give me access to  
12 that, that would be fantastic. I don't know what it  
13 takes to be a tool provider but I definitely am  
14 interested.

15 I just want to give you an example of an  
16 aftermarket product this isn't a tool that has this  
17 issue.

18 I gave you the example earlier of  
19 aftermarket radio because when you do have to pay  
20 for all the codes, it get cost prohibitive. And if  
21 you guys haven't heard it's prohibitive by cost, I  
22 will be your first to say it's very expensive for  
23 us.

24 Even like the past science stuff, they  
25 have money but they don't do it and it's because you

1       can't buy it for every car. It's one thing to make  
2       a tool that may only work on GM and Ford and the  
3       tool manufacturer company spends 25 or 50 grand and  
4       then resell a tool for \$2000 and will make the money  
5       back.

6               It's a bit different with even a radio or  
7       a start-up company trying to invent a new kind of  
8       system. So I wanted to give out some examples.

9               MS. CHARLESWORTH: Mr. Walsh and then --

10              MR. NABEL:

11              MR. WALSH: Sure. I just want to be  
12       really here about what the MOU says about what  
13       manufacturers will do with respect to the  
14       aftermarket.

15              They only say that they're going to  
16       provide information to aftermarket companies with  
17       whom they have licensing and contractual  
18       relationships. This isn't everyone who comes along  
19       who wants to participate in this marketplace can  
20       have access to the information on equal terms. This  
21       is basically the people with whom we have an  
22       arrangement, we will share it with them, but not  
23       with others.

24              And in fact, in some cases, they sue them.  
25       Ford sued Autel for making a competing aftermarkets

1 diagnosis tool on the basis of Section 1201.

2 And their argument is that -- well, we  
3 have limited time but it's mentioned in the  
4 briefing.

5 And I also would just like to say that  
6 with respect to the idea that granting the exemption  
7 puts a seal on conduct that is granting the  
8 exemption doesn't have an effect on other law any  
9 more than denying the exemption would put a  
10 government seal of approval on misusing copyright to  
11 constrain competition in the aftermarket.

12 MS. CHARLESWORTH: A point of quick  
13 clarification, for the record that I forgot to ask  
14 earlier from Mr. Nabel and you, Mr. Walsh -- I think  
15 I saw this in the papers.

16 You are not seeking to circumvent systems  
17 that control access to creative works like the  
18 entertain content that may be accessed in a motor  
19 vehicle. Is that true? That is not -- if there  
20 were an exemption that were not covered, would that  
21 be problematic for you.

22 MR. WALSH: So the definition of the  
23 proposed class as it's been discussed has been with  
24 reference to the works which are vehicle software.

25 So to the extent that someone needed to

1       interact with an entertainment system to secure a  
2       vulnerability because that can arise in the  
3       bluetooth connection that comes in through the  
4       entertainment system, that conduct ought to be  
5       within the scope of the proposed class, but we are  
6       not talking about pirating creative entertainment  
7       works.

8               MR. RUWE: But what you just addressed  
9       would seem to apply to the security class, not the  
10      diagnosis, repair and modification.

11             MR. WALSH: That is an example of a  
12      modification that a user might take in order to  
13      protect themselves. The entertainment system could  
14      also have privacy implications. It could be a  
15      source of other malfunction, too.

16             So accessing the software as opposed to  
17      accessing the entertainment products ought to be  
18      protected in the proposed class.

19             MS. CHARLESWORTH: So you are saying  
20      accessing the entertainment products, but I mean --  
21      again, I mean that raises a whole new concern  
22      because inasmuch as we have said copyright laws may  
23      be about highway safety, it is about creative  
24      content.

25             And I mean there wasn't a lot of briefing

1       on this issue, but my impression was -- well, I  
2       guess I didn't have a clear impression, but that is  
3       concerning if there would be, you know, hacking of  
4       systems that would allow piracy of content.

5               MR. DAMLE:   For example, like  
6       circumventing the DVD player that could maybe in a  
7       minivan that plays on the back -- circumventing the  
8       TPMs on the DVD player, that might be an issue.

9               MR. NABEL:   May I.

10              First of all, obviously, I don't mean to  
11       sound flip, but with respect to the agricultural  
12       equipment, that is not an issue.

13              MS. CHARLESWORTH:   Someone had an example  
14       where there --

15              MR. WIENS:   I did but it was a joke.

16              It was mentioned in their briefings  
17       something and then I said farmers might be playing  
18       Taylor Swift in the tractors but it's completely a  
19       joke.

20              MS. CHARLESWORTH:   I assume we are all in  
21       agreement that the goal here isn't to actually do  
22       things with entertainment content in motor vehicles.

23              MR. NABEL:   Right.

24              MS. CHARLESWORTH:   In other words, I see a  
25       lot of nodding of heads, but we're agreed that that

1 would be outside of the purpose of this exemption.

2 Is that true, Mr. Walsh, Mr. Nabel?

3 MR. NABEL: Yes. And to the extent those  
4 creative works are there, it's sort like TPMs  
5 within TPMs. They're still going to be protected  
6 and this exemption isn't going to be sort an  
7 exemption which would then pass through to have  
8 another exemption. That is not what we are talking  
9 about here.

10 MR. WALSH: Same here.

11 MS. CHARLESWORTH: That is a helpful  
12 clarification.

13 Mr. Metalitz.

14 MR. METALITZ: I don't think that as  
15 drafted, that it excludes those pieces that they are  
16 excluding verbally here.

17 And the other one is the one time that I  
18 recall this came up in the pleadings or in the  
19 submissions is with the DVD bypass circumvention  
20 which enables people to watch TV programs while they  
21 are driving.

22 And it was pointed out correctly that the  
23 regulation we cited, federal regulation, only  
24 applies to heavy trucks.

25 However, most of the state laws that we

1       cited, some of which are criminal laws, apply to  
2       motor vehicles, as well.

3               So it is an example of the kind of  
4       modification that creates a lot of safety problems  
5       by making creative works available to the driver  
6       while they are driving. That is one thing that we  
7       are concerned about here.

8               MS. CHARLESWORTH: You Mr. Hilkert had his  
9       card up. Don't worry you will have an opportunity,  
10      although we do have to start wrapping this up.

11              MR. HILKERT: I am happy to get my one  
12      comment in.

13              So this was actually up for a little bit.  
14      So this is actually from the pricing structure in  
15      regards to how much the tools cost. And there was  
16      some overlap even though we were doing primarily  
17      agricultural machinery, we have interviewed a diesel  
18      mechanic and he talked at length about the  
19      difficulties in terms of getting the different  
20      software.

21              So you mentioned that Detroit Diesel was  
22      very easy to get software and it was great, but  
23      Caterpillar specifically viewed him as a competitor  
24      and wouldn't sell him the software that he needed to  
25      perform a simple repair he was capable of.



1                   So that was in USC's initial comment in  
2                   Exhibit 4 and that was -- I lost it. Sorry.

3                   MS. CHARLESWORTH: It's attached to your  
4                   written comments, correct. I recall seeing that.  
5                   Thank you very much.

6                   Mr. Nabel.

7                   MR. NABEL: While we're on the same topic,  
8                   in the first exhibit we submitted is a person  
9                   talking about the cost of software said it was not  
10                  affordable to have software for what he was trying  
11                  to do because you needed to have different software  
12                  for each model and it was prohibitively expensive.

13                  He talks about it at length. So I would  
14                  encourage you if there is more questions about that  
15                  that you actually review that particular part of the  
16                  transcript. And we will be happy to point you in  
17                  the right direction, but getting back to the  
18                  previous comment about how the language was drafted  
19                  for the entertainment system on -- if there was one  
20                  on the tractor, which I don't think there are, but  
21                  there was one on the car -- has really nothing to do  
22                  with the functioning of the car and that's the way  
23                  the language was drafted.

24                  We are talking about embedded software  
25                  that controls the functioning of the motorized land

1 vehicle. And entertainment software has nothing to  
2 do with how the vehicle functions.

3 MS. CHARLESWORTH: Actually, we saw a  
4 report recently that said that apparently the plane  
5 entertainment systems that related to piloting the  
6 plane, which was shocking and somewhat disturbing,  
7 but I mean I don't know that they are always  
8 separate.

9 I certainly don't have personal knowledge  
10 of this, but I mean I think the important thing is  
11 the point that this isn't designed to reach the  
12 TPMs that apply to creative works.

13 Mr. Hilkert.

14 MR. HILKERT: For your convenience, I  
15 wanted to add the citation. It's Exhibit 4 from the  
16 minute nine and 37 seconds through minute 13 and 27  
17 seconds.

18 MS. CHARLESWORTH: Do you want to describe  
19 what that is again?

20 MR. HILKERT: Paul Louise going through  
21 and describing his difficulties with the cost of  
22 obtaining all of the necessary information to  
23 perform a reflash on the diesel machine.

24 MS. CHARLESWORTH: Mr. Lightsey.

25 MR. LIGHTSEY: I will point out that the

1 technology of the vehicle is the second highest  
2 factor in determining -- when a purchaser determines  
3 why and how they are going to purchase a vehicle and  
4 the technology in the vehicle is more and more  
5 considered by the purchaser to be part of the  
6 function of the vehicle.

7 MS. CHARLESWORTH: I think we are  
8 approaching the end of this panel but we have a  
9 couple of more questions.

10 MR. RUWE: Question for Mr. Lightsey, I  
11 would like to return to the issue of ownership of  
12 the copyrighted works at issue such as those within  
13 the ECU. This was addressed earlier by Mr. Walsh.

14 Is it GM's position that the copies of  
15 work within the ECU's are owned by the merchandiser  
16 or the owner of the vehicle?

17 MR. LIGHTSEY: It's our position that the  
18 software in the vehicle is licensed by the owner of  
19 the vehicle, similar to most electronic devices that  
20 we have on the market today.

21 MR. RUWE: How is it that -- Mr. Douglas  
22 acknowledged there is unfettered resale -- as we all  
23 know, unfettered resale of automobiles.

24 How does that work with your position that  
25 the owners of the vehicle do not own the software?

1                   MR. LIGHTSEY: What they're transferring  
2                   is the license to the software. We still maintain  
3                   the software through all the subsequent owners  
4                   through the life of the vehicle and we consider that  
5                   to be our responsibility when cars are recalled.  
6                   For regulatory reasons, the manufacturers is  
7                   expected to fix the software in the vehicle.

8                   MR. DAMLE: Are there license agreements  
9                   that -- it's been a few years since I bought a car  
10                  and I signed a lot of papers. Was there a license  
11                  agreement in those papers that I signed?

12                  MR. LIGHTSEY: I think what we have is  
13                  that in today's world, for example, there is a  
14                  license agreement in GM for the OnStar telematic  
15                  system, the infotainment system. And those are the  
16                  interfaces, if you will, that the owner comes into  
17                  direct contact with.

18                  I think it would be very difficult, if not  
19                  impossible, to have license agreements covering the  
20                  myriad of ECU's that are contained in the vehicle.  
21                  And I think most people understand when they're  
22                  purchasing the vehicle and they expect the  
23                  manufacturer to keep their software in compliance  
24                  and up to date.

25                  MS. CHARLESWORTH: I want to just -- I

1 will get back to you, Mr. Metalitz -- but,  
2 Mr. Walsh, do you see distinctions in the different  
3 types of software in cars? For example, would you  
4 distinguish OnStar from software that actually  
5 drives the vehicle and in terms of ownership and I  
6 suppose in terms of the proposal that you are  
7 making?

8 MR. WALSH: There is a distinction in  
9 terms of the arguments that can be made, though the  
10 ultimate conclusion in both cases is that the  
11 vehicle owner is the owner for purposes of  
12 Section 117.

13 The distinction is that for most of the  
14 ECU's, which I think was just already admitted,  
15 there are no license agreements that are asserted  
16 with respect to those ECU's.

17 And so the distinction is that it's much  
18 clearer that vehicle owners, in fact, own the copies  
19 of software that are in those ECU's.

20 For the entertainment systems and other  
21 systems, they are subject to an agreement that calls  
22 itself a license. That's when you need to figure  
23 out the ownership question.

24 MS. CHARLESWORTH: Would you concede that  
25 that might come out either way in terms of the

1 ownership question and whether that is a license  
2 agreement?

3 MR. WALSH: I think on the record -- all  
4 of the agreements that are in the record come out in  
5 favor of the ownership of the vehicle owner.

6 And I think given the economic constraints  
7 of consumers' expectation and their ability to  
8 resell their vehicles and so it would be very  
9 difficult for manufacturers to draft a license that  
10 would operate in practice to constrain access to  
11 that.

12 MS. CHARLESWORTH: Mr. Lightsey, when  
13 someone buys a GM car with OnStar in it, what  
14 happens to the OnStar? Do they have to reestablish  
15 a relationship with GM under that license or do I  
16 just carry the license with no constraint?

17 MR. LIGHTSEY: Actually, GM is a  
18 participant -- we have our own privacy statement and  
19 we are a participant in the Alliance privacy  
20 principles, but one of the things we do now when a  
21 person purchases a car, they are actually walked  
22 through the terms and conditions of the OnStar  
23 agreement and the privacy statement and they are  
24 required to affirmatively consent to those terms and  
25 conditions when the purchase occurs.

1                   If they are subsequent -- if they don't  
2                   make the purchase at a dealership and they're a  
3                   subsequent owner, when they contact OnStar to say  
4                   they want to use the service, once again, they're  
5                   walked through the terms and conditions.

6                   MS. CHARLESWORTH: And how does OnStar  
7                   know it's a new person driving the car?

8                   MR. LIGHTSEY: We know when they -- well,  
9                   that's one of things that is certainly very  
10                  difficult as long as the original owner continues to  
11                  make the payments to OnStar. And it's difficult for  
12                  us to know the car's been transferred.

13                 MS. CHARLESWORTH: So there an ongoing --

14                 MR. LIGHTSEY: It's a subscription.

15                 MS. CHARLESWORTH: There is a monthly  
16                 subscription payment --

17                 MR. LIGHTSEY: That's correct.

18                 MS. CHARLESWORTH: -- that you pay for  
19                 OnStar.

20                 Is that true for the infotainment system,  
21                 the entertainment system, as well?

22                 MR. LIGHTSEY: No.

23                 MS. CHARLESWORTH: So the entertainment  
24                 system, you said that was also licensed. I would be  
25                 curious to know a little more about how that license

1 works and what happens when a car is transferred.

2 MR. LIGHTSEY: Well, our position would be  
3 that when they transfer the car, they transfer what  
4 they own, which is the car, itself, and the license  
5 to operate the software.

6 MS. CHARLESWORTH: But is there  
7 entertainment content at issue? In other words,  
8 does GM have Sirius or whatever might be installed  
9 in the car and software that supports those systems?

10 And I mean you are the one who said there  
11 was a license. So you said there was a license for  
12 everything, but in particular, you said there were  
13 actual -- I think if I understood correctly --  
14 written agreements I thought you said for OnStar and  
15 for the entertainment features --

16 MR. LIGHTSEY: That's correct.

17 MS. CHARLESWORTH: -- as opposed to the  
18 other stuff.

19 MR. LIGHTSEY: Correct.

20 MS. CHARLESWORTH: So I am trying to nail  
21 down those how those written agreements work and  
22 what happens when you transfer the car.

23 MR. LIGHTSEY: When the car is transferred --  
24 well, first of all, I will say that the OnStar  
25 system and the infotainment system work together



1 extremely closely. So they're very much sold as a  
2 complete technology package.

3 I will say that, obviously, when the car  
4 is transferred and the subscription service to  
5 OnStar is terminated, the infotainment functionality  
6 in the car continues to work.

7 MS. CHARLESWORTH: Can you just quickly --  
8 because what is that functionality, the infotainment  
9 functionality?

10 MR. LIGHTSEY: The ability to play the  
11 radio, to adjust the climate control.

12 MS. CHARLESWORTH: So I think we're going  
13 to do Mr. Metalitz, Mr. Walsh, and do you want to  
14 ask your question.

15 MS. RUWE: Sure, I can ask.

16 And I think this was a question for  
17 Mr. Walsh, which is whether or not 1201 adds a  
18 reverse engineering exception for interoperability  
19 and could be useful for the aftermarket tool  
20 developers who don't benefit.

21 MR. WALSH: I can think the 1201 exemption  
22 for reverse engineering demonstrates a Congressional  
23 intent to support reverse engineering practices.  
24 And if they could have foreseen in 17 years that we  
25 would be considering a case similar to unlocking is

1 near, but perhaps not clearly within the exemption,  
2 that that would be further evidence that Congress  
3 would have wanted the exemption to be granted.

4 With respect to reasons why the exemption,  
5 itself, doesn't alleviate the adverse effects, there  
6 are a number of restrictive elements of 1201(f) that  
7 chill people from relying on it. It relates only to  
8 accessing a particular portion of the program, very  
9 strictly worded that the sole purpose of analyzing  
10 those elements that are necessary to achieve  
11 interoperability.

12 And importantly, what we are talking about  
13 in the context of cars, the interoperability is the  
14 computer program with other programs. It doesn't by  
15 its terms directly speak to achieving  
16 interoperability with a replacement hardware device,  
17 which is a frequent use case in automobiles.

18 And the fact that the information must not  
19 previously have been readily available doesn't speak  
20 very well to the use case of an individual perhaps  
21 performing a routine repair rather than breaking new  
22 ground with their analysis.

23 MS. CHARLESWORTH: Did you have anything  
24 further? You had your placard up earlier.

25 MR. WALSH: Yes. With respect to the

1       OnStar system -- I just wanted to be clear -- no one  
2       is saying you have to check with OnStar first before  
3       you can resell your car.

4               And it sounds as if a significant portion  
5       or perhaps all of the software functionality remains  
6       when the car is transferred even if there may be  
7       another arrangement for ongoing services that is  
8       separable from the software that is being  
9       transferred.

10              So on the ownership issue, that is what I  
11       would look to.

12              And in terms of idea that having an  
13       ongoing commitment to do repair means that the  
14       manufacturers own the subject matter, that would  
15       prove too much in the context of manufacturers have  
16       a duty to repair defects in the physical systems of  
17       the cars, as well, but they're not, as I understand  
18       it, asserting that they own the physical systems of  
19       the car.

20              MS. CHARLESWORTH:   Mr. Wiens.

21              MR. WIENS:   On the ownership question, in  
22       John Deere's comments, they reference that the  
23       farmer was being granted a license.

24              And we shared their comments with the farm  
25       community and thousands of farmers were very upset.

1       There is a perspective that we own the things that  
2       we have and we should be able to maintain, repair  
3       and modify them.

4               And when you have manufacturers coming in  
5       and asserting ownership rights over things that the  
6       farmers have paid significant amounts of money for,  
7       it upsets them.

8               It's upsetting to the point where the corn  
9       growers said they're very concerned about the  
10      muddying of the definition of ownership and the  
11      blending between software and hardware. This is  
12      something that is threatening their livelihoods and  
13      something that is new as a result of some of these  
14      new claims of manufacturers.

15              And the farmers are increasingly searching  
16      for relief to the point where we have 40,000  
17      comments from the public on this.

18              This ownership question is very, very  
19      speculative, very important. And in no way when I  
20      bought my car did I sign a license agreement. I own  
21      the software and all 30 ECU's.

22              MS. CHARLESWORTH: Mr. Metalitz.

23              MR. METALITZ: Yes, the last thing I want  
24      to do is upset the farmers. So what I am going to  
25      say here only applies to the automobile.

1                   Look, the licensing of software embedded  
2           in a device or embedded in an object is the norm is  
3           licensing and not sale.

4                   There obviously are exceptions to that,  
5           but I think we all know that this does -- we went  
6           through this with the phones and there was very  
7           scant evidence that anybody might be the owner of  
8           that software.

9                   We are all familiar with our computer  
10          devices and so forth. It's kind of the norm.

11                  And this is why the burden is on the  
12          proponents to show that this deviates from the norm.  
13          And for some reason when we are talking about cars,  
14          there is a transfer of ownership.

15                  The agreements that are in the record --  
16          and I will concede they're not agreements about the  
17          30 ECU's but about other systems -- I don't  
18          understand the assertion that they show indicia of  
19          ownership.

20                  Most of them characterize themselves as a  
21          grant of license. Most of them specifically  
22          prohibit transferring software to others.

23                  They impose use restrictions which are can  
24          only be described as notable, including reverse  
25          engineering. So these have a lot of the indicia of

1 ownership.

2 And again, the burden is on the proponents  
3 to show that isn't the case. And I don't think that  
4 the record would support that.

5 Just briefly on 1201(f)(1) and not getting  
6 into the --

7 MS. CHARLESWORTH: I'm sorry. You said  
8 they have the indicia of ownership but I think did  
9 you mean the license?

10 MR. METALITZ: They said the indicia of  
11 ownership, if I read it correctly.

12 MS. CHARLESWORTH: I misheard you.

13 MR. METALITZ: On the 1201(f), the only  
14 comment I would make there is 1201(f), if you look at  
15 the legislative history, it's clear they were trying  
16 in a sense to codify Sega versus Accolate, the  
17 leading case at that time on reverse engineering.  
18 And these are the cases on which the fair use  
19 analysis relies here.

20 The problem is that that one element there  
21 is -- as Mr. Walsh pointed out, you have to show  
22 that the information that you are trying to analyze  
23 through the reverse engineering process isn't  
24 available to you in some other way.

25 As far as repair is concerned, they can

1 never meet that standard because that information is  
2 available to them in the auto sector, I hasten to  
3 add, not in the agricultural sector, due to the MOU.

4 So when it suits the proponents, they rely  
5 heavily on Sega and Sony and their fair use  
6 analysis.

7 When they think it suits them to  
8 distinguish it, they do that by saying 1201(f) doesn't  
9 really apply in this case.

10 The burden is on them to show that it  
11 doesn't apply to their activity, but I just -- I was  
12 struck by the kind of inconsistency between how they  
13 approached Sega and Sony in those two settings.

14 And I would just also say I do think that  
15 the Oracle and Google case is relevant here. It's  
16 the new case on some of these questions, new since  
17 the last rulemaking.

18 And although it doesn't decide the fair  
19 use issue, it came pretty darn close to it. I think  
20 I think if you go back and look at it, it has  
21 important elements such as the fact that the product  
22 that is developed through which fair use is asserted  
23 has to have totally new code. That is not the case  
24 here. And I think it has a good analysis of what it  
25 means to say that soft software is functional.

1           I think the proponent have often used it  
2           to say software is functional because it causing the  
3           machine to do something. If that were true, every  
4           computer program would be functional and every  
5           computer program would be outside the scope of  
6           copyright protection. That is the definition of a  
7           computer program. It's a set of instructions that  
8           causes a function to occur.

9           The issue is when that software was  
10          designed, what was the range of choices that were  
11          available to the creator of that software, was it  
12          only one or just a very small handful of ways to  
13          achieve a functional result.

14          I think in this industry where you have 30  
15          or so different makes and they're all doing this  
16          differently, their ECU's are all different -- this  
17          is why in some cases you need a variety of tools to  
18          address this. I think it's very hard to say that  
19          those decisions -- that only one or a few ways of  
20          achieving the function that that software was  
21          intended to achieve.

22          I think, in fact, it shows a lot of  
23          creativity in the development of software. A lot of  
24          choices were made.

25          And for that reason, that is one objection



1       that we have to the analysis on fair use. That  
2       really degrades the software almost to the level  
3       that you can do just about anything with it and it's  
4       going to be fair use.

5               I don't think -- that analysis certainly  
6       doesn't apply here because this software has many  
7       elements that are not functional in the true sense  
8       of the word, not that they don't cause a function to  
9       happen but they were the result of choice and  
10      creative decision making rather than dictated by  
11      external constraints.

12             MS. CHARLESWORTH: Do any of my colleagues  
13      have any further questions?

14             I see, Mr. Walsh, we're going to give you  
15      the last word today.

16             MR. WALSH: So I think the evidence shows  
17      that there is a strong expectation that when you  
18      purchase a product, even if it has embedded  
19      software, that you are the owner of that product and  
20      the owner of that copy of the software. That is  
21      what it means to buy something.

22             And the evidence of going from the  
23      agricultural realm, but also the other vehicles  
24      realm, shows that we had 11,000 individuals write in  
25      essentially very surprised that their expectations

1 of ownership might be upset in that the way that  
2 manufacturers are suggesting.

3 And the idea that when you purchase an  
4 embodied system that your ownership of that is  
5 governed by some license is just false and it's  
6 unclear what the terms of that license would be.  
7 It's not in writing. There is no specification what  
8 that license would be and that's not the way the  
9 courts have analyzed the ownership question.

10 With respect to the questions of  
11 copyright-ability, for the most part -- well, in our  
12 briefings, we dispose of the points that  
13 Mr. Metalitz has just raised, but I will point out  
14 that they have not pointed to what elements of code  
15 it is that they say that are not functional and that  
16 we are not having an argument about the  
17 copyright-ability of code because when code is not  
18 copyrightable, it's not a 1201 issue.

19 We are discussing whether the work is  
20 predominantly functional in nature for purchase of  
21 the fair use test.

22 MS. CHARLESWORTH: And I think that  
23 concludes our final panel for today. Thank you all  
24 very much and we appreciate your being here. And I  
25 don't know. Maybe we will see some of you again

1 tomorrow for new adventures in 1201.

2 Have a good evening.

3 (The proceeding was concluded at

4 4:29 p.m.)

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1 CERTIFICATE OF NOTARY PUBLIC

2 I, DARYL BAUCUM, a Certified Shorthand  
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5 That the foregoing proceedings were taken  
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Page 1

<u>          \$          </u>	250:18,23	<b>15</b> 38:21 59:24	<b>2011</b> 122:13
<b>\$10</b> 217:3	<b>12:36</b> 164:14	62:25 82:6	<b>2012</b> 17:7 22:13
<b>\$1500</b> 220:14	<b>1201</b> 1:5 4:6 5:9	209:19	122:14 140:7,25
<b>\$19.95</b> 133:20	8:4 9:16 23:2,18	<b>16,000</b> 205:11	146:5
<b>\$2</b> 117:8,17	36:23 37:22,23	<b>16,900</b> 124:7	<b>2014</b> 171:5 213:23
119:7,12 120:12	38:4,14 41:20	<b>17</b> 38:20 48:24	<b>2015</b> 1:17 4:2
<b>\$20</b> 154:6	42:8 43:12 45:9	54:2 66:4 259:13	83:20 106:11
215:10,18 217:3	49:6 52:9,21	281:24	164:17
221:25	60:20 62:15,19	<b>17,000</b> 124:8	<b>21</b> 1:8 57:21 58:11
<b>\$200</b> 237:23	64:24 65:7,10	<b>172</b> 99:13	59:10 62:1 63:7
<b>\$2000</b> 267:4	66:2,3,10 67:16	<b>18</b> 115:16 251:7	80:16 164:7,25
<b>\$30</b> 217:3	68:3 74:24 75:4	<b>18-wheelers</b>	175:25
<b>\$40</b> 217:3 222:4	84:2 143:20	243:19	<b>22</b> 1:8 178:1 231:8
<b>\$45</b> 217:5	154:13	<b>19</b> 1:17 4:2 83:20	<b>23</b> 121:20
<b>\$5</b> 120:18	158:20,23	164:17	<b>25</b> 38:1 47:16
<b>\$50,000</b> 264:9	164:22	<b>1950's</b> 225:19	75:24 130:17
<u>          0          </u>	178:13,15,19	<b>1980's</b> 102:11,12	197:25 267:3
<b>02</b> 217:8	181:23 182:10	179:20	<b>27</b> 22:1 23:12
<u>          1          </u>	189:17 196:8	<b>1988</b> 215:22	257:13 274:16
<b>1</b> 1:25 110:7	207:6,12 210:4	<b>1996</b> 215:13,17,23	<u>          3          </u>
160:23	231:17 249:6,13	228:8,9	<b>30</b> 14:1 15:13 26:9
<b>10</b> 80:17 206:15	256:22 258:3	<b>1998</b> 22:12 23:2	206:8 209:20
250:18,23	268:1 281:17,21	24:5 71:19	246:8 249:19,22
<b>10:36</b> 83:17	290:18 291:1	<u>          2          </u>	251:7 284:21
<b>100</b> 177:16 236:11	<b>1201(a)</b> 39:10	<b>2</b> 130:9,10,12	285:17 288:14
<b>10356</b> 1:23 292:21	146:25	160:25	<b>300</b> 237:12
<b>106</b> 99:5	<b>1201(a)(1)</b> 259:19	<b>2:00</b> 164:7,12,18	<b>30-point</b> 249:1
151:16,20	<b>1201(a)(1)(c)(3)</b>	<b>20</b> 74:21 121:21	<b>30th</b> 118:2
<b>108</b> 99:12	24:22	206:8 209:15,20	<b>30-year</b> 206:15
<b>11</b> 21:25 23:12	<b>1201(a)(2)</b> 250:12	215:8 251:7	<b>321</b> 254:16
80:17 257:13	254:15 256:25	<b>200</b> 209:16 237:12	<b>364</b> 212:4,7
<b>11,000</b> 289:24	259:21	<b>2000</b> 106:10 119:8	<b>37</b> 274:16
<b>11:00</b> 83:11,21	<b>1201(b)</b> 146:25	<b>2002</b> 213:23 216:5	<u>          4          </u>
<b>117</b> 9:21 174:11	<b>1201(c)</b> 282:6	227:21 228:2	<b>4</b> 135:1 160:23
182:17 183:12	286:13,14 287:8	<b>2006</b> 35:18 139:24	273:2 274:15
184:2 232:9	<b>1201(f)(1)</b> 286:5	<b>2008</b> 24:7	<b>4:29</b> 1:18 291:4
277:12	<b>1201(j)</b> 24:19 36:19	<b>2010</b> 8:14 15:5	<b>40</b> 211:22
<b>12</b> 37:14 214:9	39:4,13 40:25	30:4 35:18 66:15	<b>40,000</b> 284:16
216:17	41:7 47:22 72:4	76:17	<b>450</b> 126:24
	<b>1202</b> 9:5	<b>2010/'11</b> 42:18	
	<b>12-year-old</b> 80:18		
	<b>13</b> 124:4 274:16		
	<b>130</b> 121:24		

<b>4700</b> 263:10 <b>48</b> 203:9 <hr/> 5 <hr/> <b>50</b> 15:13 158:25 206:8 251:7 267:3 <b>5000</b> 205:14 <hr/> 6 <hr/> <b>6.2.2015</b> 292:20 <b>60</b> 218:16 <b>60's</b> 225:19 <hr/> 7 <hr/> <b>7.95</b> 215:9 <b>70's</b> 204:6 <b>75</b> 126:1 <hr/> 8 <hr/> <b>8</b> 1:8 84:6 130:13 <b>8:00</b> 4:3 <b>80</b> 69:3 <b>80's</b> 126:2 180:9 204:6 <b>810,000</b> 153:24 <hr/> 9 <hr/> <b>9:00</b> 1:18 <b>90</b> 71:5 73:23 122:4 218:15 <b>9000</b> 124:21 <b>90-day</b> 73:5,10 <b>90-days</b> 73:17 <b>90's</b> 208:2 <hr/> A <hr/> <b>a)(1)</b> 251:21 <b>a)(2)</b> 252:16 <b>a.m</b> 1:18 4:3 83:11,17,21	<b>AACS</b> 3:17 137:2 140:12,25 141:10 142:1,15 <b>ability</b> 8:17 21:8 51:13 62:2 72:17 74:10 89:1 95:17 98:13 99:9 134:14 139:12 147:15 155:4 156:20 158:9 159:4 177:15 184:5 190:8,21 191:2 201:1,19 202:18,23 231:20 246:19 247:1 252:1 258:23 263:4 278:7 281:10 <b>able</b> 8:9,24 19:21 21:13 22:4 28:25 43:2 45:8 48:24 81:9,11 82:11 86:14 93:11,14 97:3 99:8,25 104:6 105:21 108:8 111:21 112:15,23 113:16 118:14 120:22 161:2 169:21 175:20 177:14,18 195:23 198:11,18 203:22 204:22 205:1 210:13 227:1 237:10 244:25 247:8 249:9 252:12 253:9 256:3 259:7 262:6,9 284:2 <b>absolute</b> 102:1 <b>absolutely</b> 61:14 109:16 121:14 162:22 204:19 205:23 209:7 215:2 216:23 239:14	<b>Abuse</b> 23:21 178:8 <b>academic</b> 19:8 78:6 259:25 <b>academics</b> 47:17 <b>accelerate</b> 197:16 <b>acceleration</b> 211:11 243:25 <b>accept</b> 91:10 <b>acceptable</b> 50:1 203:10 <b>accepted</b> 76:2,5 <b>access</b> 16:8,10 18:3,9 21:24 68:17 87:15 91:3 93:2,4,5,8 105:22 106:13 109:1,10 112:12 117:13 127:25 128:1,19 129:24 134:21 142:22 154:16 170:3 179:7 205:24 215:5 219:24 221:18 246:20 247:14,15 252:14,23 257:15 265:2 266:11 267:20 268:17 278:10 <b>accessed</b> 23:10 134:25 179:22 268:18 <b>accessible</b> 79:24 80:9 247:2 <b>accessing</b> 219:14 241:15 269:16,17,20 282:8 <b>accidents</b> 186:1 240:10 <b>Accolate</b> 286:16 <b>accommodate</b> 24:17 127:11 <b>accomplish</b>	144:2,11 147:6 213:4,6 262:22,24 <b>accomplished</b> 196:6 <b>accord</b> 209:9 <b>according</b> 40:6 87:20 241:20 <b>account</b> 39:20,23 110:17 113:11 114:6,18 120:1 132:4,6,7,12,16, 19 163:23 232:2 234:24 <b>accountable</b> 70:13 <b>accounted</b> 91:17,22 <b>accounts</b> 9:6 121:20,22 132:10 182:10 <b>accurate</b> 99:2 103:22 <b>accustomed</b> 248:2 <b>achieve</b> 191:21 254:13 282:10 288:13,21 <b>achieved</b> 75:10 235:9 <b>achieves</b> 13:19 <b>achieving</b> 12:12 282:15 288:20 <b>acknowledge</b> 64:5 107:2 117:7 <b>acknowledgeable</b> 10:17 <b>acknowledged</b> 96:21 275:22 <b>acquire</b> 147:2 <b>acquired</b> 93:19 112:22 114:17 131:17 <b>acquirer</b> 162:12
--	---	---	--

<b>acquiring</b> 114:14	241:2 280:13	258:23	<b>advance</b> 25:5,7 39:1 48:13 50:4 73:17 78:9,20 124:1
<b>across</b> 22:2 83:12 108:23 110:17 111:10 113:22 114:13 117:5 120:14 128:20 129:18,24 130:24 134:8,23 163:21 164:10 194:7 238:24	<b>actually</b> 6:14 12:7 13:16 29:15 33:13 36:14 42:11 44:8,13,18 56:23 65:23 92:11 95:20 111:5 113:7 118:8,9 124:11 131:7 139:2,10 144:1,11 145:14,16 154:22 158:17 160:17,21 162:17 163:22 164:2 165:13 167:22 169:23 170:24 172:25 181:2 184:13 185:10 186:3 191:11 195:1 196:25 199:11 208:6 213:7 221:11 222:17,25 223:18,21,24 224:2 228:8,9 240:18 245:22 261:3 270:21 272:13,14 273:15 274:3 277:4 278:17,21	<b>additional</b> 37:14 118:19,23 229:14 262:7  <b>address</b> 11:7 25:22 30:19 32:24 50:14,16 52:5,24 53:15,16 55:23,24 70:8 71:3,6 77:19 78:2 79:3 98:8,19 123:13 129:16 147:18 153:11 179:8 190:13 194:12 239:5 241:2 244:22 251:22 255:16 263:7 265:12 288:18  <b>addressed</b> 13:8 50:22 70:5 71:12 87:20 142:14 175:11 240:21 269:8 275:13  <b>addresses</b> 22:22  <b>addressing</b> 11:6 56:3 81:5 179:17  <b>adds</b> 192:9 281:17  <b>adequate</b> 67:23  <b>adieu</b> 6:24 86:4  <b>adjust</b> 204:23 281:11  <b>adjusted</b> 158:16  <b>administering</b> 119:21  <b>Administration</b> 2:14 4:17 19:2  <b>Administrator</b> 87:16  <b>Admiral</b> 34:17  <b>admitted</b> 277:14  <b>admittedly</b> 265:7  <b>adopts</b> 211:4	<b>advanced</b> 87:15  <b>advantage</b> 27:14 77:10 97:4 111:21 112:4 159:23 217:13 257:6  <b>advent</b> 117:2  <b>adventures</b> 291:1  <b>adversarial</b> 41:9  <b>adverse</b> 26:6 38:3,13 87:25 88:17,19,22,23,2 4 91:15 96:3 155:20,21,24 169:16 170:5 176:24 177:1 188:23,24 226:23 231:15 232:3 242:18 261:23 282:5  <b>adversely</b> 9:15 182:10 189:17 231:18,19  <b>advertising</b> 253:12 254:3  <b>advice</b> 43:16  <b>advocating</b> 243:1  <b>Affairs</b> 86:11  <b>affect</b> 65:24 92:8 218:23,24 226:4  <b>affected</b> 99:5 189:17  <b>affecting</b> 12:22 182:10 209:25  <b>affects</b> 92:11 100:1 169:6  <b>affiliation</b> 7:1  <b>affirmatively</b> 278:24
<b>act</b> 5:9 23:21 26:22 33:9 55:4 60:22 70:7 139:6 173:17 178:8 185:12 209:1 210:9,11 253:2,19 258:1  <b>acted</b> 35:11  <b>acting</b> 48:23 253:1  <b>action</b> 64:18 151:19 259:17 292:11  <b>actions</b> 15:25 16:1  <b>activities</b> 9:20 28:16 30:4 34:6 39:8 56:20 64:25 65:24 70:13 99:3 182:6,15 187:14 189:16 190:8 191:14 205:20 256:24,25 257:1  <b>activity</b> 9:14 11:10 24:20 39:16 41:18 49:16,18 54:11,15 59:21 69:8 70:15 72:18 190:10 191:12,19 205:25 234:3 256:17,18,19 287:11  <b>actor</b> 50:6  <b>actors</b> 52:2 68:19  <b>actual</b> 15:22 86:9 120:1 137:14,25 176:17 228:9	<b>add</b> 5:24 19:16 20:24 80:12 84:15 126:14 131:9 154:17 159:7 165:5 200:14 217:10 257:10 264:12 274:15 287:3  <b>added</b> 18:5 102:24 132:25 135:22  <b>adding</b> 131:8 134:17  <b>addition</b> 17:25 28:17 89:22 114:1 129:10 156:2 176:10		

<b>afford</b> 199:25	<b>aggressive</b> 54:8	<b>alfalfa</b> 204:15,16	85:2 89:1 97:4
<b>affordable</b> 273:10	<b>aggressively</b> 105:13 106:12	<b>alienation</b> 183:15	111:14 116:25
<b>afield</b> 75:4	<b>agnostic</b> 162:16	<b>alleged</b> 186:2 187:15 264:24	127:5 132:7,9
<b>afraid</b> 45:16 113:23 195:7 200:10	<b>ago</b> 48:25 52:7 64:4 66:4 80:24 139:23,24 200:22 230:15 259:13 264:9	<b>allegedly</b> 241:18	176:22 234:7 277:14
<b>aftermarket</b> 176:5 182:11 197:14,17 214:4 216:14 217:18,24 226:13 228:14 246:24 262:14 263:8,9,11,17,25 265:16,18,22 266:16,19 267:14,16 268:11 281:19	<b>agreed</b> 119:19 216:5 270:25	<b>alleviate</b> 282:5	<b>alter</b> 57:15
<b>aftermarkets</b> 267:25	<b>agreement</b> 215:14,24 216:16 228:10 264:8 270:21 276:11,14 277:21 278:2,23 284:20	<b>alleviating</b> 144:15 258:2	<b>altered</b> 226:7 244:12
<b>afternoon</b> 57:22	<b>agreements</b> 90:18 172:16 173:2,6,10 214:11 276:8,19 277:15 278:4 280:14,21 285:15,16	<b>Alliance</b> 3:15 7:19 25:20 31:13 168:16,22 205:7 228:18 235:5 260:9 278:19	<b>alternative</b> 120:16 122:24 143:1 146:4 154:7 157:8 219:14 220:4,5 237:1
<b>afternoon's</b> 36:3	<b>agricultural</b> 165:2 169:6 171:25 202:11 204:6 240:16 260:10,11,16 270:11 272:17 287:3 289:23	<b>allow</b> 18:16 19:13 24:24 27:18,22 65:18 79:8 113:11 165:9 203:6 212:18 218:2 220:16 223:24 230:24 246:22 251:19 261:8 270:4	<b>alternatives</b> 88:19 89:8,10 105:5 109:21 111:4 117:13 156:5 160:2 169:10 173:15 174:1,12
<b>afterwards</b> 162:25 227:22	<b>ahead</b> 7:7 55:19 128:9 136:17 147:11	<b>allowed</b> 10:15,16 16:17 17:2 20:6,10 42:19 43:11 67:4 112:17 142:12 153:4 186:17,18,19 202:3 258:14	<b>am</b> 4:8,11 6:24 7:10,12,15,17,19 ,21 11:23 14:24 15:1 17:4 20:24 21:17 22:4 25:15 31:24 33:22 35:4 40:14 44:11,19,22,23 45:11,23 46:16 53:16 56:1 62:15 63:21 67:4 71:8,21 72:23 75:8,18 76:22 77:22 83:25 86:10,18,20 94:25 97:18 98:2 99:6,25 102:21 104:12,14 108:7,20 110:5 113:23 116:1,11 119:5 123:25 124:1 125:4 128:11,16 130:3,4,5 137:1 148:19 154:12 156:11 157:22 161:14 163:10 167:10 168:5,6,8,15
<b>against</b> 36:25 41:22 42:2 54:22 99:8 142:22 152:1 158:1 174:13 176:1 181:6 189:1 235:20	<b>aid</b> 17:9	<b>allowing</b> 21:23 28:9,11 185:7 188:11 190:24 226:3	
<b>age</b> 3:4 7:16 125:12 168:7,14	<b>air</b> 27:2 57:24 182:1 206:19 207:18,19,21,24 208:8,16,19 213:8 216:1 220:13,14,17,22 233:10 237:13 238:6,23 244:15 248:5,16 250:19	<b>allows</b> 41:3 89:2 133:7 221:15 247:9,12	
<b>agencies</b> 11:7 37:8 59:13 64:4,6,9,19 65:5,6,12,22 233:17 241:13 250:19	<b>akin</b> 119:14	<b>all-purpose</b> 178:20	
<b>agency</b> 44:20 58:18 59:21 216:3 234:2 257:20		<b>alluded</b> 43:22	
<b>aggravate</b> 89:17		<b>alone</b> 138:19,20	
<b>aggregate</b> 121:23		<b>aloud</b> 43:17	
		<b>already</b> 36:21 46:3 65:9 75:6,14	



<p>169:12 175:6 185:8,22 186:10,11,16 187:5,6 188:17 194:5 195:4 199:12,23 205:7,16 210:2 212:12,17,18,23 213:15 219:13 220:1,14 225:11 231:13 235:17 237:7 240:3,15 245:3,9,16 249:15 250:8 251:14 253:8,9 254:2,3,4,5,22 256:4,6,8 257:3 260:1 266:13 272:11 280:20 284:24 292:10</p> <p><b>Amazon</b> 111:2 153:23 159:22 263:10</p> <p><b>ambushed</b> 170:13</p> <p><b>amended</b> 180:7</p> <p><b>amendments</b> 24:6</p> <p><b>America</b> 3:25 67:14 179:24</p> <p><b>American</b> 90:22 181:25</p> <p><b>AMG</b> 212:14</p> <p><b>among</b> 27:2 123:25 160:8</p> <p><b>amongst</b> 124:20 256:5</p> <p><b>amount</b> 63:21 89:4,18 92:16 238:14 249:21</p> <p><b>amounts</b> 237:10 284:6</p> <p><b>ample</b> 46:17</p> <p><b>analogous</b> 66:8 95:16 150:24 201:20</p> <p><b>analysis</b> 10:24</p>	<p>12:13 13:7 33:10 36:17,18 91:18 98:17 102:9 137:13,14 138:19 149:4 174:11,12 184:3 190:2 193:17 282:22 286:19 287:6,24 289:1,5</p> <p><b>analyze</b> 5:5 196:20 286:22</p> <p><b>analyzed</b> 138:12 290:9</p> <p><b>analyzing</b> 13:11 139:5,6,9 282:9</p> <p><b>and/or</b> 26:15</p> <p><b>Android</b> 131:6,16 134:12,13</p> <p><b>anemic</b> 66:9</p> <p><b>Angeles</b> 207:15 238:7</p> <p><b>angles</b> 62:17</p> <p><b>announcements</b> 135:10</p> <p><b>answer</b> 35:4 57:23 58:12 109:18,22 116:1,16 121:16 162:24,25 169:12 175:14 195:5 245:23</p> <p><b>answers</b> 126:17 195:14,19 245:21</p> <p><b>anti</b> 88:19</p> <p><b>anticipate</b> 180:25</p> <p><b>anticipated</b> 40:22 66:4 69:25</p> <p><b>anti-</b> <b>circumvention</b> 5:8 62:18 84:3 130:1 210:4</p> <p><b>anti-competitive</b> 226:10</p>	<p><b>Antiguan</b> 145:24</p> <p><b>anti-tampering</b> 58:1 64:16 65:9 208:14</p> <p><b>antithesis</b> 40:23</p> <p><b>anti-trafficking</b> 143:20,21</p> <p><b>anybody</b> 82:9 200:5 285:7</p> <p><b>anymore</b> 194:24</p> <p><b>anyone</b> 6:11 75:11 83:6 86:6 219:6,7</p> <p><b>anything</b> 16:23 18:20 36:1 84:25 102:22 104:15 105:14 107:22 130:6 148:24 160:3 171:17 193:20 200:14 211:5 212:24 234:18 239:14 251:4 282:23 289:3</p> <p><b>anyway</b> 43:5 77:14 156:18 234:13</p> <p><b>anywhere</b> 16:19 71:5 81:2 110:23 128:21 129:14,23 130:15 131:2,5 132:1,20 133:9 134:3,4 159:23</p> <p><b>ap</b> 112:7 131:2 133:11 135:20 240:7</p> <p><b>apart</b> 98:16</p> <p><b>apologize</b> 67:13 86:15</p> <p><b>apparently</b> 274:4</p> <p><b>appealed</b> 138:8 139:17</p> <p><b>appear</b> 178:19</p>	<p><b>APPEARANCES</b> 3:1</p> <p><b>appears</b> 193:24</p> <p><b>Apple</b> 127:22 128:1 129:13 131:15 134:6</p> <p><b>applicable</b> 21:25 22:2</p> <p><b>application</b> 92:8,11,19,21</p> <p><b>applications</b> 249:21</p> <p><b>applied</b> 62:25 81:1,2 86:12 100:5</p> <p><b>applies</b> 40:4 73:19 97:16 163:13 173:18 202:3 211:5,6 216:20 227:21 228:22 232:10 260:16 271:24 284:25</p> <p><b>apply</b> 19:24 22:14 23:6 57:9 63:25 102:8,19 103:25 173:19 228:5,23,25 231:17 233:18 252:3 260:11 269:9 272:1 274:12 287:9,11 289:6</p> <p><b>applying</b> 204:17</p> <p><b>appreciably</b> 160:14</p> <p><b>appreciate</b> 8:1 14:5,6 107:22,24 230:9,23 290:24</p> <p><b>approach</b> 53:11 100:17</p> <p><b>approached</b> 38:17 78:8 242:6 287:13</p> <p><b>approaches</b> 39:5</p>
---	---	---	--

<b>approaching</b> 275:8	268:2 290:16	<b>assume</b> 83:13 220:24 221:4 230:19 235:16 245:14 254:7,8 270:20	150:23 160:13,15
<b>appropriate</b> 31:3 49:25 51:2 181:5 207:14 232:1,13 233:21	<b>arguments</b> 5:14 22:1,7 27:7 152:22 176:15 213:20 277:9	<b>assuming</b> 19:18 40:14 71:14 183:25 246:25	<b>audiovisual</b> 84:6,21 160:24
<b>approval</b> 31:21 32:2 59:20 82:8 268:10	<b>arise</b> 12:24 269:2	<b>assure</b> 241:8 245:5,25	<b>Autel</b> 267:25
<b>aps</b> 114:15 116:19	<b>Army</b> 37:9	<b>assured</b> 180:10 247:2	<b>authorial</b> 12:9
<b>archetypal</b> 9:19	<b>arose</b> 207:8	<b>ATM</b> 111:25 112:1,2,3	<b>authority</b> 190:17 233:23,24
<b>architecture</b> 80:8	<b>arrangement</b> 33:7 153:7 267:22 283:7	<b>attach</b> 67:19	<b>authorization</b> 73:1 212:20
<b>archival</b> 99:13	<b>arrangements</b> 30:24	<b>attached</b> 47:15 224:24 229:9 273:3	<b>authorize</b> 252:2 258:19
<b>archive</b> 211:17	<b>arsenal</b> 179:23	<b>attachments</b> 166:9	<b>authorized</b> 33:19 99:11 128:22 146:7,10 147:1 212:6 224:3
<b>archived</b> 211:19	<b>article</b> 77:17	<b>attack</b> 19:7	<b>authorizes</b> 234:23
<b>area</b> 9:19 58:11 62:25 64:21 72:20,22 112:1 169:18 198:3 223:7 232:7 242:19 250:4	<b>articles</b> 48:10 204:5	<b>attacker</b> 15:8 16:7 17:20,25	<b>auto</b> 9:1 36:4 60:13,21 63:23 66:5 68:3,7 168:17 192:20 193:3 207:5 211:12 220:3 228:18 249:24 250:7 256:17 260:9 287:2
<b>areas</b> 5:16 56:4 64:7 74:9 152:7 165:14,23 174:9 234:19	<b>arts</b> 25:4	<b>attack-proof</b> 21:2	<b>automakers</b> 31:14 34:6 173:16
<b>arena</b> 66:5	<b>ARV</b> 238:20	<b>attacks</b> 16:13 18:6,8 169:2	<b>automatic</b> 18:2
<b>aren't</b> 77:3 90:4 165:24 177:14 184:11 196:23 254:11	<b>aside</b> 38:16 97:16	<b>attempt</b> 58:14 100:9 200:22 225:12	<b>automatically</b> 115:3 135:21
<b>arguably</b> 24:9 152:19 253:3	<b>aspect</b> 104:1 113:1 192:13 193:6	<b>attempting</b> 147:22	<b>automobile</b> 3:15 7:20 19:14 20:25 21:7 25:20 28:7 30:20 31:13 32:9 33:24 45:6 56:15 61:1 81:3 168:16,22 205:8 210:3 225:15 226:13 235:5 237:22 263:14 284:25
<b>argue</b> 192:19	<b>aspects</b> 26:25 48:21 56:18 101:15 111:18 161:12	<b>attempts</b> 58:12 102:8	<b>automobiles</b> 15:13 19:5 55:6 57:6 63:9 66:7 69:20
<b>argued</b> 56:23 240:5 248:8	<b>asserted</b> 191:25 277:15 287:22	<b>attention</b> 8:24 69:23 227:12	
<b>argues</b> 42:2	<b>asserting</b> 49:6 56:7 283:18 284:5	<b>attorney</b> 7:15 86:1 87:15 109:17 167:17 168:6,9 292:12	
<b>arguing</b> 52:13 152:24	<b>assertion</b> 285:18	<b>attributable</b> 38:4	
<b>argument</b> 41:19 50:17 52:15 160:9 169:10 186:18 195:3 239:10 254:10	<b>assertions</b> 32:6	<b>attuned</b> 31:8	
	<b>Assistant</b> 2:9,11 4:13,14 85:21,25 167:15	<b>audience</b> 6:11 174:21	
	<b>associated</b> 8:10 31:14	<b>audio</b> 88:12 99:24 139:5 148:3	
	<b>association</b> 3:24,25 87:17 168:17 182:23 205:10,13,14		

164:8 169:7 172:12 174:14 228:22 275:23 282:17 <b>automotive</b> 17:10 18:7 44:3 63:11 201:22 205:10,12 252:18 <b>avail</b> 89:9 <b>availability</b> 10:2 28:3 88:18 90:16,25 91:1,2 123:14 178:18 <b>available</b> 22:19 89:8 90:3,10 91:5 105:8,9 106:11 107:9 122:16 124:5,8,23 125:9,17 126:18,19,20,23 127:5,13 128:6,23 129:6,11,17 130:22 134:12 145:3,18 153:17,18,23 154:1 174:4 201:11 212:19 214:1,2,7 215:17 219:9,19 223:24 228:11,15 235:8 262:13 264:16 265:16,23 272:5 282:19 286:24 287:2 288:11 <b>avenue</b> 55:23 <b>average</b> 26:8 80:17 <b>avoid</b> 152:16 153:1 <b>aware</b> 46:5 49:4 50:18 62:12,18,23 83:11 98:12 120:24 173:10	213:15 235:15 264:13,23 <b>away</b> 16:23 18:19 20:15 58:7 87:18 192:22 261:14 <b>axle</b> 196:11 198:16,19 218:5 236:22 238:11 <b>axles</b> 237:16 <hr/> <b>B</b> <hr/> <b>bachelor's</b> 20:5 <b>backed</b> 241:19 <b>background</b> 45:12 110:1 145:25 199:12 249:19 <b>backing</b> 44:6 <b>backup</b> 254:2,5,17 <b>backward</b> 124:11 <b>bad</b> 50:6 52:2,4 68:19 70:11 77:6,7,9,16 79:2 191:14 192:25 217:8,9 222:20 231:16 232:3 244:18 <b>bag</b> 220:17 <b>bags</b> 27:2 182:1 206:19 220:13,15,22 244:15 248:5,16 <b>bailiwick</b> 64:14 <b>balance</b> 42:1 58:12 75:9 189:13 238:9 <b>balanced</b> 235:2 <b>banc</b> 171:6 <b>bank</b> 111:24 112:2,3 <b>banks</b> 112:4 <b>bank's</b> 112:1 <b>bar</b> 24:21 164:10	<b>bargain</b> 103:6 118:18 <b>barred</b> 65:10 <b>barrier</b> 11:9 17:11 64:24 190:9 <b>base</b> 123:6 224:15 <b>based</b> 11:20 12:13 14:11 63:25 74:6,9 101:19 138:14 151:6,19 184:25 262:8 <b>basic</b> 115:14 <b>basically</b> 42:15 47:22 91:16 104:4 105:18 142:19 143:24 145:6 193:7 221:8 230:12 264:19 267:21 <b>basis</b> 64:12,20 73:21 118:1 140:16 148:18 258:25 268:1 <b>Baucum</b> 1:23 292:2,20 <b>Bay</b> 112:1 <b>bear</b> 68:9 74:3 <b>became</b> 185:20 187:13,14 <b>become</b> 18:6 50:18 80:14,15 187:21 249:7 <b>becomes</b> 96:11 100:8,9 126:13 <b>becoming</b> 8:12 <b>beginning</b> 226:12 <b>behalf</b> 21:18 25:16,19 54:21 87:12 168:7 205:16 253:1 258:20 <b>behavior</b> 29:11 70:11 79:6 244:7	<b>believe</b> 29:10 35:19 54:9 61:23 67:12 78:25 87:20 88:21 92:10 93:13,22 95:22 101:6 106:8 116:12 144:25 147:25 149:25 210:12,13 213:7 225:22 229:11 <b>believes</b> 258:18 <b>bender</b> 220:15 <b>beneficial</b> 70:12 165:22 237:5 <b>benefit</b> 9:15 49:4,12 103:6 112:13 118:18 160:20 192:16 239:13 281:20 <b>benefits</b> 54:16 111:16 188:10,19,20 189:8,9 190:21,22,23 191:10 <b>benevolent</b> 20:17 29:13 <b>beside</b> 172:7 <b>besides</b> 223:12 <b>best</b> 20:2 27:14 37:17 52:17 53:23 54:5 74:19 78:1 111:22 133:7 172:24 183:3 <b>better</b> 6:13 32:21 82:25 126:1 211:16 239:21 243:21 <b>beyond</b> 40:21 97:5 203:18 <b>bias</b> 41:1 71:25 72:1,5 <b>biggest</b> 113:21
--	---	--	--

178:11	<b>bodies</b> 55:10 186:7	<b>bridges</b> 188:4	<b>bucks</b> 215:8
<b>bilateral</b> 119:19	<b>body</b> 55:14,22	<b>brief</b> 6:5 7:25 35:8	<b>build</b> 14:13 19:16
<b>billion</b> 237:23	152:23	72:25 78:22	34:8 48:15
<b>billions</b> 89:19	<b>boils</b> 105:18	109:8 169:12	107:12 247:11
<b>bind</b> 104:14	<b>bolstered</b> 9:21	229:6	263:5,15 264:1
<b>bio-diesel</b> 237:3	<b>bona</b> 40:13	<b>briefing</b> 182:14	<b>building</b> 191:24
<b>bit</b> 15:12 56:13	<b>bond</b> 40:13	268:4 269:25	210:16
59:3 67:9	<b>book</b> 106:7 150:5	<b>briefings</b> 270:16	<b>built</b> 118:11
107:16,17	<b>books</b> 38:20	290:12	263:17
114:20 117:19	149:12,21	<b>briefly</b> 54:20	<b>bump</b> 116:13
120:21 140:4	150:4,17	68:1,13 86:4	220:15
165:11 170:7	<b>bookshelf</b> 149:11	104:19 110:13	<b>bunch</b> 152:11
174:7 175:7,9	<b>born</b> 226:17	171:24 172:4,19	196:18,19
189:7 193:21	<b>bought</b> 97:19	230:5 286:5	254:24
194:13 195:18	106:9 117:2,14	<b>briefs</b> 240:20	<b>bundle</b> 160:12
252:9,10 253:24	119:8 151:7,10	<b>bright</b> 53:9 72:4	<b>burden</b> 26:4 35:6
267:6 272:13	248:22 276:9	<b>brilliant</b> 237:19	39:7,10 72:14
<b>blending</b> 284:11	284:20	<b>bring</b> 7:1 68:8	78:24 226:21
<b>blessing</b> 234:3	<b>bounds</b> 227:25	125:16 181:14	231:4 232:8
<b>blind</b> 234:21	<b>brain</b> 196:15	<b>bringing</b> 59:1,2	245:10,13
240:13	<b>brake</b> 15:17 43:2	<b>broad</b> 27:22 52:13	285:11 286:2
<b>blue</b> 207:8	<b>brakes</b> 16:1,2,21	64:25 65:23	287:10
<b>Blue-rays</b> 115:19	17:22 51:22	97:11 141:16	<b>Burner</b> 184:9
<b>bluetooth</b> 16:16	246:10	144:20 233:25	<b>bus</b> 15:9,11,21,24
182:2 269:3	<b>braking</b> 8:19	<b>broadband</b> 90:21	18:4,11,17
<b>Blu-ray</b> 102:20	18:18 27:1 44:25	<b>broadcast</b> 134:14	<b>business</b> 11:1
121:1,4 129:8	<b>brand</b> 62:7	<b>broadcasting</b> 95:2	109:17 113:4
136:6 137:4	127:7,18,21	<b>broader</b> 29:11	119:19 133:4
143:1,7,11	<b>branding</b> 12:9	55:15 70:14	141:13 144:22
144:23 145:13	<b>breach</b> 39:25	<b>Broderick</b> 179:22	159:16 161:15
146:7 159:3,5	<b>breath</b> 82:3,16	<b>broken</b> 110:21	233:20 254:2,11
<b>Blu-rays</b> 112:17	<b>breadth</b> 234:17	<b>brought</b> 8:21 11:5	256:9 261:3,6,9
124:13 144:17	<b>break</b> 83:10	44:18 64:1 74:3	<b>businesses</b> 182:12
<b>blurred</b> 249:6	100:18 247:8	79:25 134:6,11	<b>businessperson's</b>
<b>BMW</b> 37:13	<b>breakdown</b> 136:9	142:1 166:1	109:20
212:25 213:10	<b>breaking</b> 164:6	182:4 234:20	<b>button</b> 222:12
217:15,16	282:21	<b>browsers</b> 21:3	<b>buy</b> 106:7 116:22
<b>BMW's</b> 48:2	<b>breathe</b> 207:19	<b>Bruce</b> 3:17 47:20	117:15 126:22
<b>board</b> 34:15 57:24	<b>brewing</b> 67:9	87:14 101:14	127:21,24 128:1
207:21,24	<b>bricks</b> 218:7	137:1	150:12 152:16
208:9,16,19		<b>Buckingham</b>	183:23
213:8 216:2		176:9 177:11	197:15,20 201:9
250:16,20			203:25 222:22
			247:21 248:15
			249:9,12 267:1

289:21 <b>buyer</b> 246:5 <b>buyers</b> 206:1 244:10 245:10 <b>buying</b> 94:1 114:15 116:17 135:24 136:10 153:1 158:5 244:18 245:3 247:18,19 249:15 <b>buys</b> 131:20 278:13 <b>bypass</b> 203:7,14 207:1 211:24 271:19 <b>bypassed</b> 206:19 <b>bypassing</b> 28:18 <hr/> <b>C</b> <hr/> <b>cable</b> 93:1 109:1 <b>calibrate</b> 236:24 <b>calibrated</b> 26:18 <b>calibration</b> 218:20,22,23 250:22 251:5,6 <b>calibrations</b> 218:10 <b>California</b> 4:2 15:7 43:4 57:24 83:20 164:17 169:19 202:15 208:8,13 209:16 210:20 211:4,5,6,8,21 216:1 238:24 292:3 <b>cam</b> 15:9,11,21 17:21 18:4 <b>Campbell</b> 96:6 <b>Canada</b> 255:25 <b>cannibus</b> 222:19 <b>capabilities</b> 117:5	<b>capability</b> 203:17 253:12 <b>capable</b> 17:20 156:12 179:16 181:10 204:19 272:25 <b>car</b> 16:3 19:1 20:23 26:2 30:17 31:7 40:16 42:21 43:3,7,9,25 46:1 66:23 82:2 99:24 184:15,16 185:12 186:21 194:25 200:1 205:11 207:17 212:4,8 221:15 222:12,17 225:17,18,22 226:2,12 233:18,19 236:16 237:3 243:24 244:19 245:1,4,18 246:1,5,6,9 249:15 250:5 252:20 255:3,14 256:4,6 267:1 273:21,22 276:9 278:13,21 279:7 280:1,3,4,9,22,2 3 281:3,6 283:3,6,19 284:20 <b>card</b> 272:9 <b>care</b> 180:11 229:18 <b>cared</b> 198:6 <b>careful</b> 102:8 <b>carefully</b> 5:18 26:18 70:19 206:10 226:19 <b>carried</b> 82:6 <b>carry</b> 72:17,18 148:16 196:11 198:16 218:6 263:14 278:16	<b>cars</b> 8:4 9:10 17:19,25 20:18 21:8 22:22 25:24 27:6 28:10 29:15 31:22,23 32:21 33:25 34:8 44:1,21 52:4 65:13,14,16 66:2,16,19 67:2 69:21 71:23 79:11,22,25 80:14,18 183:14,17 186:6 201:25 208:14 210:8 211:13,25 212:16,17,19 225:25 227:2,24 228:12 233:21 241:21,22 244:11 245:10 249:12 276:5 277:3 282:13 283:17 285:13 <b>car's</b> 279:12 <b>Cars</b> 80:14 201:23 <b>case</b> 13:16 19:4,9 37:13 38:15 42:6 43:16 68:7 75:17 87:17 88:3,7,15 91:22,25 92:3,14,17 93:5 94:11,21,22,23,2 4 95:6 96:22 97:14,16 99:24 100:24 101:15,18,21 102:2 109:22 117:24 120:9 137:4,9,12,16 138:11 139:3,5,7,9,19 141:7,9 143:23 144:8 147:25 149:5,25 150:16,19,21 152:18 153:3 155:11 156:11 161:17,21 162:12,17 169:2	174:5 201:4,12 246:25 247:17 253:16 254:16 281:25 282:17,20 286:3,17 287:9,15,16,23 <b>case-by-case</b> 118:1 <b>cases</b> 35:18,23 36:5 50:18,23 78:5,7 95:20 100:19 138:9 140:24 141:11 144:8 151:8,22 152:13 158:1 161:18 183:10 219:15 244:4 267:24 277:10 286:18 288:17 <b>case-specific</b> 100:21 152:7 <b>catalog</b> 90:14 123:20 125:2 <b>catalogs</b> 125:6 <b>catalyst</b> 217:9 <b>catalytic</b> 182:2 <b>catch-all</b> 189:5 <b>categories</b> 13:12 <b>category</b> 13:14,23 <b>Caterpillar</b> 272:23 <b>Catherine</b> 3:4 168:5 <b>cattle</b> 176:10,11 177:12 <b>cause</b> 16:21 56:23 187:8 289:8 <b>caused</b> 26:6 38:14 56:24 <b>causes</b> 36:2 151:19 232:3 288:8 <b>causing</b> 288:2 <b>CD</b> 104:10
--	--	---	---

<b>CD's</b> 103:16 157:4 160:13,15 255:10 <b>cell</b> 55:6 240:8 <b>cellular</b> 16:16 <b>center</b> 259:7 <b>central</b> 132:20 169:18 202:15 <b>certain</b> 5:13 15:25 23:7 32:16 57:7 71:2 111:18 112:1 125:10 126:12 146:24 187:2 201:25 221:17 226:11 237:7 244:19 265:4,9 <b>certainly</b> 36:1 40:25 68:22 75:6 82:25 94:3 97:21 98:9 100:1 151:4 157:5 215:16 220:14 251:14 274:9 279:9 289:5 <b>certainty</b> 49:18 <b>CERTIFICATE</b> 292:1 <b>certification</b> 209:18 <b>certified</b> 209:19 213:8 292:2 <b>certify</b> 292:4,10 <b>cetera</b> 17:22 <b>CFAA</b> 23:21,25 24:2,12 38:6 39:18 52:23 178:8 179:15,19 180:16,20 <b>chain</b> 152:2 <b>chaired</b> 34:17 <b>Chairman</b> 34:18 <b>challenge</b> 41:16 129:16 249:23	250:9 <b>chance</b> 77:19 107:21 <b>change</b> 60:4,13,14 90:17 101:18 147:23 175:6 226:14 233:5 234:10,12 238:2 242:25 243:1 258:8,15 259:23,24 <b>changed</b> 107:16 139:22 148:13 200:3 209:11 250:6 <b>changes</b> 8:18 34:12 60:8 116:2 197:8 211:13 221:11 238:7,16 243:16 <b>changing</b> 59:22 196:24 220:9 236:1 237:1 <b>channels</b> 98:6 200:1 <b>characteristics</b> 243:24 <b>characterize</b> 147:22 285:20 <b>charge</b> 114:16 115:21 118:19 264:6 <b>charged</b> 118:6 <b>Charlesworth</b> 2:5 4:5,8 7:6,23 11:23 12:16 13:2,22 14:20 19:18 20:11 21:16 25:10,13 27:3 28:22 29:14,19 30:1,8 33:17 34:24 35:1 36:8 42:4,10,24 45:3,8,18,25 46:7,13,23 47:2,5,8 50:7	51:24 53:4 54:17 56:5,22 57:2,4 59:9 60:16 61:10,17 62:8,14 66:12 67:6 68:2,10 69:25 70:23 72:23 73:14 74:13,22 77:12 78:10,21 79:17 80:4 81:13 83:6,23,25 86:3,15 87:1,18 91:24 96:4,10 97:6 100:11,23 101:8,11 103:9 108:12,16 110:5 113:13 114:7 115:25 116:8 118:20 119:16,22 123:9 127:12,15,24 128:5,9 129:3 130:9,11 133:16,21,25 135:23 136:2,11 141:18 142:11,18 143:19 145:4 146:18,22 148:5 150:3,11 153:12 154:1,12,24 155:22 156:8,16,22 157:12,16 163:7,18 164:3,20 166:4,10 167:1,5,11,19,22 168:23 171:23 172:20 173:12 174:16,19 175:3 177:22 180:15 181:21 183:18 184:6 185:2,20 186:10,16 187:10 191:17 192:24 193:20 194:3 196:4 199:9 200:13,16 205:3 207:3	208:7,10,23 209:5,23 219:12,21 220:23 221:2,13 223:13,22 224:8,11 225:7 227:13,16 229:3,13,25 230:19,24 238:25 239:23 241:5,10 242:16 243:17 244:8 245:3 246:7 248:3,11 249:17 250:10 251:11 252:8,15 253:6,21 254:19 255:5 256:20 257:2 258:7,13,22 259:9 261:21 263:6 264:11 265:3,6 266:1,7 267:9 268:12 269:19 270:13,20,24 271:11 272:8 273:3 274:3,18,24 275:7 276:25 277:24 278:12 279:6,13,15,18,2 3 280:6,17,20 281:7,12 282:23 283:20 284:22 286:7,12 289:12 290:22 <b>Charlie</b> 3:8 7:12 14:23 <b>chattel</b> 95:19 <b>check</b> 153:22 217:6 246:5,17,18,21 247:1 249:25 250:5,15,22 283:2 <b>checked</b> 249:22 <b>checking</b> 115:9
---	---	---	---

<b>Cheney</b> 2:13 4:15 43:10,15 81:13,14 82:19 86:1 121:6 145:20 149:7 159:7 167:17 198:12 199:1 210:19 247:7 <b>chief</b> 34:14 63:12 86:20 128:16 <b>Chiefs</b> 34:18 <b>chill</b> 282:7 <b>chilled</b> 47:23 <b>chilling</b> 9:7 32:7 36:23 37:4,11 38:19 41:20 42:12 47:10,12,18 55:1 63:2,15,22 66:10 67:10,20,21 69:12 <b>chills</b> 9:5 <b>China</b> 9:12 48:6 69:11,17 73:1 <b>Chinese</b> 48:8 <b>chip</b> 255:23 <b>choice</b> 74:14 99:14 258:1 289:9 <b>choices</b> 288:10,24 <b>choose</b> 122:24,25 160:8,12 <b>choosing</b> 98:23,25 <b>chosen</b> 245:25 <b>Chris</b> 17:8 19:8 66:19 76:24 78:6 <b>Chrysler</b> 46:4 217:25 263:20 <b>circle</b> 136:14 <b>circled</b> 75:16 <b>Circuit</b> 102:7 137:20 138:1,9,15 152:15,21	170:24 <b>circumstance</b> 257:18 <b>circumstances</b> 97:17,18 261:6 <b>circumvent</b> 62:11 145:14,16 170:2 175:18,19 177:4,5,19 205:24 208:12 223:11 224:3 253:10 256:2,9 268:16 <b>circumvented</b> 144:24 145:1 210:14 244:16 <b>circumventer</b> 147:2 <b>circumventing</b> 147:8 221:5 251:1 254:12 255:8 260:5 270:6,7 <b>circumvention</b> 11:9 26:6 27:18 28:10 65:8 91:15 105:5 141:9 143:15,25 145:8 146:5,24 147:14,15 148:23 158:1 160:4 175:25 180:16 185:7 188:8,10,12,14,1 6 189:18 190:9,24 219:13,17,20,21 220:3,4,8,16 221:10 222:5 223:14 225:5 226:3,22 228:4 233:8 235:7,9,10 242:19 245:7 247:16 252:5,6,19 253:3,14,20 254:7,9 256:19	258:4,19 260:2,4 261:4,15,17 266:8 271:19 <b>circumventions</b> 223:4 <b>citation</b> 274:15 <b>cite</b> 37:25 139:19 <b>cited</b> 40:6 139:7 271:23 272:1 <b>cites</b> 101:21 <b>city</b> 210:1 <b>Civic</b> 201:24 248:22 <b>claim</b> 9:17 11:13 49:6 65:15 82:11,17 95:18 144:3 <b>claimed</b> 88:14 <b>claiming</b> 82:9 94:3 <b>claims</b> 106:17 284:14 <b>clamshell</b> 135:16 <b>clarification</b> 268:13 271:12 <b>clarify</b> 59:9 140:2 258:15 <b>clarifying</b> 5:12 258:18 <b>class</b> 21:23 22:21 23:22 38:1 47:16 59:10,11 62:1 63:7 75:24 84:5,6,19 102:4 130:13 160:25 164:7,25 171:25 172:1 175:25 178:1 187:8,25 191:4 231:17,21 268:23 269:5,9,18 <b>classes</b> 1:8 21:19,25 22:2,4,6,9 23:11,12,14	108:5 160:22,23 181:1 257:13 258:13,15 <b>classroom</b> 161:2,11 163:4 <b>clean</b> 212:3 219:1 233:10 238:6,23 <b>cleanly</b> 125:13 <b>cleanup</b> 125:1 <b>clear</b> 9:2 50:3 53:9 56:14 72:14 73:25 88:3 92:7 94:1 97:10,21 139:21 147:13 165:24 198:12 214:5 219:13 232:25 254:16 256:23 257:2,22 259:20 270:2 283:1 286:15 <b>clearer</b> 277:18 <b>clearly</b> 22:15 36:10 42:2 53:5,9 87:23 88:7 102:13 106:2 125:7 126:2 148:11 151:22 152:15 184:3 282:1 <b>clears</b> 38:3 <b>click</b> 115:6 <b>clients</b> 107:11 141:14 <b>client's</b> 222:12 <b>climate</b> 281:11 <b>clinic</b> 168:1,2,3 <b>clips</b> 161:4,9 163:19 <b>close</b> 16:8,9 287:19 <b>closely</b> 150:24 231:13 281:1 <b>closer</b> 152:24
---	--	---	---

<b>cloud</b> 151:6	132:22,25 157:1	40:8 47:20 50:10	107:8 168:14
<b>cloud-based</b> 110:16 130:16	<b>collections</b> 121:23 134:20,22	60:11 67:16 88:4,14 89:4 103:11 105:10 106:25 107:19 108:15 140:4,6 165:18 175:19 230:14 233:16 236:13 256:15 259:4 260:13 273:4 283:22,24 284:17	176:12 186:21 216:13 242:1 267:3,7
<b>coast</b> 202:15	<b>CollidEscape</b> 141:7 144:8	<b>commerce</b> 2:14 4:17 150:8	<b>compare</b> 28:4 247:12
<b>coastal</b> 169:18	<b>collision</b> 24:14	<b>commercial</b> 152:20	<b>comparing</b> 225:17,19
<b>code</b> 8:17 10:1,11 12:1,3,6,11,17 13:14,18 16:13 17:3 20:15 21:6,12 27:22,23 28:1 34:3 61:5,21,24 62:3,4 67:2,4 69:4 115:24 117:16,17,25 118:3,9,10 135:13,15,20,25 210:25 217:7 252:24 287:23 290:14,17	<b>colloquy</b> 239:8	<b>commercially</b> 256:18	<b>compatible</b> 19:16
<b>codes</b> 19:13 266:6,20	<b>combine</b> 173:20	<b>commercials</b> 99:2	<b>compelling</b> 179:11
<b>codify</b> 286:16	<b>combined</b> 34:9 90:11 127:1	<b>commitment</b> 283:13	<b>compensates</b> 119:23
<b>coding</b> 100:2 252:14	<b>combo</b> 135:15 136:5	<b>committed</b> 58:6	<b>compensation</b> 119:23
<b>coffee</b> 83:13	<b>Comcast</b> 111:3	<b>committee</b> 34:17	<b>compete</b> 105:1 262:9
<b>cognizable</b> 12:21 50:2 89:14 96:8 100:9	<b>comes</b> 100:21 115:2 135:16 136:5 153:24 154:9 211:14 267:18 269:3 276:16	<b>common</b> 30:20 247:19 248:15	<b>competent</b> 251:14
<b>collaborate</b> 196:3 200:6	<b>comfort</b> 134:22	<b>commonly</b> 77:12 120:6 236:20	<b>competing</b> 262:14 267:25
<b>colleague</b> 168:2 169:1 242:13	<b>comfortable</b> 81:18,24 82:19	<b>communicates</b> 197:7 198:8	<b>competition</b> 69:10,15,16 73:1,3 143:8 184:25 241:24 246:25 258:1 262:1 268:11
<b>colleagues</b> 4:10 289:12	<b>coming</b> 60:7 116:19 123:10 164:11 199:22 202:12 240:15 284:4	<b>communications</b> 217:12 222:5	<b>competitions</b> 48:6 69:14
<b>colleague's</b> 96:13	<b>command</b> 18:16	<b>community</b> 168:11 202:5 253:13 259:4 283:25	<b>competitive</b> 214:3 216:21
<b>collect</b> 110:11 112:15 130:19	<b>commands</b> 18:3	<b>companies</b> 21:4 66:24 108:23,24 109:3 113:10,19,21 114:1 122:1 215:4 260:14 263:12,18,21 264:1,6,7 267:16	<b>competitor</b> 272:23
<b>collecting</b> 122:22	<b>comment</b> 5:25 21:19,22 67:12 84:15 103:18 104:22 107:21 116:9 117:10,19 148:9 161:6 174:21 241:3 272:12 273:1,18 286:14	<b>company</b> 48:8	<b>complain</b> 235:13
<b>collection</b> 90:7 110:14,16 111:7 112:9,12,20,25 114:18 115:8 130:23 131:9	<b>commented</b> 176:17		<b>complaint</b> 126:14 228:14
	<b>comments</b> 5:14,18,20 6:15 23:20 37:3,11,14,15,16		<b>complete</b> 104:23 281:2
			<b>completely</b> 141:12 154:7 245:11 270:18
			<b>completion</b> 125:1
			<b>complex</b> 39:4 40:19 263:23
			<b>compliance</b> 26:3,19,23 28:3



<p>34:12 56:24 57:12,15 58:9,15 175:21 226:18 227:4 233:13 276:23 <b>complicated</b> 80:10 125:11 <b>complications</b> 81:4 <b>comply</b> 56:16 <b>component</b> 213:1 <b>components</b> 16:16 196:20 <b>composition</b> 124:15 <b>compromise</b> 75:12 <b>compromised</b> 187:3 <b>computer</b> 11:21 12:1,17 14:12 23:21 24:8,11 25:5 49:10 50:9 63:6 99:12 154:19 155:3 156:3 157:2,6 163:24 178:2,4,5,7,8,13, 16,21 179:22 180:3 181:15,16 198:18 225:20 246:11,21 247:13 257:17,19,21 282:14 285:9 288:4,5,7 <b>computerization</b> 65:12,14 66:2 71:23 182:4 <b>computerized</b> 80:14 <b>computers</b> 15:14 22:11,12,16,18 24:10 65:16 66:9,16 103:17 179:6 182:20</p>	<p>242:2 <b>computing</b> 22:8,17 23:7,13,19 109:14 111:9 180:8 <b>concede</b> 27:15 255:19 277:24 285:16 <b>concept</b> 71:20 169:8 <b>conception</b> 61:11 <b>concern</b> 34:19 40:2 50:10,21 51:25 52:11,12 59:12 68:16 70:9,17,21 77:14,20 78:2 79:6 82:4,18 186:13 187:19 211:23 228:3 246:2 248:4,8 269:21 <b>concerned</b> 29:13 56:19 77:21 82:7 171:10 223:1 233:1 250:20 255:3 272:7 284:9 286:25 <b>concerning</b> 270:3 <b>concerns</b> 8:20 12:2 20:9 29:4,5 37:19 51:10 55:24 56:4 57:16 70:8 71:4,7 75:19 144:15 178:24 182:5 187:20 189:19 190:4 193:25 226:9,10,16 238:19 <b>conclude</b> 24:15 224:12 <b>concluded</b> 83:16 164:13 291:3 <b>concludes</b> 290:23</p>	<p><b>conclusion</b> 107:15 170:15 277:10 <b>conclusory</b> 139:1 <b>concrete</b> 11:16 14:9 242:9,17 252:10 <b>conditioned</b> 153:3 <b>conditions</b> 278:22,25 279:5 <b>conduct</b> 5:3 18:21 64:14 187:7 191:3 192:15 268:7 269:4 <b>confer</b> 161:22 <b>confess</b> 27:6 <b>confident</b> 206:23 210:15 <b>confidential</b> 31:1 <b>confine</b> 146:8 <b>confines</b> 112:17 <b>conflict</b> 165:23 <b>confusion</b> 234:7 <b>Congress</b> 23:1 35:14 39:14 40:21,24 48:24 53:5 71:19 75:3 77:21 88:10 257:25 258:18 259:10,13,23,24 282:2 <b>Congressional</b> 54:2 88:9 142:3 281:22 <b>Congress's</b> 75:6 <b>connect</b> 155:4 <b>connected</b> 79:23 112:11 <b>connection</b> 64:8 90:21 128:24 129:7 184:17 269:3 <b>connections</b></p>	<p>146:14,17 <b>conscious</b> 208:25 210:9,11 <b>consciously</b> 207:6 <b>consent</b> 16:4 243:14 278:24 <b>consequence</b> 66:3 199:2 224:20 225:2 241:9 <b>consequences</b> 28:9 151:2 188:3 191:6 193:14 225:4 233:2 234:13,16,24 236:8 <b>consider</b> 23:1 24:22 56:3 62:6 84:2 89:14 188:18,20 189:7,9,10 196:7 224:17 225:4 239:11 276:4 <b>considerable</b> 153:25 <b>consideration</b> 10:21 13:21 52:21 75:19 80:3 193:16 258:12 <b>considerations</b> 40:23 64:13 77:24 189:22 192:23 193:18 <b>considered</b> 9:23 10:20 23:2,6,8,12 49:8 88:10 108:4 226:19 275:5 <b>considering</b> 5:11 49:16 108:5 281:25 <b>considers</b> 24:23 61:2 232:13 <b>consistence</b> 78:11 <b>consistent</b> 38:17</p>
--	---	--	---

<p><b>consists</b> 262:4</p> <p><b>console</b> 112:10</p> <p><b>consolidate</b> 131:19</p> <p><b>constrain</b> 268:11 278:10</p> <p><b>constrained</b> 119:5</p> <p><b>constraint</b> 278:16</p> <p><b>constraints</b> 59:5 278:6 289:11</p> <p><b>consultant</b> 33:22</p> <p><b>consultants</b> 33:4</p> <p><b>consume</b> 133:11</p> <p><b>consumer</b> 28:18 80:24 88:20 89:5,12 90:4 92:13 95:5,17 96:3 98:9,11,22,24 99:1 106:13 109:21 111:17 112:6 113:5 114:25 116:3 118:22 120:6,22 121:13 122:11,12 123:6 128:19 135:24 144:11 154:7 156:6 158:22 206:23 214:2,7 258:1</p> <p><b>consumers</b> 8:25 35:20 51:14 86:13,24 87:12 88:25 89:9,18,21 91:19 102:25 104:6 106:19 110:4,11 111:5 112:14 114:11 117:11 118:13 121:1,10 122:21 129:24 133:15,17,18 134:19,21 135:2 153:18 158:7 278:7</p>	<p><b>consuming</b> 107:7</p> <p><b>contact</b> 276:17 279:3</p> <p><b>contacting</b> 117:21</p> <p><b>contained</b> 5:8 276:20</p> <p><b>contemplate</b> 48:24 125:13</p> <p><b>contemplated</b> 10:6 13:13 49:17</p> <p><b>contemplates</b> 50:11</p> <p><b>contend</b> 226:25</p> <p><b>content</b> 3:21 86:23 87:11,15 95:9 96:24 98:6 102:22 105:8 107:6 108:23 109:10 111:22 113:21 120:1,5,8 124:4,5 126:9,13,15 134:7 137:3,15 143:10 161:19,20 162:10,11,19 268:18 269:24 270:4,22 280:7</p> <p><b>contention</b> 230:13</p> <p><b>contest</b> 232:6 233:12</p> <p><b>context</b> 13:6,11 52:21 88:12 100:5 102:9 111:12 145:13 147:7 148:3 150:23 158:9 159:3 179:2,3 181:1 241:6 282:13 283:15</p> <p><b>contexts</b> 257:5</p> <p><b>continuation</b> 88:13</p> <p><b>continue</b> 44:2 110:9 122:5</p>	<p>124:25 146:2 256:1</p> <p><b>continued</b> 3:1 18:13 44:5</p> <p><b>continues</b> 279:10 281:6</p> <p><b>continuing</b> 17:10 206:5</p> <p><b>contours</b> 98:12</p> <p><b>contract</b> 30:21 40:15 184:1</p> <p><b>contractor</b> 33:21,22</p> <p><b>contractors</b> 40:5</p> <p><b>contracts</b> 38:7</p> <p><b>contractual</b> 153:6 183:25 267:17</p> <p><b>contrary</b> 41:21 88:15 90:12 105:6</p> <p><b>contrast</b> 58:16 63:16 231:7</p> <p><b>control</b> 17:21 18:18 23:13 27:1 43:2 57:25 60:8 87:17 182:1 205:24 206:3,24 207:23 221:12 268:17 281:11</p> <p><b>controlled</b> 17:24 26:9 30:16 57:13</p> <p><b>controlling</b> 15:16,18 26:10</p> <p><b>controls</b> 27:20 58:3 106:14 273:25</p> <p><b>controversial</b> 20:13 113:17</p> <p><b>convenience</b> 274:14</p> <p><b>convenient</b> 112:1 149:19</p> <p><b>conversation</b></p>	<p>53:10 165:6 191:24</p> <p><b>conversations</b> 43:14,19</p> <p><b>conversion</b> 94:25</p> <p><b>converters</b> 182:2</p> <p><b>converting</b> 107:5</p> <p><b>conviction</b> 145:25</p> <p><b>COO</b> 176:11</p> <p><b>cool</b> 164:2</p> <p><b>cooperate</b> 212:5</p> <p><b>cooperated</b> 145:24</p> <p><b>cooperation</b> 41:9 153:20 213:12</p> <p><b>cooperative</b> 41:1</p> <p><b>copied</b> 92:6 178:18</p> <p><b>copies</b> 23:9 89:1 99:12,13 103:3 104:7,23 105:22 106:1 127:24 143:11 149:18 152:25 153:1,4 158:25 182:19,22 183:16 184:16,18,23 229:10 255:1 257:15 275:14 277:18</p> <p><b>copy</b> 68:8 87:17 93:6,15 94:2,6 95:18 99:16 105:19 106:7,9 129:8,9 131:22 135:2,19 136:7 137:25 140:5,9 149:20 150:3,4,5,9,11 151:10 152:15,16 153:9,23 158:25 169:9 172:23 183:24 184:5 186:4 198:23</p>
--	---	---	--

<p>254:17 289:20</p> <p><b>copying</b> 27:22</p> <p>102:2 105:5</p> <p>106:6 137:15,23</p> <p>138:3,21</p> <p><b>copyright</b></p> <p>2:5,7,9,11</p> <p>4:9,12,13,15 5:9</p> <p>9:18 10:14,18,25</p> <p>12:6,10,21,23</p> <p>13:2 22:25</p> <p>23:5,6,15 24:22</p> <p>25:3,7,8 50:1,6</p> <p>52:6 59:20 60:22</p> <p>61:18 68:6 74:18</p> <p>84:1 85:22 90:19</p> <p>93:16 97:23</p> <p>99:3,8,18 104:1</p> <p>105:24 118:24</p> <p>119:24</p> <p>141:19,20,22</p> <p>142:7 148:4,6</p> <p>149:4,14 167:12</p> <p>170:25</p> <p>171:1,9,10,18</p> <p>178:12,14,17</p> <p>179:3,11</p> <p>181:5,8,13,19</p> <p>182:16</p> <p>184:12,24</p> <p>189:2,4</p> <p>190:1,5,7 193:3</p> <p>195:10 208:11</p> <p>209:1 210:9,11</p> <p>223:1 224:14</p> <p>231:3</p> <p>239:11,17,19</p> <p>258:11 268:10</p> <p>269:22 288:6</p> <p><b>copyright-ability</b></p> <p>290:11,17</p> <p><b>copyrightable</b></p> <p>12:14 290:18</p> <p><b>copyrighted</b> 10:9</p> <p>12:1,17,22 36:11</p> <p>94:2 141:24</p> <p>150:5 231:19,22</p> <p>275:12</p>	<p><b>copyright-related</b></p> <p>187:9,16 190:3</p> <p><b>copyrights</b> 94:4</p> <p>142:24 180:13</p> <p><b>core</b> 25:3</p> <p><b>corn</b> 284:8</p> <p><b>corned</b> 107:17</p> <p><b>corporate</b> 22:19</p> <p><b>correct</b> 6:10 44:11</p> <p>45:2 57:1,3</p> <p>65:14 80:13 85:8</p> <p>101:13 103:23</p> <p>107:10 128:8</p> <p>172:22 224:8</p> <p>260:17 273:4</p> <p>279:17</p> <p>280:16,19</p> <p><b>correctly</b> 72:3</p> <p>185:12 196:14</p> <p>210:24 271:22</p> <p>280:13 286:11</p> <p><b>cost</b> 17:13 33:10</p> <p>89:12 90:13</p> <p>133:17 140:16</p> <p>154:6 214:22</p> <p>216:25 228:15</p> <p>234:1 248:23</p> <p>264:3,18,19,20,2</p> <p>5 266:20,21</p> <p>272:15 273:9</p> <p>274:21</p> <p><b>costs</b> 88:24 89:9</p> <p>214:25 217:5</p> <p><b>counsel</b> 2:5,7,9,11</p> <p>4:9,12,13,14</p> <p>83:25 85:22,24</p> <p>86:1</p> <p>167:11,14,16</p> <p><b>count</b> 121:20</p> <p><b>counters</b> 88:15</p> <p><b>countervailing</b></p> <p>188:25</p> <p><b>countries</b> 9:11</p> <p>114:14</p>	<p><b>country</b> 16:19</p> <p>205:14 207:18</p> <p>238:24</p> <p><b>County</b> 152:14</p> <p><b>couple</b> 6:4 10:9</p> <p>13:12,25 14:11</p> <p>84:9,18 85:7</p> <p>91:25 119:4</p> <p>132:8</p> <p>153:11,13,14</p> <p>157:19 177:13</p> <p>198:13</p> <p>217:21,24 218:1</p> <p>220:11 275:9</p> <p><b>courage</b> 232:14</p> <p><b>course</b> 5:11 36:3</p> <p>96:20 101:19</p> <p>126:25 171:21</p> <p>230:14</p> <p>242:23,24 252:5</p> <p>253:19</p> <p><b>court</b> 49:15 87:5,8</p> <p>91:22 92:4 94:12</p> <p>95:7 96:11 101:2</p> <p>129:1 137:19,20</p> <p>138:8 139:8</p> <p>148:1,6,8,16</p> <p>171:3</p> <p><b>courts</b> 91:12</p> <p>144:16 145:12</p> <p>290:9</p> <p><b>court's</b> 138:22</p> <p><b>courtyard</b> 83:12</p> <p>164:10</p> <p><b>cover</b> 19:4 101:16</p> <p>107:23 217:25</p> <p>258:24 259:21</p> <p>265:11,25</p> <p><b>covered</b> 99:3</p> <p>268:20</p> <p><b>covering</b> 276:19</p> <p><b>covers</b> 259:21</p> <p>264:19</p> <p><b>craft</b> 65:22</p> <p><b>crafted</b> 70:19 72:9</p>	<p><b>crafting</b> 13:17</p> <p><b>Craig</b> 168:10</p> <p>194:5 205:2</p> <p><b>crash</b> 66:7</p> <p><b>crazy</b> 52:9</p> <p><b>create</b> 13:4,5</p> <p>34:10 99:15</p> <p>104:4 106:22</p> <p>132:3,6 146:24</p> <p>147:14,15</p> <p>189:11 227:3</p> <p>239:25 262:7,23</p> <p>264:22</p> <p><b>created</b> 10:3 132:4</p> <p>199:18,19</p> <p><b>creates</b> 12:17,24</p> <p>28:1 32:7 87:24</p> <p>100:3 143:15</p> <p>180:21 272:4</p> <p><b>creating</b> 81:7</p> <p>261:25</p> <p><b>creative</b> 268:17</p> <p>269:6,23 271:4</p> <p>272:5 274:12</p> <p>289:10</p> <p><b>creativity</b> 61:6</p> <p>288:23</p> <p><b>creator</b> 288:11</p> <p><b>credentialed</b></p> <p>121:25</p> <p><b>credentials</b></p> <p>32:14,16 40:17</p> <p>82:15 83:4</p> <p><b>credible</b> 31:7</p> <p><b>criminal</b> 272:1</p> <p><b>criteria</b> 32:12,14</p> <p>40:18 183:11</p> <p><b>critical</b> 9:24 15:25</p> <p>16:22,25 18:22</p> <p>20:15 49:25</p> <p>177:8 202:24</p> <p>218:25 227:5</p> <p><b>critically</b> 243:3</p>
--	--	---	--

<p><b>criticism</b> 9:18 10:8,13 13:15 16:6 104:22</p> <p><b>criticize</b> 10:15</p> <p><b>criticized</b> 10:13</p> <p><b>crop</b> 177:20</p> <p><b>crops</b> 177:10,17</p> <p><b>cross-industry</b> 69:5</p> <p><b>CRR</b> 1:23</p> <p><b>crucial</b> 8:7</p> <p><b>cruise</b> 182:1</p> <p><b>CSR</b> 1:23 292:21</p> <p><b>cue</b> 163:19,22</p> <p><b>cued</b> 108:11 163:13,24</p> <p><b>curious</b> 116:1 153:17 279:25</p> <p><b>current</b> 157:24 226:4</p> <p><b>currently</b> 19:9 24:1 74:3 101:3,6 115:15 124:5 127:10 144:23 168:1 180:21</p> <p><b>curve</b> 220:15</p> <p><b>custody</b> 152:2</p> <p><b>customer</b> 117:21 118:10 253:18</p> <p><b>customers</b> 117:1 253:11</p> <p><b>customer's</b> 120:1</p> <p><b>cut</b> 223:10</p> <p><b>CVN</b> 250:24 251:3</p> <p><b>cyber</b> 20:25 34:11,14,16 51:20 52:24 74:4 76:3</p> <p><b>cycle</b> 107:16</p>	<p style="text-align: center;"><u>          </u> <b>D</b> <u>          </u></p> <p><b>dairy</b> 176:20</p> <p><b>Dakota</b> 259:5</p> <p><b>damage</b> 59:6</p> <p><b>Damle</b> 2:7 4:11 31:17 32:24 43:21 44:11,15 55:9,21 57:17 65:2 75:21 85:23 101:4 104:8 123:12 125:19 150:1,16 155:6 156:15 167:14 188:4 189:5 190:15 191:8 214:16 215:20,24 216:21,24 218:2 219:6 227:18 228:21 229:2 236:6,21 237:15 239:9 260:15 261:10,20 262:11 264:3 270:5 276:8</p> <p><b>Dan</b> 167:25</p> <p><b>dangerous</b> 29:7 73:9 77:18 187:14 245:19</p> <p><b>darn</b> 287:19</p> <p><b>DARPA</b> 17:8,12 37:8 40:14 44:5,7</p> <p><b>Daryl</b> 1:23 292:2,20</p> <p><b>data</b> 15:19,22 116:12 152:14 155:12 156:14 157:23 209:13 263:22,23,25 264:3</p> <p><b>database</b> 124:23</p> <p><b>date</b> 276:24 292:13</p>	<p><b>Dated</b> 292:20</p> <p><b>dating</b> 24:3</p> <p><b>daughter</b> 131:20</p> <p><b>daughters</b> 131:13</p> <p><b>David</b> 4:23,24</p> <p><b>day</b> 90:17 131:12 149:13 203:11 212:4 215:7 218:15 222:1</p> <p><b>days</b> 71:5 73:23 79:14 80:5 122:3 177:14,15 207:16 212:7 215:7</p> <p><b>DC</b> 108:3 160:21</p> <p><b>DDCP</b> 146:13</p> <p><b>de</b> 89:11,16</p> <p><b>deactivated</b> 206:19</p> <p><b>deadline</b> 203:1</p> <p><b>deal</b> 52:10,11 73:23 102:5,6 179:19 186:8 194:13 249:19 250:3 255:18 260:9</p> <p><b>dealer</b> 203:5 216:11,15 265:15</p> <p><b>dealers</b> 80:1 177:17 202:17,18 205:10,12 214:6</p> <p><b>dealership</b> 279:2</p> <p><b>dealerships</b> 177:8</p> <p><b>dealing</b> 181:10 257:14,16 259:12</p> <p><b>deals</b> 125:12</p> <p><b>dealt</b> 199:15 234:14</p> <p><b>death</b> 240:8</p>	<p><b>debate</b> 74:20 76:4 136:18</p> <p><b>debating</b> 209:1</p> <p><b>decade</b> 11:22</p> <p><b>decades</b> 88:10 125:8 182:7,8</p> <p><b>decades-long</b> 181:24</p> <p><b>DECE</b> 3:22</p> <p><b>decide</b> 33:10 49:16 287:18</p> <p><b>decided</b> 60:4 91:12 140:24 141:1 161:18</p> <p><b>deciding</b> 126:9</p> <p><b>decision</b> 12:8 116:5 137:14,18,20 138:2,16,22,24 139:8,11,15,18,2 0,25 141:1 148:2 149:2 224:15 225:4 234:5 247:21 289:10</p> <p><b>decisions</b> 116:6 125:14 137:12,22 138:11 147:7 288:19</p> <p><b>decree</b> 243:14</p> <p><b>deemed</b> 99:17</p> <p><b>deep</b> 142:2 145:14</p> <p><b>Deere</b> 172:24 173:1,2,5 174:2</p> <p><b>Deere's</b> 175:19,24 203:14 283:22</p> <p><b>def</b> 119:14 133:20 162:3,4</p> <p><b>defeat</b> 151:21</p> <p><b>defects</b> 283:16</p> <p><b>defendant</b> 152:22</p> <p><b>defense</b> 3:4 7:16</p>
---	--	---	---

168:7 259:17 <b>defer</b> 101:14 130:4 236:17 <b>deference</b> 65:21 <b>defined</b> 93:21 162:10 <b>defines</b> 196:16 <b>definitely</b> 16:3 195:22 266:13 <b>definition</b> 82:14 120:13,19 143:8 162:5 268:22 284:10 288:6 <b>defraud</b> 247:24 <b>degrades</b> 289:2 <b>degree</b> 79:1 123:2 204:14 224:19 <b>degrees</b> 218:15 <b>deleterious</b> 178:18 <b>delicate</b> 238:9 <b>deliver</b> 134:2 <b>delve</b> 6:7 <b>demand</b> 106:13 <b>demonstrate</b> 73:16 112:6 <b>demonstrated</b> 176:25 235:6 <b>demonstrates</b> 38:9 281:22 <b>demonstrating</b> 26:5 <b>demonstration</b> 136:22 <b>denied</b> 34:21 138:13 226:15 <b>denies</b> 98:13 <b>deny</b> 11:2 <b>denying</b> 179:12 268:9 <b>department</b> 2:14 4:17 152:20	242:7 <b>departure</b> 35:10 148:21,22,24 <b>depend</b> 19:7 79:23 <b>dependent</b> 68:8 90:20 92:15 <b>depending</b> 90:17 162:1 188:19 <b>depends</b> 80:1,8 128:2 217:21 221:23 <b>deploy</b> 79:20 220:22 <b>deposited</b> 115:3 161:25 <b>Deputy</b> 2:7 4:11 85:23 167:14 <b>derivative</b> 12:18,25 13:4,5,9,10 <b>Derive</b> 241:25 262:23 <b>describe</b> 42:25 44:12 274:18 <b>described</b> 47:19 80:20 103:22 141:17 162:23 180:9 212:22 285:24 <b>describing</b> 13:15 47:11 51:17 161:18 216:10 274:21 <b>designed</b> 19:15 27:19 28:13 58:14 61:5 109:6 142:21 180:5 203:20 206:25 210:16 212:16 219:5 237:14 255:7 274:11 288:10 <b>designing</b> 207:6 <b>desired</b> 12:12	<b>desktop</b> 22:18 <b>despite</b> 160:14 <b>destroy</b> 177:15 <b>detail</b> 24:14 31:2 62:1 109:4 174:7 231:2 <b>detailed</b> 116:11 <b>details</b> 42:20,22 44:10 46:4 48:17 109:15 <b>detect</b> 206:18 <b>determination</b> 12:13 259:15 <b>determine</b> 19:14 189:16 218:23 <b>determined</b> 218:21 <b>determines</b> 275:2 <b>determining</b> 232:2 275:2 <b>deterred</b> 53:2,3 <b>deterring</b> 157:25 <b>Detroit</b> 243:5 272:21 <b>devastating</b> 141:16 <b>develop</b> 5:6 147:2 153:20 187:2 199:9 218:19 249:8,11 264:21 <b>developed</b> 54:24 98:1 109:7 130:22 149:6 210:6 287:22 <b>developer</b> 50:8 <b>developers</b> 281:20 <b>developing</b> 5:13 <b>development</b> 158:1 288:23 <b>developments</b> 101:10,12	<b>develops</b> 173:3 <b>deviates</b> 285:12 <b>device</b> 23:13 63:19 113:25 131:5,6 135:1,9 154:23 155:1 156:9,12,20 163:21 203:20 212:20 258:21 282:16 285:2 <b>devices</b> 9:10 19:16 23:7 28:5 104:7 109:11,13 110:18 128:20 129:12,19 131:15,16 134:12,24 135:3 140:12,14,19 156:7 157:6 212:18 259:1 275:19 285:10 <b>devote</b> 34:20 61:3 <b>diagnose</b> 177:6 213:25 223:25 227:1 <b>diagnoses</b> 213:19 220:2 252:23 262:25 265:25 <b>diagnosis</b> 165:1 176:8 191:13 205:21,23 207:2 218:3 226:23 227:2 235:4 241:16 260:23 262:2 268:1 269:10 <b>diagnostic</b> 174:3 176:5 214:20 221:7 222:4,10,13,24 235:7 245:8 247:9 265:14,20 <b>diagnostics</b> 196:24 250:16 <b>diagrams</b> 215:12 222:1
---	--	---	--

<b>dialogue</b> 231:9	273:11 277:2	115:24 124:1	70:1,5 71:12
<b>diameter</b> 236:24	288:15,16	129:12 168:2	72:1 73:6,12
<b>dictated</b> 289:10	<b>differential</b>	253:19 276:17	74:20 75:2,25
<b>dictionary</b> 149:13	135:24	<b>directed</b> 176:7	76:7,25 78:11
<b>die</b> 240:1	<b>differentiate</b>	<b>direction</b>	<b>disclosures</b> 48:11
<b>died</b> 157:6	256:12	258:5,6,20	79:3
<b>Diego</b> 15:7 43:4	<b>differently</b> 233:20	273:17 292:9	<b>discover</b> 81:9
<b>diesel</b> 237:9	288:16	<b>directions</b> 239:15	<b>discovered</b>
243:5,19	<b>differs</b> 136:4	<b>directly</b> 21:25	8:10,16
272:17,21	<b>difficult</b> 49:20	50:8 57:23 73:8	<b>discovering</b> 12:11
274:23	83:5 107:7 147:5	105:1 116:16	<b>discovery</b> 100:20
<b>difference</b> 36:21	195:2 249:7	282:15	<b>discrimination</b>
55:5 144:6	276:18 278:9	<b>Directors</b> 34:15	100:9
178:12 185:23	279:10,11	<b>disable</b> 220:17	<b>discs</b> 108:25
194:18 206:9	<b>difficulties</b> 272:19	<b>disabled</b> 206:20	112:18 114:15
246:9,16 257:12	274:21	<b>disabling</b> 28:17	116:17 129:8
<b>differences</b> 131:1	<b>difficulty</b> 82:12	<b>disabuse</b> 246:15	158:5
169:5 173:14	83:2 147:1,11	<b>disagree</b> 262:16	<b>discuss</b> 20:13
174:10 178:11	<b>dig</b> 17:14 145:14	<b>disagreeing</b>	23:23 24:13 36:3
<b>different</b> 13:20	<b>digital</b> 3:4,21 7:16	187:10	94:8 98:21
15:13 22:14	21:24 86:23	<b>disagreement</b>	167:2,7 174:20
23:15,16 28:7	87:11 95:11	165:14,24	<b>discussed</b> 22:20
36:6 45:19 59:4	102:20,23 103:2	<b>disc</b> 94:6,7 100:1	46:12 89:3
62:17 66:17	104:2	102:20 103:2	111:12 152:8
78:17 90:18 92:5	105:3,13,15	105:9,14 110:20	170:11 177:25
98:6 102:11	109:4 116:24	112:20 115:22	178:10 180:7
103:24 108:7	117:17 120:12	116:23,24	227:8 250:11
110:18 111:18	121:5 124:24	117:1,17,24	256:14 268:23
112:2,22	125:16,18	118:3 120:12	<b>discusses</b> 51:12
114:19,23	127:22	<b>disclose</b> 48:17	<b>discussing</b> 73:8
118:15 119:11	129:8,9,14,18	51:5,14 71:2,4,5	84:22 91:10
126:6	130:1,16,20,24	74:10 78:14	97:15 181:18
131:18,21,24	131:9,21	<b>disclosed</b>	290:19
133:8 139:9,10	134:7,19 135:2	29:17,22,23 30:6	<b>discussion</b> 11:15
143:2 146:9	136:6 143:4	70:7 73:16	37:19 48:1 49:25
151:20 160:22	149:10 168:7,14	<b>disclose-to-the-</b>	52:8 55:1,3
162:1 169:11	204:10 248:20	<b>manufacturer</b>	56:11 62:1 74:18
172:5 181:8	249:5	74:15	93:25 98:21
192:9,17 194:9	<b>digitally</b> 125:9	<b>disclosing</b> 50:3	103:19,20
221:22	126:18,21,23	<b>disclosure</b> 29:21	138:18,19,20,24
224:18,19	127:5,13	30:9 50:9,16	147:19 154:3
234:16 245:21	<b>digitizing</b> 107:5	53:5,7,21 54:4	160:25 167:8
248:6,7,9	<b>digress</b> 15:12	55:14 56:2	193:13 225:11
254:1,18 257:13	<b>direct</b> 92:21		259:25
258:16 263:11	103:13 109:24		<b>discussions</b> 225:10
267:6 272:19			

231:8 <b>disenfranchised</b> 204:9 <b>Dish</b> 88:3,6 91:22,24 92:2,5,9,11,22 94:11,12,23,24 95:6 96:14 97:15 100:19 101:15 102:5,7 137:9 138:6 <b>disk</b> 34:12 <b>dismissed</b> 8:21 37:20 51:11 <b>Disney</b> 3:19 86:21 110:23 126:2 127:8,18 128:6,17,19,21,2 3 129:5,8,23 130:15,20,22 131:1,5 132:1,6,7,10,20 133:9 134:21 159:23 <b>DisneyMoviesAny where.com</b> 131:4 <b>Disney's</b> 118:7 <b>displace</b> 96:23,25 150:9 <b>displaces</b> 150:11 <b>displacing</b> 96:16 <b>display</b> 113:23 <b>displayed</b> 23:10 <b>displaying</b> 15:17 156:21 <b>dispose</b> 290:12 <b>dispositive</b> 160:3 <b>dispute</b> 31:24 32:5 68:23 69:7 138:4 <b>disputed</b> 5:16 175:18 214:14 <b>disseminated</b> 37:7	68:19 79:10 <b>distinct</b> 38:13 55:5 72:16 <b>distinction</b> 36:14 139:4 249:5 277:8,13,17 <b>distinctions</b> 171:25 277:2 <b>distinctive</b> 22:7 <b>distinguish</b> 172:4 206:6 277:4 287:8 <b>distinguishable</b> 101:22 152:9,11,13,18 <b>distinguishes</b> 172:11 <b>distributed</b> 80:25 103:24 125:14 130:23 <b>distributing</b> 27:23 98:5 104:2 <b>distribution</b> 28:1 29:6 95:8 106:4 107:6 108:25 109:2 151:14,24 152:1 162:14 <b>distributor</b> 161:20 <b>distributors</b> 111:19 <b>district</b> 101:2 137:19,20 138:8,22 139:8 162:13 <b>disturb</b> 64:11 <b>disturbing</b> 274:6 <b>Division</b> 212:15 <b>DMA</b> 111:14,15 113:3 116:14 123:14 126:19 127:5,6,7,10,20 128:6 130:6,19,23 133:1	134:6,11,18 162:20 163:12,23 <b>DMCA</b> 20:19 22:13 24:3,5,12,18,20 25:1 38:11 43:20 44:4 47:17 48:2,9,16 74:1 76:21 82:7 105:3 141:25 142:1,6 170:1 178:8,12 182:4 234:9,10 <b>DMCA's</b> 130:1 <b>DNA</b> 25:1 <b>doctrine</b> 97:10 <b>doctrines</b> 189:4 248:1 <b>document</b> 170:13 182:23 183:7 200:8 <b>documentary</b> 229:14 <b>documented</b> 74:4 <b>dollar</b> 158:15 <b>dollars</b> 217:3,4,22 218:1 243:13 248:24 <b>domestic</b> 48:1 224:25 <b>domestically</b> 73:4 <b>done</b> 39:19 42:18 47:13 50:12 51:1 63:9 66:17,19 76:16 78:6 122:1,3 125:12 141:23 210:24 227:2 236:7 250:1 <b>Dorgan</b> 213:23 216:5 228:7,18 <b>DOT</b> 59:16 <b>doubt</b> 29:8 180:22 237:18	<b>Douglas</b> 166:8 168:15 205:4,5,7 207:14 208:8,16 209:3,7 210:10,19 211:1 212:12,23 213:6,14,18 215:2,21 216:1,23 217:1 218:8 219:18 220:7 221:1,5 224:11,13 225:7 228:10 229:8 235:22 236:18 237:7,17 242:21 243:18 250:13,14 262:11 263:6,7 264:5 265:12 275:21 <b>download</b> 90:11 105:8 111:7,8 113:12 115:13 119:10 129:12 131:4 184:15,16 <b>downloadable</b> 128:24 129:6,17 <b>downloaded</b> 117:5 <b>downloading</b> 89:15 128:3 159:21,22 <b>downloads</b> 90:1 102:20,23 103:2 105:13 120:15 <b>downstream</b> 213:10 <b>Dr</b> 7:12 8:3 14:23 29:9,14,16 31:19 38:25 42:6 47:19 54:25 66:12 67:18 68:23 72:24 76:6 81:6 83:3 <b>draft</b> 278:9 <b>drafted</b> 23:3 180:21 255:21 257:20 271:15
--	--	--	--

273:18,23	159:15,20 161:2	<b>economic</b> 126:21	88:17,19,23,24
<b>Dreamworks</b>	270:6,8 271:19	143:2 278:6	91:8,12 92:18,21
114:23	<b>D-V-D</b> 115:20	<b>economics</b> 118:21	93:1 94:21
<b>drive</b> 157:3,18	<b>DVDCCA</b> 3:17	<b>economy</b> 26:21	96:2,3,8,16
186:6	137:2 140:13	211:11 226:2	99:20 100:8
<b>driven</b> 65:13	145:9	236:1 237:22,24	141:8 155:20,24
<b>driver</b> 16:22 18:20	<b>DVDFab</b> 141:9	238:3 242:5	157:23 160:4
272:5	143:23 144:8	243:8,10,11,21	169:16 170:5
<b>drivers</b> 206:1	145:22 158:1	<b>ecosystem</b> 3:22	180:5 187:7
<b>drives</b> 157:7 277:5	<b>DVD's</b> 87:22	86:24 87:11	189:10 192:19
<b>driving</b> 223:8	89:19 97:19	128:21 131:3	228:7 236:12
271:21 272:6	99:22 102:19	133:11 134:7,18	268:8
279:7	112:16 128:25	135:5	<b>effected</b> 231:20
<b>dropped</b> 58:4	154:5 155:16	<b>ecosystems</b> 133:8	<b>effective</b> 181:2
<b>dubious</b> 176:5	156:13 157:25	<b>ECU</b> 18:3 26:17	<b>effectively</b> 202:8
<b>Ducati</b> 228:23	158:18 160:1	79:24 80:9 170:3	<b>effects</b> 38:3,14
<b>due</b> 20:22 144:9	254:3,4,17,23	184:21 205:24	47:12 63:22
225:17 287:3	255:1	206:8 213:1,9	88:22 91:15,17
<b>dummies</b> 66:7	<hr/>	247:5 275:13	94:18 155:21
<b>duplicate</b> 101:17	<hr/>	<b>ECU's</b> 15:22	176:24 177:1
<b>durability</b>	<hr/>	16:14 18:15,22	188:23,25
218:24,25 236:2	<b>E</b>	26:10,13	231:16 232:4
238:19	<b>E2</b> 253:5	27:16,20 31:3	258:3 261:24
<b>during</b> 5:11 17:17	<b>eager</b> 204:8	58:10,13,24	282:5
57:10 63:20	<b>earlier</b> 6:15,21	182:25 183:4,7	<b>efficiency</b> 58:23
149:13	16:19 29:16	206:9 246:8	206:11 239:18
<b>duty</b> 53:21 283:16	68:17 69:1,10	249:19 251:7	<b>efficient</b> 233:10
<b>DVD</b> 87:17 90:9	76:15 81:21	275:15 276:20	<b>effort</b> 34:7 41:10
93:9,14,23	85:20 96:22	277:14,16,19	101:17
105:20 106:9	128:16 133:2	284:21 285:17	<b>efforts</b> 27:24
116:2 117:14,15	137:10 140:8	288:16	31:15 63:11 69:5
119:7,15	141:2 148:9,23	<b>edge</b> 155:11	134:18 210:1
120:12,19,25	180:7 193:2	<b>edit</b> 225:12	<b>EFF's</b> 53:23
121:4 124:13	207:4 225:11	<b>educational</b>	<b>eight</b> 177:1 240:17
129:7 135:25	266:18 268:14	160:23 164:5	<b>either</b> 10:11 63:22
136:6 137:4	275:13 282:24	<b>EFF</b> 31:11 60:3	74:7 88:6 110:25
141:6 142:3	<b>early</b> 51:8 119:8	179:13 234:9	114:14 117:21
143:3,4 145:6	<b>easier</b> 134:20	<b>effect</b> 9:7 13:11	130:4 132:10
146:7,19 153:18	151:25 248:20	14:7 32:7 36:24	143:22 144:1
154:5,8,19,20,25	<b>easily</b> 81:2	37:4,11 38:5	147:16 157:22
155:4,9,17	<b>eastern</b> 204:13	41:20 42:12	160:7 162:11
156:2,17,23	<b>easy</b> 42:12 109:10	44:24 47:10,18	214:23 277:25
157:1,3,13,14,15	129:24 132:15	55:2 63:3,15	<b>eject</b> 35:23
,17 158:4,6,9,14	153:19 161:5	66:10 67:10	<b>elaborate</b> 47:20
	197:8 200:7	69:12 79:1 82:7	75:18 194:8
	201:23 202:2	87:25	
	249:2 272:22		



<p>252:9</p> <p><b>electrical</b> 204:14</p> <p><b>electronic</b> 3:8,10 7:11 26:9 28:5 133:23 156:7 168:9 275:19</p> <p><b>electronically</b> 117:2</p> <p><b>element</b> 49:2 51:5 138:12 286:20</p> <p><b>elements</b> 57:12 184:8 216:7 282:6,10 287:21 289:7 290:14</p> <p><b>eliminate</b> 38:10 191:23</p> <p><b>else</b> 67:15 71:6 83:6 145:17 193:21 198:25 220:19 224:7 234:22 239:14</p> <p><b>E-mail</b> 229:22 230:3</p> <p><b>embedded</b> 273:24 285:1,2 289:18</p> <p><b>embellishment</b> 154:17</p> <p><b>embodied</b> 94:6 151:9 290:4</p> <p><b>embraces</b> 97:11</p> <p><b>emergency</b> 15:17</p> <p><b>emission</b> 58:3,21 216:6,18,19 236:2</p> <p><b>emissions</b> 26:21 28:19 57:25 174:24 175:1 218:23 226:2 235:25 236:3 238:12 242:6 243:10 244:1</p> <p><b>emit</b> 237:9</p> <p><b>emphasize</b> 126:5</p>	<p><b>employed</b> 30:3</p> <p><b>employee</b> 292:12</p> <p><b>employees</b> 40:4</p> <p><b>en</b> 171:6</p> <p><b>enable</b> 26:14 128:19 140:17 141:25 142:23 143:13 144:2</p> <p><b>enabled</b> 141:8 146:13,16 161:19 162:18</p> <p><b>enables</b> 271:20</p> <p><b>enabling</b> 48:14 77:6 141:4</p> <p><b>enacted</b> 35:14</p> <p><b>encompasses</b> 111:8</p> <p><b>encounter</b> 63:20</p> <p><b>encourage</b> 17:14 29:11 130:2 273:14</p> <p><b>encouraged</b> 54:24 79:5</p> <p><b>encourages</b> 24:22 30:14 70:10</p> <p><b>encrypt</b> 57:19 209:12</p> <p><b>encryption</b> 58:1 103:1 104:3 208:17 247:8 254:4</p> <p><b>endanger</b> 56:21 68:20</p> <p><b>endorsed</b> 227:7</p> <p><b>energy</b> 206:3 242:7</p> <p><b>enforce</b> 64:16 151:25 158:1 233:17 259:17</p> <p><b>enforceable</b> 184:1</p> <p><b>enforced</b> 38:21 48:9 59:25</p>	<p><b>engage</b> 9:14 19:22 53:1 65:1 70:14 104:6 151:5 191:4 253:2 261:14</p> <p><b>engaged</b> 68:25</p> <p><b>engaging</b> 49:3 151:24 152:24 165:13 182:7 252:5 253:18</p> <p><b>engine</b> 26:11 27:1 211:9,13 217:6 218:10,20 221:12 243:4,5,16 251:6</p> <p><b>engineer</b> 195:13,17,18 199:12,23 222:16 262:6 263:4</p> <p><b>engineering</b> 16:13 185:1 196:6 204:14,17 262:24 281:18,22,23 285:25 286:17,23</p> <p><b>engineers</b> 21:1 63:12 211:12 237:19 263:25</p> <p><b>engines</b> 16:2</p> <p><b>enhance</b> 201:3,23 202:8 203:23</p> <p><b>enhanced</b> 125:18</p> <p><b>enhancements</b> 198:24</p> <p><b>enhancing</b> 24:6</p> <p><b>enjoin</b> 54:10</p> <p><b>enjoy</b> 134:3</p> <p><b>enormous</b> 237:10</p> <p><b>ensure</b> 26:18</p> <p><b>enter</b> 40:15</p> <p><b>entered</b> 229:7</p>	<p>243:14</p> <p><b>entertain</b> 268:18</p> <p><b>entertainment</b> 3:21,24 86:23 87:11 124:13 183:9 265:9 269:1,4,6,13,17, 20 270:22 273:19 274:1,5 277:20 279:21,23 280:7,15</p> <p><b>entire</b> 38:22 59:25 60:1 105:25 132:21 134:8 150:4 158:25 159:1 177:20 263:21</p> <p><b>entirely</b> 116:4 240:25</p> <p><b>entitled</b> 97:21 98:22,25 99:1</p> <p><b>entitlement</b> 132:2</p> <p><b>entity</b> 127:1</p> <p><b>entry</b> 17:11 65:18 126:8</p> <p><b>enumerated</b> 189:3</p> <p><b>environment</b> 30:16 59:19 97:7 143:3 171:14 188:16 189:12 190:19,23 191:7,15 192:20 239:13,21,22 242:12 243:12,22 244:3 260:12</p> <p><b>environmental</b> 26:23 187:22 189:9 216:3,4</p> <p><b>environments</b> 207:23</p> <p><b>EPA</b> 56:6,17 57:7,8 59:16 174:23,25 211:4</p>
--	--	---	--

238:20 243:12 250:19 <b>episodes</b> 124:19 <b>equal</b> 232:14 267:20 <b>equally</b> 22:1 <b>equipment</b> 134:9 165:2 173:11 174:15,16 177:6 203:22,25 204:3,4,6,8,20 229:1 236:3 242:4 259:3 260:10,11 263:13 270:12 <b>equipped</b> 26:15 <b>equivalent</b> 99:1 264:2 <b>ESA</b> 86:18 100:14 <b>especially</b> 19:25 60:1 84:19 90:16 102:23 122:22 169:8 <b>ESPN</b> 132:11 <b>essence</b> 205:16 <b>essential</b> 48:11 51:5 <b>essentially</b> 22:11 73:11 117:3,11 119:15 186:13 188:10 189:24 222:19 246:22 289:25 <b>established</b> 36:9 105:7 215:3 225:14 <b>et</b> 17:22 <b>ethic</b> 181:25 <b>ethical</b> 75:25 <b>Europe</b> 255:25 <b>evaluate</b> 5:6 21:9 154:14 190:7,18,21	191:1,3 192:14 245:1 <b>evaluated</b> 245:12 <b>evaluating</b> 187:7 192:15 <b>evaluation</b> 31:4 43:23 <b>evening</b> 291:2 <b>event</b> 215:10 <b>eventually</b> 198:4 <b>everyone</b> 4:5 6:4 7:9 17:16 29:2 49:14 85:9 87:4 107:4 109:18,25 174:4 209:6 218:12 267:18 <b>everyone's</b> 52:16 <b>everything</b> 204:17 215:19 216:20 235:8 260:25 280:12 <b>everywhere</b> 134:3 <b>evidence</b> 4:19 5:16 14:9 35:24 36:1,22 37:10 38:18 40:9 47:9 63:2 65:4 66:10 69:11 76:11,12 84:21 90:8 96:17,23 155:6 169:3,5 170:20 171:21 172:17 173:7,15,25 174:5,13 175:11,13,15 176:25 184:20 187:18,23 193:12,13 229:14 233:15 240:23 241:1,2 282:2 285:7 289:16,22 <b>eviscerate</b> 141:12 <b>evolution</b> 149:3 <b>evolved</b> 18:1 149:5	<b>exact</b> 104:23 216:6,14 <b>exactly</b> 6:18 13:24 32:4 99:2 107:10 142:18 158:19 171:3 181:12,17,18 214:25 238:4 254:23 <b>examine</b> 18:23 <b>example</b> 16:15,17 27:1 36:9 44:25 49:24 54:12 59:7 63:10 64:16 82:2 93:9 95:10 100:3 111:25 112:8 115:6 118:1 120:18 122:1 126:16 142:15 146:19 155:2 156:25 160:12 161:21 162:3 163:22 172:25 187:20 198:15 201:5 210:21 220:24 221:25 224:1 228:24 233:18 236:21,22 237:16 241:17,25 242:9,10 243:15 244:14 247:20 252:11 257:16 260:20,21 261:8 262:20 266:15,18 269:11 270:5,13 272:3 276:13 277:3 <b>examples</b> 11:16 31:20 41:15 42:5 102:25 114:20 182:14 196:5 201:18 220:11 240:17 241:23 242:17 243:4 252:22 260:8	267:8 <b>excellent</b> 211:1 <b>except</b> 40:10 76:24 99:4 191:17 243:11 <b>exception</b> 39:9,15 82:16 106:1 179:5 281:18 <b>exceptions</b> 125:15 285:4 <b>excessive</b> 228:16 265:1 <b>exchange</b> 89:6 263:25 <b>excited</b> 4:18 <b>exciting</b> 102:15 <b>exclude</b> 265:3 <b>excluded</b> 265:10 <b>excludes</b> 271:15 <b>excluding</b> 271:16 <b>exclusion</b> 265:19 <b>exclusions</b> 265:8 <b>exclusive</b> 13:3,5 99:4 106:1 <b>exclusively</b> 150:14 <b>exemplifies</b> 31:12 <b>exemption</b> 9:22 10:5,21 11:3,14 13:13 14:8 19:3,19 21:23 23:1 25:25 27:10,18,21 29:3,11 32:6 33:1 35:10,12 38:10 39:4 40:22 42:3 48:19,21 50:16 52:14 53:6,14,15,16 55:14,22 56:8 57:21 59:14 64:9,11 65:21 70:3,10,20,25 71:1,10
--	---	---	--

72:8,9,21 73:15,18 74:1,16 75:5 77:25 79:4 81:16,20,23 82:1,4,11,24 86:13 87:21 88:1 91:7 93:7,18 94:17,22 95:12,23 97:1,4,9 100:16 141:5,16 142:12 144:1,2,7,19 147:4,14,21 148:18 149:3 158:2 160:5 179:12 189:1 193:19 201:8 205:21 213:21 219:22 224:22,23 225:21 226:15 233:2 235:2,3 239:25 240:6 242:11 245:24 251:13,19 255:13 257:5 259:14 261:8 268:6,8,9,20 271:1,6,7,8 281:21 282:1,3,4  <b>exemptions</b> 5:7 23:6 24:24 35:16 40:24 58:19 64:17 70:19 84:3 102:18 160:22  <b>exercise</b> 95:18 <b>exert</b> 99:8 <b>exhibit</b> 6:14 84:22 85:1 110:7 124:4,21 130:9,10,12 174:6 228:18,19 229:7 273:2,8 274:15  <b>exhibits</b> 6:10,12,20 84:18 166:1 <b>exist</b> 22:18 33:21	64:22 65:19 81:8 137:17 141:3 175:1  <b>existence</b> 160:2  <b>existing</b> 53:6 89:22 102:12 143:7  <b>exists</b> 25:3 38:11 80:19 102:13  <b>expanded</b> 17:23 134:18  <b>expect</b> 21:7 34:5 91:9 106:8 115:17 146:2 276:22  <b>expectation</b> 123:4 251:15 278:7 289:17  <b>expectations</b> 98:9,10 289:25  <b>expected</b> 106:10 276:7  <b>expensive</b> 169:22 217:10,17 223:18 266:22 273:12  <b>experience</b> 54:3 55:4 79:19  <b>experiences</b> 176:20  <b>expertise</b> 11:7 64:7,13,20 175:17 176:14,16,18 189:25 190:7,25 199:10  <b>experts</b> 5:21 8:3 11:21  <b>explain</b> 15:12 124:18 198:20  <b>explained</b> 182:21  <b>explaining</b> 263:22  <b>explains</b> 51:19	77:17 244:23  <b>explanation</b> 47:22  <b>explicitly</b> 10:14 102:1 153:3  <b>exploit</b> 14:17  <b>exploitation</b> 19:11 56:20 66:21  <b>exploited</b> 57:14  <b>exploiting</b> 44:24  <b>explore</b> 85:16  <b>explored</b> 15:7  <b>exploring</b> 74:25 193:9  <b>expressed</b> 59:22 226:9,16  <b>expresses</b> 40:12  <b>expression</b> 12:15 61:6  <b>expressly</b> 173:18  <b>extended</b> 216:19  <b>extends</b> 59:11  <b>extension</b> 170:17  <b>extensive</b> 100:20 157:1  <b>extent</b> 11:4 12:10 13:19 76:1 81:8 190:14 192:8 234:5 268:25 271:3  <b>external</b> 155:4 289:11  <b>extra</b> 87:4 114:16 115:21 198:10  <b>extract</b> 18:22  <b>extraordinarily</b> 5:1 259:2  <b>extreme</b> 148:6 239:24  <b>extremely</b> 4:22 96:21 179:16 281:1	<b>eye</b> 234:21 240:13  <hr/> <b>F</b> <hr/> <b>face</b> 88:20 173:25  <b>faced</b> 82:13 143:2 147:12  <b>facie</b> 38:15 169:2  <b>facilitate</b> 49:22 50:6  <b>facilitates</b> 39:22,24  <b>facilities</b> 212:6  <b>fact</b> 8:23 9:21 11:14 12:10 30:20 32:5,8,10 35:7 44:18 51:16 54:5 60:14 61:15 63:22 67:1 69:7,10,16 70:10,20 78:25 79:2 82:23 87:3 91:19 94:5,20 95:17 98:1,18 99:25 110:22 114:17 122:14 146:23 148:3 150:22 151:18 154:11 160:1,14 183:14 184:15 185:25 214:14 239:25 257:5 267:24 277:18 282:18 287:21 288:22  <b>faction</b> 89:19  <b>factor</b> 13:21 49:7,16,20 50:12 96:20 98:5 102:10 140:10,11,20 184:3,6 189:6 192:3,10,22 232:21,22 275:2  <b>factors</b> 9:23 10:7,19 49:1 88:1 90:23,25
---	--	--	---

104:20 160:6 171:19 189:3 193:16 224:16 231:23,25 232:1,12 247:20 <b>factory</b> 204:16 218:9,11 <b>facts</b> 31:25 64:1 96:15 119:4 241:7 <b>factual</b> 12:13 72:25 <b>fail</b> 107:17 203:4 <b>failed</b> 226:20 <b>fair</b> 13:6,22 36:18 50:2 88:5 91:11,16 92:14 96:20 97:9,10 98:4,14,16 99:10 100:18 102:2,5,10 104:10,17 106:6 138:12,21 139:2,6,9 147:21,24 148:11,14 152:17 154:11 182:16 191:18 192:3,6,11,15 194:3 214:12 231:5 232:8 240:3 286:18 287:5,18,22 289:1,4 290:21 <b>fairly</b> 157:1 <b>faith</b> 39:20 48:23 72:6 <b>fall</b> 34:9 39:8 72:19 76:21 <b>falling</b> 102:3 <b>falls</b> 72:19 <b>false</b> 225:23 290:5 <b>familiar</b> 165:19 212:12,23 285:9 <b>families</b> 131:14	<b>family</b> 112:24 131:13,14,15 162:3 <b>family's</b> 113:11 <b>fantastic</b> 266:12 <b>fantasy</b> 132:11 <b>farm</b> 174:15,16 202:21 204:5,15,20 229:1 259:3,4 283:24 <b>farmer</b> 176:20 177:9 202:15 203:3 204:13 283:23 <b>farmers</b> 173:8 175:17,18,20 176:14,15 177:3,4 202:19,23 203:17,25 204:7 259:5 270:17 283:25 284:6,15,24 <b>Farms</b> 174:6 <b>fashion</b> 81:12 <b>fashioned</b> 83:1 <b>fast</b> 129:4 <b>faster</b> 211:10,13 217:12 236:16 <b>father's</b> 225:15 <b>favor</b> 88:1 192:11,21 193:18 278:5 <b>favours</b> 53:7 <b>fear</b> 45:10 48:16 195:7 242:14 <b>fears</b> 43:20 44:4 <b>feature</b> 129:11 <b>features</b> 16:22 18:2 21:9 26:16 35:17 280:15 <b>February</b> 130:17	134:5 <b>federal</b> 37:8 58:18 213:22 271:23 <b>federally</b> 40:6 <b>fee</b> 117:8,12 119:6,7,12,25 120:13 <b>feel</b> 111:18 133:12 165:6 <b>feeling</b> 170:12 204:9 <b>fellow</b> 29:9 34:5 <b>felt</b> 44:6 61:15,24 <b>fender</b> 220:15 <b>fewer</b> 154:21,22 <b>fiction</b> 14:14 <b>fid</b> 40:13 <b>field</b> 17:11 19:25 20:22 45:15 50:4 68:25 203:15,24 233:7 242:8 262:9 <b>fies</b> 40:13 <b>fifth</b> 231:25 <b>fight</b> 200:11 <b>figure</b> 75:9 79:7,9 222:17,24 246:22 250:2 252:22,24 277:22 <b>figured</b> 43:8 <b>figures</b> 253:1 <b>filed</b> 38:1 67:15 137:16 228:19 <b>filing</b> 80:16 <b>film</b> 127:1 136:4,10 <b>films</b> 89:24 90:4 128:1 129:11 <b>final</b> 53:23 146:3 290:23	<b>finally</b> 69:9 88:1 113:1 <b>financially</b> 292:11 <b>finding</b> 21:12 31:22 37:13 77:5 96:15 97:9 120:7 137:21 189:19 <b>findings</b> 17:18 29:17,18,20 54:23 <b>finds</b> 51:25 218:18 <b>fine</b> 222:13 <b>fined</b> 243:12 <b>finish</b> 153:14 <b>Fios</b> 116:21 <b>firmware</b> 18:15,22 194:15 196:21,25 197:4 222:6 223:12 <b>first</b> 4:21 5:4 7:7 21:21 22:24 23:25 24:19 25:12 35:9 37:5,10 42:9 49:7 50:25 63:20 71:2 72:24 74:11 87:23 88:23 91:12 98:7 99:7 104:24 122:14 124:12 129:10 137:8,11,16 140:1 157:20 170:5 173:17 175:16 179:10 192:3,7,10,22 204:1 221:24 229:5,6 230:14 236:13,14 246:4 266:4,11,22 270:10 273:8 280:24 283:2 <b>fit</b> 33:10 127:20 175:7 241:14 259:24 <b>five</b> 38:1 60:2 66:20 113:14
--	---	---	---

114:1,5 125:20 137:12 171:19 219:3 231:23 232:1,12,21,22 <b>five-minute</b> 7:5 <b>five-page</b> 230:7 <b>fix</b> 21:5 33:9,11 34:3 41:4 46:18 52:2 68:18 79:9,20 80:10 81:12 169:23,24 173:23 177:18,19 199:8 203:24 218:19 222:11 238:4 248:24 256:7 276:7 <b>fixed</b> 17:6 51:3,6 77:9 79:15 202:25 256:4 <b>fixes</b> 13:17 33:13,16 <b>flaw</b> 79:19,23 <b>flaws</b> 16:25 21:5,12 77:4,10 <b>fleet</b> 79:11,14 <b>fleets</b> 242:2 <b>flexibility</b> 111:4 <b>flexible</b> 161:13 <b>flip</b> 270:11 <b>Flixster</b> 114:23 <b>floor</b> 168:24 <b>flourishing</b> 244:7 <b>flow</b> 171:1 <b>fly</b> 169:23 225:12 <b>focus</b> 27:6 35:7 165:23 <b>folks</b> 17:14 29:12 32:21 54:25 69:3 70:11 130:5 230:25 240:18 <b>follow-on</b> 48:14	<b>follow-up</b> 62:9 81:14 94:10 107:24 <b>football</b> 132:11 <b>footnote</b> 80:12 <b>force</b> 15:24 33:15 <b>Ford</b> 17:20 217:23,25 263:20 267:2,25 <b>foregoing</b> 14:19 292:5 <b>foreseen</b> 281:24 <b>forgive</b> 45:19 71:4 <b>forgot</b> 268:13 <b>form</b> 99:14 125:9,18 140:10,11,20 143:9 <b>formal</b> 118:8 <b>format</b> 98:23,25 99:14 107:6 118:15 124:24 129:18 140:10,12 143:4,5 153:24 <b>formats</b> 90:9 128:24 129:7,25 <b>format-shift</b> 120:23 <b>format-shifting</b> 84:7 97:12 119:13 <b>former</b> 34:18 170:12 <b>forms</b> 23:7 74:5 104:3 180:8,10 181:9 <b>formula</b> 264:17 <b>formulate</b> 237:19 <b>forth</b> 8:19 221:17 230:16 260:12 285:10 292:6 <b>forward</b> 41:9	47:13 71:15 72:12 123:24 142:1 176:24 183:3 188:9 <b>Foundation</b> 3:8,10 7:11 168:9 <b>founder</b> 194:6 <b>fourth</b> 102:10 <b>Fox</b> 94:12 95:7,9 138:7 <b>frames</b> 80:5 <b>framework</b> 34:13 87:21 207:10 <b>frameworks</b> 203:18 <b>franchise</b> 205:11 214:6 <b>frankly</b> 68:21 79:22 165:12 <b>Fraud</b> 23:21 178:8 <b>free</b> 64:12 114:11,18 115:3 117:18 132:4 133:12 165:6 183:14 266:5 <b>freedom</b> 51:4 54:6 <b>freely</b> 37:6 225:22 <b>freeway</b> 227:23 <b>french</b> 237:3,8,11 <b>frequent</b> 282:17 <b>friend</b> 17:7 130:3 169:18,24 173:23 203:3 <b>friends</b> 202:12 255:1 <b>fries</b> 237:3 <b>front</b> 158:22 <b>Frontier</b> 3:8,10 7:11 168:9 <b>Frozen</b> 135:19 <b>frustrate</b> 98:10	<b>frustrating</b> 132:1 <b>fry</b> 237:8,11 <b>fryers</b> 237:4 <b>fuel</b> 26:21 58:23 211:11 213:2 226:2 236:1 237:1,22,24 238:3 239:18 242:5 243:7,10,21 <b>full</b> 156:6 229:8 <b>full-length</b> 129:11 <b>full-time</b> 69:3 <b>fully</b> 23:2 75:11 234:23 <b>function</b> 55:25 137:17,23 138:3,5,21 186:20 246:1 275:6 288:8,20 289:8 <b>functional</b> 287:25 288:2,4,13 289:7 290:15,20 <b>functionalities</b> 262:7 <b>functionality</b> 10:16 12:12,14 131:8 133:10,15 138:1,13 203:24 216:15 217:11 227:5 263:16 281:5,8,9 283:5 <b>functionally</b> 264:1 <b>functioning</b> 15:15 246:6 273:22,25 <b>functions</b> 8:18 12:3 26:10,12 59:18 65:17 262:21 274:2 <b>fundamental</b> 178:10 203:17,25 220:9 <b>fundamentally</b>
---	---	---	--

110:3,10 115:20 125:2 162:8 <b>funded</b> 37:8 40:6,9 45:1,4,6 <b>funding</b> 36:25 40:10 <b>furnish</b> 264:20 <b>Furthermore</b> 27:21 <b>future</b> 78:18 109:14 113:9 123:19 162:4 194:2 226:5 <b>futures</b> 19:17 <hr/> <b>G</b> <hr/> <b>gallons</b> 237:11 <b>game</b> 28:8 95:20 112:10 <b>games</b> 28:6,12 55:6 179:21 <b>gander</b> 190:16 231:10 232:15 <b>garage</b> 225:18 252:11 253:8 <b>Garages</b> 168:11 194:6 <b>Garcia</b> 12:8 170:23 <b>Gate</b> 114:2 <b>gathers</b> 263:13 <b>gauge</b> 71:9 <b>gee</b> 112:7 118:2 <b>geese</b> 239:7 <b>Gellis</b> 3:4 7:14 21:16,17 67:6,7 168:5 177:23,24 180:18 257:10,11 <b>general</b> 2:5,7,9,11 3:13 4:8,12,13,14 7:22 16:25 24:25	51:17 55:11 61:21 65:8 83:25 85:21,23,25 86:22 87:10 91:2 103:15 108:21 123:12 125:25 158:24 159:2 167:11,15 168:18 206:2 230:1 237:20 <b>generally</b> 24:23 42:25 76:5 99:21 136:5 212:19 254:11 <b>generate</b> 106:19 <b>generating</b> 9:25 <b>generous</b> 4:23 <b>generously</b> 21:23 <b>gentlemen</b> 66:23 <b>geographic</b> 100:4 <b>gets</b> 60:20 161:25 244:14 <b>getting</b> 8:5 39:11 54:16 57:21 62:16 103:5 104:19 114:17 156:14 254:22 272:19 273:17 286:5 <b>given</b> 25:7 46:8 67:17 107:9 114:20 170:13 259:22 260:23 278:6 <b>giving</b> 4:20 46:4,22 82:8 234:3 <b>glad</b> 17:4 <b>glib</b> 245:22 <b>Global</b> 31:14 168:17 <b>GM</b> 17:6 25:16,21 26:24 29:15,17,22 30:3,14,17	31:21,22 33:23 34:4,23 43:7 54:21 62:20 69:2 76:20,21 215:13 217:25 226:25 227:7 263:20 267:2 276:14 278:13,15,17 280:8 <b>GM's</b> 25:24 26:8 28:13 262:3 275:14 <b>goal</b> 5:5 270:21 <b>goals</b> 206:3 <b>gone</b> 80:20 82:5 104:16 111:11 145:21,22 146:1 147:11 148:21 159:15 260:12 <b>goods</b> 104:2 226:13 <b>Google</b> 127:23 134:11 170:23 287:15 <b>goose</b> 190:16 231:10 232:15 <b>go-round</b> 232:25 <b>govern</b> 178:7,21 180:2,5 241:13 <b>governed</b> 290:5 <b>governing</b> 24:11 179:15 <b>government</b> 40:4 44:20 45:1,4,5 59:21 145:24 233:7 234:2 268:10 <b>government-</b> <b>sealed</b> 82:8 <b>governs</b> 178:13,15 207:10 <b>grab</b> 83:13 87:3 164:9 <b>grade</b> 161:1	218:16 <b>grand</b> 197:25 267:3 <b>grant</b> 17:8,12 19:19 44:6,8 50:15 53:14,15 65:21 70:25 79:4 95:23 193:19 240:6 251:13,19 285:21 <b>granted</b> 25:6 35:16 70:10 72:22 81:20,22 82:1 87:22 147:5 154:10 182:17 245:24 258:4 282:3 283:23 <b>granting</b> 29:10 32:6 35:12 38:9 53:14 144:16 147:13 160:5 187:25 189:1 225:2 233:2 242:10 268:6,7 <b>granular</b> 100:5 <b>grateful</b> 5:2,20 <b>gray</b> 198:3 <b>great</b> 33:5 63:17 133:5,11 149:15 218:25 234:5 239:12 243:10 272:22 <b>greater</b> 60:8 62:1 117:12 211:10,11 <b>grocery</b> 158:22 <b>ground</b> 84:9 100:18 259:22 282:22 <b>group</b> 16:11 25:21 66:18,20 81:25 109:6 118:11 122:1 194:6 199:16,19 200:4 <b>groups</b> 19:8 42:16
---	--	--	---

<p>137:3 <b>grow</b> 63:14 122:19 <b>growers</b> 284:9 <b>growing</b> 124:17 <b>grown</b> 69:2 125:3 <b>guarantee</b> 213:24 <b>guess</b> 7:24 53:13 58:12 61:18 66:25 70:16 76:25 96:18 122:20 190:15 191:24 194:24 196:2 198:25 219:18 220:7 229:5 242:21 252:12 270:2 <b>guest</b> 131:14 <b>guidance</b> 53:17 <b>guide</b> 116:20 217:11 <b>guided</b> 71:19 <b>guiding</b> 40:24 <b>guys</b> 77:7,9,16 199:15 221:3 222:9 266:21</p> <hr/> <p><b>H</b> <b>hack</b> 77:17 185:20 259:4 <b>hackable</b> 186:22 <b>hacked</b> 60:25 143:11 <b>hackers</b> 14:15 <b>hacking</b> 52:22 53:1 76:1 270:3 <b>half</b> 124:15,16,17 <b>Hamlet</b> 163:10,11,14,15, 17 <b>hand</b> 79:3 149:16 <b>handed</b> 84:19 193:23</p>	<p><b>handful</b> 145:17 182:22 288:12 <b>handle</b> 202:21 <b>hands-free</b> 182:2 <b>hands-on</b> 236:18 <b>haphazard</b> 9:3 <b>happen</b> 10:10 14:4 15:10 78:18 117:20 120:4 200:12 218:18 240:24 289:9 <b>happened</b> 60:20 147:19 183:5 231:16 <b>happens</b> 118:25 129:4 133:3,4 199:14 203:2 219:2 242:25 256:5 278:14 280:1,22 <b>happy</b> 35:4 85:17 113:18 130:5 158:14 272:11 273:16 <b>hard</b> 114:21 135:8 153:23 200:2 250:8 288:18 <b>hardware</b> 178:3 202:4 205:1 208:3 222:2 282:16 284:11 <b>harm</b> 10:17 35:20 50:3 100:10 102:9 138:10,14 140:23 141:14 179:20 180:23 184:12 185:3 187:9,16 235:1,2,6,18,20 247:24 <b>harmed</b> 184:19,22 <b>harmful</b> 171:7 180:2 185:24 <b>harms</b> 11:5 13:8 41:23 89:8</p>	<p>179:8,17 180:11 181:7,8,9,11,13 186:2,8 187:15 188:16,18,20 189:12 190:13 244:2 <b>Harry</b> 3:13 7:21 168:18 <b>harvest</b> 177:15 <b>harvesters</b> 173:20 <b>hasten</b> 287:2 <b>haven't</b> 37:18 39:10 78:24 79:2 105:9 157:9 199:17 209:4 248:12 250:11 260:11 266:21 <b>having</b> 37:2 41:20 42:11 47:17 50:2 52:7,20 58:6 72:16 82:10 90:21 100:2,13 108:19 117:2 120:13 134:14 142:25 152:16 157:24 158:12 165:22 176:10 192:16 194:1 195:3 200:19 202:13 219:24 235:25 236:1 246:16,17 283:12 290:16 <b>HBO</b> 114:3 126:15 <b>HDCP</b> 146:13 <b>head</b> 149:9 261:11 <b>heads</b> 270:25 <b>hear</b> 4:18 52:12 84:17 100:11 102:14 105:2 113:16 123:9 172:6 195:25 251:24 <b>heard</b> 37:19 39:25 40:1 41:24 60:19 61:13 71:7 82:4</p>	<p>159:13 165:3 188:6 262:18,20 266:5,21 <b>hearing</b> 4:21 36:4 56:12 94:16 110:7,8 121:8 122:10 130:12 164:24 <b>hearings</b> 1:5 5:5,11 107:18 121:9 123:4 140:25 <b>heart</b> 52:17 138:4 <b>hearts</b> 70:12 <b>heavier</b> 196:12 198:16 218:6 <b>heavily</b> 219:2 232:21 287:5 <b>heavy</b> 271:24 <b>held</b> 70:13 <b>Hello</b> 7:21 <b>help</b> 7:8 20:18 32:22 74:1 85:18 90:1 169:24 200:2,5 241:8 249:9,11 255:15 <b>helped</b> 83:8 <b>helpful</b> 5:1,17 27:5 42:14 71:16 78:3 83:8 84:10 195:22 200:16 271:11 <b>helping</b> 20:19 32:20 195:12 255:10 <b>helps</b> 5:14 84:23 87:5 <b>hence</b> 202:2 <b>hereby</b> 292:3 <b>he's</b> 101:16 204:22 <b>hesitant</b> 47:13 <b>hesitate</b> 137:13</p>
---	--	--	---

<p><b>hesitation</b> 93:21</p> <p><b>Hiding</b> 20:15</p> <p><b>high</b> 120:19 125:5 129:17 133:20 143:8 162:4,5 217:14,22 220:2</p> <p><b>higher</b> 217:17</p> <p><b>highest</b> 28:15 109:9 275:1</p> <p><b>highlight</b> 175:13</p> <p><b>highly</b> 33:24 34:1 59:18</p> <p><b>highway</b> 19:2 172:1 173:19 241:11 269:23</p> <p><b>Hilkert</b> 168:3 169:1 170:7 174:7 175:4,5 272:8,11 274:13,14,20</p> <p><b>hindered</b> 44:16</p> <p><b>hired</b> 76:20</p> <p><b>historical</b> 116:11</p> <p><b>history</b> 8:14 15:4 51:12 66:6 88:7 117:1 142:2 149:1 207:12 236:14 286:15</p> <p><b>hit</b> 150:8 203:1</p> <p><b>hitting</b> 222:12</p> <p><b>hold</b> 14:20 139:16 242:16</p> <p><b>holder</b> 184:14</p> <p><b>holders</b> 90:19</p> <p><b>holding</b> 102:1 138:20</p> <p><b>hollow</b> 32:7</p> <p><b>Hollywood</b> 108:22</p> <p><b>home</b> 88:11 99:24 124:12 139:6 146:9,20 149:16,19</p>	<p>150:12</p> <p><b>hometown</b> 237:2</p> <p><b>Honda</b> 201:24 202:1 248:22</p> <p><b>hone</b> 5:15</p> <p><b>honor</b> 35:2</p> <p><b>hooked</b> 155:10,17</p> <p><b>hopefully</b> 136:19 194:13 230:19</p> <p><b>hoping</b> 45:11</p> <p><b>Hopper</b> 137:16,22 138:5,12,20</p> <p><b>horn</b> 17:22</p> <p><b>horribles</b> 240:25</p> <p><b>horror</b> 240:23</p> <p><b>hosted</b> 74:8</p> <p><b>hostile</b> 54:7</p> <p><b>hostility</b> 63:20</p> <p><b>hot</b> 218:15</p> <p><b>hour</b> 147:19 218:16</p> <p><b>hours</b> 203:9 265:8</p> <p><b>house</b> 112:18</p> <p><b>household</b> 121:20</p> <p><b>huge</b> 199:17</p> <p><b>humans</b> 248:2</p> <p><b>hundred</b> 238:21 243:13</p> <p><b>hundreds</b> 140:19 259:6</p> <p><b>hypothetical</b> 73:20 149:8 185:21</p> <p><b>hypothetically</b> 228:1</p> <hr/> <p><b>I</b></p> <hr/> <p><b>idea</b> 14:12 15:7 59:19 64:8 105:21 113:3,20 114:10 115:14</p>	<p>119:22 171:24 181:14 220:21,22 246:16 250:15 252:2 266:10 268:6 283:12 290:3</p> <p><b>ideas</b> 12:14 237:19</p> <p><b>identified</b> 11:17 16:14 17:5 85:4 235:1 237:21</p> <p><b>identify</b> 6:25 9:10 16:25 30:19 222:21,22</p> <p><b>identifying</b> 6:17</p> <p><b>ifixit</b> 202:5</p> <p><b>iFixit</b> 168:13 200:21</p> <p><b>ignore</b> 27:17 189:13</p> <p><b>III</b> 3:13</p> <p><b>I'll</b> 176:24</p> <p><b>illegal</b> 28:16 62:10 89:15 249:14</p> <p><b>illegitimate</b> 220:25</p> <p><b>illicit</b> 151:24</p> <p><b>Illinois</b> 203:8</p> <p><b>illustrates</b> 136:22</p> <p><b>illustration</b> 183:13</p> <p><b>I'm</b> 7:12,14 14:21 19:3 29:1 46:21 62:16 73:3 75:13 85:23 86:22 87:9,14 100:14 101:14 103:9 128:18 129:1 144:5 145:4 168:12 169:4 195:4 200:1 213:16 231:2 238:25 248:12 249:18 253:8 286:7</p>	<p><b>imaginary</b> 150:12</p> <p><b>imagine</b> 78:19 135:8 227:22</p> <p><b>immediate</b> 141:15</p> <p><b>immediately</b> 77:16 202:24 238:17</p> <p><b>impact</b> 24:23 26:7 36:18 44:22 96:5,12 98:1,4,16 142:13,15 148:15,16,18 185:13 186:3 187:3,22 222:7 226:23 234:17 236:2 238:12,16,17,18 242:18 244:1 259:20</p> <p><b>impacted</b> 9:15 56:7 70:18 79:12</p> <p><b>impacts</b> 72:16 185:10,16 235:25</p> <p><b>impair</b> 185:7</p> <p><b>impaired</b> 187:13</p> <p><b>impediment</b> 63:5 159:6</p> <p><b>impediments</b> 37:25 38:2 126:8</p> <p><b>implement</b> 195:6</p> <p><b>implemented</b> 28:14</p> <p><b>implicate</b> 178:14,16</p> <p><b>implicates</b> 23:15</p> <p><b>implications</b> 22:23 24:13 177:9 190:7 269:14</p> <p><b>implied</b> 175:20</p> <p><b>importance</b> 8:7 31:9</p> <p><b>important</b> 9:8</p>
---	---	--	---



16:14 20:5 23:17 26:25 28:21 42:10 61:3 62:7 68:6 70:2 74:12 75:1 96:21 107:23 112:13,14 122:20,23 126:3 136:21 137:11 142:10 172:14 234:1 243:3 244:24 245:23 274:10 284:19 287:21 <b>importantly</b> 226:25 282:12 <b>impose</b> 285:23 <b>impossible</b> 108:6 206:17 209:15 276:19 <b>impression</b> 270:1,2 <b>improve</b> 14:9 35:25 192:1 203:19 237:24 238:3 242:5,11 <b>improved</b> 11:14 186:22 188:1 211:25 241:23 243:9 <b>improvement</b> 10:1 176:7 239:18 <b>improvements</b> 9:1 11:18 51:15 187:23 <b>improving</b> 21:13 <b>inability</b> 155:18 <b>inapplicable</b> 101:21 <b>inappropriate</b> 106:16 239:15 <b>inasmuch</b> 269:22 <b>incentive</b> 81:10 <b>Incentives</b> 106:22	<b>incentivize</b> 105:4 <b>incentivized</b> 31:6 33:13,24 34:1 <b>incidental</b> 261:2 <b>inclined</b> 19:19 50:15 70:4,25 91:20 <b>include</b> 16:1 18:1 26:8 114:2 135:15 208:6 <b>included</b> 37:18 70:4 <b>includes</b> 41:2 109:12 136:6 165:2 262:1 <b>including</b> 8:18 19:1 22:4 24:4 26:20 27:1,9 39:18,25 42:6 104:6 172:4 179:15 186:8 226:1 285:24 <b>incompatible</b> 90:15 <b>inconsistency</b> 287:12 <b>incorporate</b> 227:9 <b>incorporated</b> 22:3 55:22 <b>incorrectly</b> 186:15 <b>increase</b> 134:19 211:25 235:23,24 243:25 <b>increased</b> 131:8 160:13 201:14,15,18 211:14 212:2 <b>increases</b> 238:5 <b>increasing</b> 204:7 <b>increasingly</b> 41:13 116:19 284:15 <b>incurred</b>	264:19,21 <b>Indeed</b> 226:11 <b>indefinitely</b> 93:12 <b>independent</b> 8:6,11,14 11:17 14:14 15:4 31:20 32:1 33:11 41:14 51:18 54:16 66:6 73:2 76:18 125:21 182:12 184:19,21 205:13,15 214:1,8 244:24 263:4 <b>independently</b> 46:21 <b>indicated</b> 46:7 68:16 69:1 90:12 228:10 <b>indicates</b> 88:7,10 <b>indicating</b> 150:20,21 174:22 <b>indicia</b> 285:18,25 286:8,10 <b>individual</b> 90:4 132:22 162:11 176:2 182:11 233:18,19 255:14 282:20 <b>individually</b> 15:16 <b>individuals</b> 81:19,25 82:1 289:24 <b>industry</b> 3:25 18:7 37:12 38:21,24 40:1,10 41:4,12 58:5,9,16,17,18 59:3,18,25 60:7,13,21 61:2,21,24 62:12,21,22 63:23 69:1 70:22 80:22 81:3 86:25 87:13 104:1 108:24	111:10,11 113:7 122:8 126:7 176:19 207:5 209:25 210:3 237:22 250:17 288:14 <b>influence</b> 36:17 <b>inform</b> 48:12 50:24 51:3 <b>information</b> 2:13 4:16 9:8 29:6 31:2,15 41:16 49:8,12,22 50:4,5 63:13 68:20 73:17 123:22 132:8 153:19 162:1,2 174:3 185:1 194:8 195:11,12,23 197:18 200:22 213:24 214:4,5,12,18,20 ,23 215:11,17 216:6,10,13 223:3 228:11,15,16 236:18 262:8,12,19,22 263:13 264:20,21 265:1,2,15,16,23 267:16,20 274:22 282:18 286:22 287:1 <b>informative</b> 83:8 164:4 <b>informed</b> 51:9 <b>informing</b> 46:16 <b>infotainment</b> 276:15 279:20 280:25 281:5,8 <b>infringe</b> 182:15 239:19 <b>infringement</b> 9:19 39:22 49:23 50:6 148:4 150:20,22
---	---	---	--

184:11 <b>infringing</b> 93:16 96:1 99:6 100:8 189:2 191:5,21 <b>inherently</b> 126:6 <b>inhibiting</b> 37:23 <b>initial</b> 21:20 85:10 89:3 153:22 273:1 <b>initially</b> 57:10,25 <b>initiated</b> 54:21 <b>initiative</b> 31:12 51:20 67:14 <b>initiatives</b> 51:16 <b>inject</b> 15:8,10 16:8,17 18:10 <b>injecting</b> 17:21 <b>injectors</b> 213:3 <b>injunction</b> 137:18 138:7,14 144:16 <b>innovation</b> 241:24 263:3 <b>innovations</b> 182:1 <b>innovative</b> 130:1 181:17,19 <b>inquire</b> 24:25 <b>inquiry</b> 25:2 191:16 <b>insert</b> 115:23 135:16,19 <b>inserting</b> 64:8 <b>inside</b> 115:22 162:1 <b>insofar</b> 99:4 178:13,16 <b>inspected</b> 248:18 <b>inspection</b> 211:7,18,22,24 212:9 248:20,23 249:2 250:24 <b>inspired</b> 51:21	<b>install</b> 209:12 210:13 <b>installed</b> 153:3 280:8 <b>installer</b> 153:7 <b>instance</b> 55:14 78:16 99:7 127:17 152:7 178:25 198:15 222:9 263:18 264:14,24 <b>instances</b> 44:12 65:13 71:22 <b>Instant</b> 111:2 <b>instead</b> 54:12 89:20 155:23 240:22 <b>instinct</b> 52:19 <b>Institute</b> 263:13 <b>institution</b> 74:7 <b>instructions</b> 230:2 288:7 <b>integrate</b> 116:21 126:12 <b>integrated</b> 114:24 <b>integrating</b> 115:17 <b>integrity</b> 11:25 12:5,8 248:21 <b>Intel</b> 114:1 <b>intellectual</b> 62:23 167:25 <b>intend</b> 45:25 67:19 <b>intended</b> 24:21 39:14 105:4,24 130:1 132:1 140:6 142:7 178:20 181:19 244:13 254:24 288:21 <b>intent</b> 54:2 92:13 122:5 152:2 281:23	<b>intention</b> 244:17 <b>intentionally</b> 199:7 <b>intentioned</b> 27:25 <b>intentions</b> 29:8,12 <b>intents</b> 24:9 <b>interact</b> 269:1 <b>interacting</b> 22:10 <b>interaction</b> 22:8 26:14 95:1,2 <b>interchangeable</b> 90:5 <b>interconnected</b> 26:13 <b>interest</b> 7:1 11:25 12:5,6,21,23 13:3 27:3 52:17 59:14 68:6,8 86:6,13 141:19,20,22 162:21 170:10 177:1 178:14,17 182:13 188:25 189:2 <b>interested</b> 5:12 19:1 31:9 32:20 44:3 45:15 56:12 86:12 94:16 107:19,20 118:18 172:3 251:23 266:2,14 292:11 <b>interesting</b> 16:5 60:17 63:8 74:17 118:21 150:19 170:22 171:2 193:10 257:9 <b>interests</b> 11:2 70:12 142:8 170:19,25 171:1,9,10 234:20 <b>interfaces</b> 276:16 <b>interject</b> 11:24	<b>international</b> 75:24 <b>internationally</b> 100:2 <b>Internet</b> 110:16 199:18 <b>Internet-based</b> 109:2 <b>interoperability</b> 281:18 282:11,13,16 <b>interoperate</b> 263:5 <b>interpersonal</b> 247:21 <b>interpret</b> 259:11 <b>interpretation</b> 119:5 <b>interrupt</b> 62:16 103:9 113:13 153:10 <b>interrupted</b> 14:3 193:21 <b>interrupting</b> 181:24 <b>interviewed</b> 272:17 <b>intimidate</b> 73:11 <b>intimidating</b> 73:22 <b>intimidation</b> 73:21 74:2,5 <b>intrinsic</b> 186:25 187:6 <b>introduce</b> 7:7 64:17 84:13 86:4 167:23 <b>introduced</b> 35:19 49:2 116:15 138:6 184:20 187:23 241:18 <b>introduction</b> 26:1 <b>introductions</b> 6:7
---	--	--	--

<b>introductory</b> 108:14 128:12 129:22	151:20 171:8 195:24 222:6 247:23 249:19 257:22 266:16 267:18 270:21 271:6 274:11 286:3,23	194:14 199:25 227:4 230:13 231:3,5 232:16,21 244:9 246:13	198:4,9,17 199:5 200:2 203:8 204:10 205:5 207:11,14,17 209:14 211:3,23 212:4,19 213:10,15 214:1,8 215:9,10 217:1,7,17 218:11,14,16,25 222:1,7,18 223:19 224:8,18,19 231:18,24 233:25 237:12 238:9 239:15,21 240:5,7,24 241:23 242:22,23 243:7,20 244:18,20,24 245:17 246:22 248:1,7,9,14,20 249:2,22 250:6,8,9,23 251:4,20 253:5 256:23 257:2,8 259:3,20 261:12,16 262:3 263:23 264:24 266:21,22,25 267:1,6 268:3,23 270:18 271:4 273:3 274:15 275:17 276:9 277:17 279:7,11,14 284:8 285:10 286:15 287:15 288:7,18 289:3 290:5,7,18
<b>invent</b> 267:7		<b>item</b> 178:1	
<b>invention</b> 241:22		<b>it'll</b> 217:7	
<b>invest</b> 107:8 187:1		<b>it's</b> 12:4,19 20:7,9 30:20 35:2 36:16 37:7 38:8 39:10 40:19 42:6 52:12 53:8,9,12 56:14 60:7,8,10 62:24 63:7 64:5 65:9,14 67:15 68:18 71:8,15 73:20 74:17 75:4 77:20,24 78:24 79:14,24 80:5,22 83:13 84:10 85:4 89:13 97:10 99:2,21 101:2,6,21 103:19 104:17,23 106:15 112:14 117:25 119:25 124:16 127:8 130:22 131:25 133:23 135:4,6,16 136:9 137:10 138:15 139:14 140:16 144:9 146:15 147:3,13 148:14 149:15 151:25 152:19,20,23,24 155:9 163:11 170:20 171:2,18 172:7 174:8 178:4 180:6,13 181:2,4 182:5 184:8 185:11 186:5,14 187:20 189:7,25 190:1,11 192:24 193:10 194:20 195:8 196:15 197:6,8,25	
<b>investigate</b> 8:17	<b>isolated</b> 14:14 88:6 89:24		
<b>investigated</b> 9:10 48:3 49:10,14 182:21	<b>isolation</b> 89:14		
<b>investment</b> 107:3	<b>issue</b> 19:5 23:25 30:9 37:16 39:5 42:11 50:14,17 53:5,11,15,16,21 58:10 59:10 60:21 61:11 63:1 67:9 69:22 70:1 71:12 74:23 75:1,3,12,16 77:23 92:2 94:9 101:20,23 138:9 144:10 172:14 174:11 178:1 180:20 184:22 189:15,24 193:5 198:17 207:7 219:6 222:10 223:1 233:23 248:11 249:25 250:11 251:12 253:5 255:18,19 266:17 270:1,8,12 275:11,12 280:7 283:10 287:19 288:9 290:18		
<b>investments</b> 107:14			
<b>invitation</b> 147:23			
<b>invite</b> 111:24			
<b>inviting</b> 128:14			
<b>involve</b> 22:8 24:6 247:21			
<b>involved</b> 22:10 29:25 35:17 80:9 137:13,19,21 138:10,19 140:24 169:15 170:4 173:22 202:11 209:4 232:20 236:4			
<b>involvement</b> 55:9			
<b>involves</b> 161:1 164:25 179:5			
<b>involving</b> 254:17			
<b>IOS</b> 112:7 131:5 134:8			
<b>iota</b> 37:23	<b>issued</b> 117:25 122:2 124:12		
<b>iPads</b> 112:8	<b>issues</b> 5:10,15,16 10:16 12:8 20:13 23:22 28:17,19 36:18 37:21 46:18 57:21 64:21 67:8 79:2 83:9 85:16 113:17 136:18 165:13 176:23 181:7 187:21		
<b>Ironically</b> 16:24			
<b>irreparable</b> 138:10,14			
<b>irresponsible</b> 76:13			
<b>ISAAC</b> 31:14			
<b>isn't</b> 76:12 83:3 98:24 99:1			
			<b>iTunes</b> 127:22 128:1 129:13 134:6 159:21
			<hr/> <b>J</b> <hr/>
			<b>Jaclyn</b> 83:25
			<b>Jacqueline</b> 2:5 4:8

32:13 167:11 <b>Jacqueline's</b> 65:6 <b>jailbreak</b> 201:10 <b>jailbreaking</b> 201:5,7,8 234:19 <b>Jamie</b> 3:19 86:20 108:1 115:23 123:24 126:1 <b>January</b> 138:23 <b>Jeff</b> 176:9 177:11 <b>job</b> 203:20 <b>John</b> 172:24 173:1,2,5 174:2 175:19,24 283:22 <b>join</b> 126:9 <b>joined</b> 4:11 <b>joining</b> 164:21 <b>joint</b> 34:18 47:15 74:5 114:22 <b>joke</b> 270:15,19 <b>journals</b> 204:5 <b>judge</b> 139:10 171:4 <b>judges</b> 141:11 <b>judge's</b> 139:8,20 <b>judging</b> 20:24 <b>judgment</b> 101:2 117:23 138:22 139:19 239:20 <b>jump</b> 163:20 175:16 <b>jurisdictions</b> 64:7 <b>justification</b> 155:14 <b>justifies</b> 104:11  <hr/> <p style="text-align: center;">K</p> <hr/> <b>Kathy</b> 7:14 <b>Kazinski's</b> 171:4	<b>key</b> 131:7 161:4 <b>KeyChest</b> 129:15 130:6,23 132:2 <b>kids</b> 112:8 <b>kindergarten</b> 161:1 <b>Kindles</b> 131:16 <b>kinds</b> 10:5 13:7 143:8 196:8 218:4 237:20 <b>Kit</b> 3:10 7:10 <b>Klibaner</b> 4:25 <b>knew</b> 169:25 170:1 201:1 243:6 <b>knowledge</b> 3:6 25:2 34:5,25 43:23 60:23 67:15 68:24 86:11 103:23 120:3 139:13 140:3 141:17 143:14 145:18 244:10 274:9 <b>knowledgeable</b> 208:25 <b>Knowledge's</b> 106:25 <b>known</b> 52:3 71:21,22 185:21,24 202:1 247:13 252:11 253:8 <b>Knupp</b> 7:18 168:21 <b>Kyle</b> 168:12  <hr/> <p style="text-align: center;">L</p> <hr/> <b>L.A</b> 152:14 <b>LA</b> 3:17 137:2 <b>lack</b> 138:14 155:3 157:15 <b>land</b> 139:14	241:12 273:25 <b>language</b> 24:21 71:11 93:18 171:2 183:1 255:5,20 256:15,22 273:18,23 <b>laptop</b> 155:13 225:20 <b>large</b> 49:1 113:20 124:22 125:15 134:12 158:13 211:4 243:5,18 <b>largely</b> 51:17 127:5 159:15 <b>larger</b> 25:16 90:10 123:6 198:15,19 218:5 236:22,23 237:16 257:11 <b>largest</b> 134:7,16 146:1 205:13 <b>last</b> 14:24 34:10 44:19 60:2 86:16 111:14 122:2 130:17 134:5 135:12 160:17 202:10 214:9,13 232:25 239:5 247:7 284:23 287:17 289:15 <b>lastly</b> 171:20 <b>late</b> 122:13 <b>later</b> 30:6 41:25 58:4 94:9 181:1 220:18 <b>launch</b> 122:12 <b>launched</b> 109:6 122:11 130:17 134:5,10,15 <b>law</b> 10:14,18 12:10 24:2 25:3,8 39:18,24 45:10 50:1 59:22 60:4,13,15 63:7 64:21 74:9 78:15	88:3,7,15 89:2 97:9 98:12,13 99:4 104:1,19 105:24 109:23 139:14,22 148:10 149:5 150:16,19,21 152:8 168:1 171:18 178:20 180:1,3,4,6 184:14 186:8,9 195:21 233:5 248:1 259:11,12 268:8 <b>lawful</b> 88:1 93:2,4,5,8 98:18 99:16,17 176:4 <b>lawfully</b> 93:19 157:1 <b>lawfulness</b> 9:20 <b>laws</b> 19:12 38:6,20 52:22,23 53:3 56:17 171:16 179:14 181:19 269:22 271:25 272:1 <b>lawsuit</b> 54:22 195:8 <b>lawyer</b> 7:18 15:2 130:4 195:4 <b>lawyers</b> 42:19 43:16 62:23 63:7 136:23 <b>layer</b> 26:22 <b>lays</b> 8:13 <b>lead</b> 25:25 28:18 56:20 182:1 241:3 <b>leading</b> 286:17 <b>league</b> 132:11 <b>learn</b> 52:2 79:8,19 <b>leased</b> 151:7 <b>least</b> 11:21 50:19 60:1 65:4 68:24 71:3 97:7,20
---	---	---	--

103:14 123:2 148:14 215:23 220:8 221:14,18 239:3 240:9,15 241:3 244:12 <b>leave</b> 52:14 171:21 253:21 <b>leaves</b> 125:21 <b>leaving</b> 38:16 <b>lecture</b> 165:3 <b>led</b> 8:12 11:18 <b>left-hand</b> 124:3 <b>legacy</b> 250:9 <b>legal</b> 8:9 20:22 36:13,16 37:25 45:17 47:14 63:4 67:19 74:2,6,8 86:11 88:8 97:19 104:11 119:5 138:9 148:25 173:12 201:7,19 252:15 <b>legally</b> 261:9 <b>legislation</b> 88:15 <b>legislative</b> 142:2 148:25 286:15 <b>legit</b> 195:8 <b>legitimate</b> 9:5 11:2,10 14:16 37:21 52:12 54:15 64:25 65:24 91:6 147:12 158:4 179:6 182:6 190:10 <b>legitimately</b> 49:11 <b>legs</b> 83:14 <b>lemon</b> 248:7 <b>length</b> 272:18 273:13 <b>lengths</b> 63:17 <b>less</b> 91:20 94:22 121:2 186:22	188:14 198:11 204:3 215:10 233:10,11 <b>lesser</b> 185:19 <b>lets</b> 112:3 <b>let's</b> 19:19 70:24 100:11 110:17 112:21 163:11,13,14 185:20 218:14 228:1 229:17 232:16 252:10 254:7 <b>letter</b> 47:15 74:5 107:24 162:25 213:23 216:5 221:17 224:25 228:7,19 <b>letters</b> 41:25 205:9 229:9 230:11 <b>level</b> 38:23 72:2 74:2 91:14 96:2,9 101:2 109:9 233:13 244:15 248:7 262:9 289:2 <b>liability</b> 47:14 67:20 74:1 <b>liberally</b> 25:6 <b>librarian</b> 232:2,13 234:6 <b>libraries</b> 89:23 <b>library</b> 17:9 35:16 99:11 112:15 114:11 115:4,10,19 126:25 127:3 131:19 147:10 157:10 <b>license</b> 126:12 145:10 163:9 172:16 173:1,6,10 182:24 183:8 264:8 276:2,8,10,14,19	277:15,22 278:1,9,15,16 279:25 280:4,11 283:23 284:20 285:21 286:9 290:5,6,8 <b>licensed</b> 94:4 275:18 279:24 <b>licensees</b> 262:5 <b>licenses</b> 183:5 184:4 <b>licensing</b> 87:16 90:18 140:5 145:10 161:15 162:10,18 267:17 285:1,3 <b>licensor</b> 163:12 <b>lieu</b> 223:14 <b>life</b> 57:10 59:6 62:5 131:12 171:7 206:13,15 209:19 210:17 238:23 240:8 276:4 <b>lift</b> 246:10 <b>light</b> 30:10 32:5 54:6 217:6 220:17 225:10 252:21 <b>lights</b> 206:20 <b>Lightsey</b> 3:13 7:21 25:12,13,14 27:15 29:5 30:2,3,12 31:17 32:4,18 33:23 34:25 36:21 54:19,20 55:19 56:14 57:1,3,6 60:18 61:1,14,23 62:13,20 68:12 70:9 78:21,22 79:21 80:7,20 81:5,18 168:18 225:8,9 228:6,25 264:11,12 265:5 274:24,25	275:10,17 276:1,12 278:12,17 279:8,14,17,22 280:2,16,19,23 281:10 <b>Lightsey's</b> 72:10 <b>likelihood</b> 58:2 <b>likely</b> 70:14 98:20 230:2 241:3 <b>limit</b> 19:22 48:21 81:16,19 93:17 142:21 228:2 229:19,23 230:7 <b>limitation</b> 29:3 153:4 228:21 <b>limitations</b> 62:2 92:6,7 97:1 101:23 103:3 <b>limited</b> 43:5 58:19 69:8 82:20 144:7 170:8 228:4 251:20 257:6 262:19 268:3 <b>limiting</b> 144:14 <b>limitless</b> 82:17 <b>limits</b> 149:22 <b>line</b> 53:9 81:15 174:20 <b>lines</b> 72:4 <b>link</b> 132:15 <b>Lions</b> 114:2 <b>list</b> 111:6 113:19 231:24 266:6 <b>listed</b> 38:12 132:19 <b>listings</b> 115:12 <b>literally</b> 126:8 127:16 <b>litigate</b> 100:20 <b>litigation</b> 36:25 <b>litigator</b> 170:12
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<b>manufacturer's</b> 61:6	94:14,18,21 100:3 102:16	238:12 259:14,16 261:1	245:3,13 246:12,15 248:6
<b>Manufacturers</b> 3:15 7:20 25:20 31:13 168:16,22 205:8	<b>Markey</b> 9:2 51:12 <b>Markey's</b> 8:13 <b>marking</b> 6:12 <b>Marvel</b> 130:20 134:21	265:10 267:2 268:18 269:22 270:9 283:6 <b>maybe</b> 62:8 72:12 78:12 79:18 80:23 84:20 107:17 116:8 131:18,21 132:11 133:3 144:8,15 148:15 161:3 170:14 174:20 195:3 196:10 201:7 215:10 217:11,12 218:17 237:5 244:17,18 246:15 252:8 266:7 270:6 290:25	251:13,18 253:6 254:23 255:15 269:20,21,25 270:10 274:7,10 280:10 286:9 <b>meaning</b> 30:1 50:9 65:24 200:3 <b>meaningful</b> 184:17 <b>means</b> 15:20 18:17 24:10 48:22 58:25 95:25 135:1 159:4 197:20 283:13 287:25 289:21 <b>meant</b> 72:12 <b>measurable</b> 87:25 <b>measured</b> 88:25 117:9 <b>measurement</b> 122:18 255:8 <b>measures</b> 25:24 51:2 62:4 71:24 207:25 208:14 254:12 <b>mechanic</b> 169:23 197:21 245:25 246:6 248:17 252:25 253:1 256:6,7 272:18 <b>mechanical</b> 246:17 <b>mechanically</b> 248:25 <b>mechanics</b> 66:7 168:11 199:20 244:25 249:1 <b>mechanism</b> 186:6 <b>mechanisms</b> 235:12,15 <b>media</b> 23:10 33:14 41:5 86:14 87:24 97:5,7 99:23
<b>manufactures</b> 250:7	<b>master's</b> 204:14 <b>material</b> 6:21 63:19 85:15 141:24 229:19 <b>materials</b> 142:4 <b>Matt</b> 86:17 <b>matter</b> 68:9 80:5 92:22 139:24 203:19 239:22 240:9 258:17 283:14 <b>Matthew</b> 3:24 179:22 <b>may</b> 1:17 4:2 5:16 6:16 22:11 23:1,19 25:25 27:12 29:12 36:13 41:2 44:15 49:11 50:3 52:3,15 54:7,11 59:7,13 60:18 63:25 67:19,20,23 76:4 79:1 80:9,20 83:20 85:3 94:8 95:20 107:7 111:18 113:5 118:5,19 121:6 139:16,17 145:20 153:18 155:3,11 159:7,8 161:22 162:12 164:17 171:7 173:1 178:2 180:1 181:3 183:19,25 186:20 217:16,25 219:23 237:10	<b>McCalley</b> 51:16 <b>McDonald's</b> 237:11 <b>mean</b> 46:23 50:7 51:25 52:5 53:12 60:17,19 62:15 70:23,25 71:6,7,14 73:15 74:13,25 76:1 79:17,18 95:24 96:17 97:15,25 100:7 104:12 119:22 120:2 127:13,15 134:5 135:10 143:1,22 147:7 148:7,19 150:4 154:18,24 155:7 157:12 159:12,14 186:17 189:7 191:18 192:2 193:1,3 204:24 210:1 220:24 221:1 224:5 242:21 243:2 244:5,15,16	
<b>manufacturing</b> 226:12 <b>Mark</b> 3:21 86:22 87:9 108:1,10,20 130:3,15 135:13 168:2 169:1 <b>markedly</b> 169:10 <b>market</b> 13:12 28:3 50:2 91:9,13,17 95:10 96:2,5,8,12,16,2 3,25 98:16 99:20,22 100:1,6 102:9,12 109:7 110:11 116:15 117:8 118:22 120:17 125:16,22 126:3,4,15 140:18 143:7,15 144:9 145:3 146:24 158:4,16 171:13 184:19,21 186:11 187:9 198:3 202:2 214:3,4 216:22 249:10 261:25 262:4 263:8,19 275:20 <b>marketability</b> 171:11,13 <b>marketplace</b> 13:1 98:1 109:20 122:12,13 136:24 159:18 185:14 201:17 204:2 267:19 <b>markets</b>			

<p>107:9 147:8 151:3,4,9 152:8,12 <b>media-type</b> 257:15 <b>medical</b> 63:19 <b>medium</b> 21:24 95:3,5 <b>meet</b> 26:4 32:12 57:7 58:14,21,22,23 106:13 183:10 211:21 226:20 231:4 238:22 287:1 <b>member</b> 25:21 <b>members</b> 2:3 168:13 229:11 258:24 263:15 <b>memo</b> 37:25 <b>Memorandum</b> 173:18 260:24 <b>mention</b> 35:15 88:18 111:14 119:4 193:23 201:20 <b>mentioned</b> 33:3 41:23 42:15 43:7 56:5 64:23 101:22 113:20 119:6 120:12 135:13 164:9 198:13 229:17 247:17 252:2 263:1 268:3 270:16 272:21 <b>mentioning</b> 135:4 <b>mentions</b> 152:10 <b>mentors</b> 204:12 <b>Mercedes</b> 212:14 <b>merchandiser</b> 275:15 <b>merchandisers</b> 51:7 262:13</p>	<p><b>mercy</b> 177:7,17 <b>merely</b> 52:6 69:17 <b>message</b> 18:10 <b>messages</b> 15:8,11,24 16:8,18 17:21 42:23 <b>met</b> 35:5 39:10 78:24 82:24 231:4 232:8 <b>Metalitz</b> 3:15 7:17 25:10,11 35:1,2 43:22 44:14 47:21 57:20 59:13 62:22 67:11 69:15 71:17 78:14 81:18 82:3,21 166:3,6,11 167:1,3 168:20 193:23 227:15 229:3,4 230:9,22 231:1 236:10 251:8,9 253:23,24 259:9,10 260:17 271:13,14 277:1 281:13 284:22,23 286:10,13 290:13 <b>method</b> 16:20 249:24 <b>M-Go</b> 114:22 <b>mic</b> 5:23 <b>microphone</b> 87:4 <b>microphones</b> 87:2 <b>Microsoft</b> 21:1 114:1 249:20 <b>mid</b> 179:20 180:9 <b>mid-1980's</b> 24:3 <b>migration</b> 159:17,18 <b>miles</b> 16:23 18:19</p>	<p>218:16 238:22 259:6 <b>militate</b> 189:1 <b>Miller</b> 3:8 7:12 8:3 13:25 14:22,23,24 19:18,25 20:14 28:24 29:9,14,16,18,24 30:5 31:19 32:13,24 33:2,20 36:16 38:25 42:6,9,15 43:1,13,18,24 44:17 45:2,5,10,23 46:3,11,15 47:1,4,7,19 54:25 66:12,13 67:18 68:23 72:24 76:6,14 78:4 80:12 81:6 83:3 <b>Miller's</b> 14:2 <b>million</b> 121:20,21,24 168:13 202:5 209:15,16 243:13 258:24 <b>millions</b> 89:21 132:9 134:13 140:19 <b>mind</b> 75:6 148:14 170:18 204:21 <b>minimize</b> 82:12 <b>minimus</b> 89:11,16 <b>minivan</b> 270:7 <b>minute</b> 30:9 109:5 131:22 140:22 148:13 169:14 260:18 274:16 <b>minutes</b> 6:5 64:4 85:10 113:14 128:18 167:20 175:7</p>	<p><b>misheard</b> 286:12 <b>mispronouncing</b> 86:16 <b>misquote</b> 139:2 <b>miss</b> 107:20 249:2 <b>missed</b> 248:13 <b>missing</b> 72:7 <b>misusing</b> 268:10 <b>Mitchell</b> 7:18 86:18 168:21 <b>mix</b> 182:5 232:24 <b>mobile</b> 23:7 109:13 111:9 134:23 <b>mod</b> 212:8 <b>model</b> 81:1 133:5 197:9,25 215:20,21 227:21 273:12 <b>models</b> 162:8 197:24 <b>modern</b> 15:13 17:15 26:2 28:7 225:15 <b>modification</b> 165:1 176:6 191:13 194:23 197:10 201:2 204:20 205:22,25 211:15 220:25 226:24 232:7 233:9 235:17 236:20 241:16 243:16 245:20 254:9 269:10,12 272:4 <b>modifications</b> 194:9,17,22 195:15 196:13 197:1,3 204:23 206:16 211:9 212:6,11,18,21 214:15 218:4</p>
--	--	--	--



222:6 235:19 236:7,11 237:4,6,21 243:20 246:3 248:10 261:25 <b>modified</b> 24:8 185:18 201:16 225:23 248:5 249:14 <b>modifies</b> 186:14 210:22 <b>modify</b> 8:18 186:19 194:15 201:23 202:2 203:13,22 209:13 211:25 212:24 213:9 226:3 227:5 235:24 252:12 253:10 284:3 <b>modifying</b> 27:22 58:10 203:23 213:2 241:21 243:7 250:21 <b>moment</b> 84:14 109:9 117:11 124:19 200:24 201:12 249:10 253:22 <b>momentary</b> 218:17 <b>monetary</b> 88:24 89:8,9 <b>monetize</b> 105:15 106:23 <b>money</b> 89:6,18 120:4,7 187:1 198:10 266:25 267:4 284:6 <b>monitor</b> 209:15 <b>month</b> 21:4 <b>monthly</b> 279:15 <b>months</b> 238:15 <b>Moreover</b> 214:10 <b>morning</b> 4:5 21:17	25:15,22 83:24 128:14 140:4,8 170:11 193:24 196:15 199:16 225:11 231:8 233:4 <b>motion</b> 3:25 104:1 105:19 <b>motor</b> 25:17 51:20 268:18 270:22 272:2 <b>motorcycles</b> 228:23 229:1 <b>motorized</b> 241:12 273:25 <b>Motors</b> 3:13 7:22 17:1 51:17 168:19 <b>MOU</b> 27:9 213:24 227:8,13,19 228:1,5,8,18 230:12 260:10 261:13,15,22 264:17 265:3,12 267:12 287:3 <b>mountains</b> 207:19 238:7 <b>mouth</b> 61:20 187:11 <b>move</b> 14:1 71:15 99:25 113:15 121:3 176:24 251:11 <b>moved</b> 9:11 23:10 <b>moves</b> 91:21 113:5 213:9 <b>movie</b> 89:13 112:9 115:1 116:18 119:14,17 120:20 121:3 124:23 125:3 130:16 134:19,22 135:21 179:21,22	<b>movies</b> 90:1,2,9 104:14 110:12,23 114:8,14 115:7 121:24 122:22 123:14,16,18,19 124:16,22 125:16,24 126:22 127:19,20,21 128:6,20,21,23 129:6,14,17,23,2 4 130:15,20 131:1,5,9,17,20, 23 132:1,19,24 133:6,9 135:6 152:6 155:8 159:23 <b>moving</b> 104:7 249:4 <b>MPA</b> 114:1 <b>MPAA</b> 86:18 100:14 <b>MTIA</b> 167:18 <b>muddying</b> 284:10 <b>Mullen</b> 34:17 <b>multi-device</b> 131:15 <b>multimedia</b> 6:21 85:1 <b>multiple</b> 68:4 90:15 99:22,23 104:7 114:19,23 129:19 134:23 151:19 161:4 197:23 206:14 221:24 254:25 <b>multi-retailer</b> 113:2 <b>municipal</b> 152:23 <b>murkiness</b> 20:22 <b>music</b> 103:12 <b>myriad</b> 276:20 <b>myself</b> 21:10,15	42:17 44:2,21 66:18 76:18,24 167:10 245:5 <b>myths</b> 14:11,18 <hr/> N <b>Nabel</b> 167:21,25 168:23,25 172:13,22 173:13 174:18,25 175:8 176:23 178:23 181:12 224:21 239:2,5 240:14 242:13 254:21,22 255:20 256:16 260:18 261:19 267:10 268:14 270:9,23 271:2,3 273:6,7 <b>Nabel's</b> 260:8 <b>nail</b> 280:20 <b>namely</b> 31:13 <b>narrating</b> 236:14 <b>narrow</b> 96:14 97:16 <b>narrowed</b> 165:15 <b>narrowly</b> 72:9 <b>nation</b> 194:7 <b>national</b> 2:13 4:16 19:2 205:10 206:2 224:25 234:1 <b>nationwide</b> 209:16 211:6 <b>nature</b> 290:20 <b>navigate</b> 45:9 <b>Navstar</b> 243:6,17 <b>NCIA</b> 86:2 <b>nearly</b> 121:20 124:8 <b>necessarily</b> 20:24
---	---	---	--

33:8 46:19 52:16 70:11 74:11 82:10 83:3 91:2 127:20 147:4 152:1 160:3 185:9 191:9 218:3 243:23 <b>necessary</b> 27:10 50:4 64:10 143:13 156:7 261:12,16 274:22 282:10 <b>necessitated</b> 18:3 <b>negating</b> 82:23 <b>negative</b> 98:4 180:5 188:3 241:9 258:3 <b>negotiating</b> 101:6 <b>neighbor</b> 245:4 247:20 <b>neighborhood</b> 159:1,8 <b>neighbors</b> 177:13 <b>neither</b> 99:3 137:22 138:11 259:14 292:10 <b>net</b> 189:9 <b>Netel</b> 4:24 <b>Netflix</b> 93:14 159:14 <b>network</b> 26:14 65:17 79:23 111:25 112:3 194:19 197:6 200:8 224:25 <b>networked</b> 80:5,15 <b>networks</b> 109:1 <b>neutral</b> 162:16 237:5 <b>Nevertheless</b> 145:9 <b>newer</b> 196:18,21	204:3 <b>news</b> 10:7 <b>NHTSA</b> 51:20 57:9 59:16 63:12 174:17 <b>Nimmer</b> 4:24 <b>nine</b> 115:15,16 131:13 138:1 139:24 274:16 <b>Ninth</b> 102:7 137:20 138:9,15 152:14,21 170:24 <b>nobody</b> 21:6 195:8,12 200:8,11 <b>nodding</b> 270:25 <b>NOI</b> 234:25 <b>nominal</b> 117:12 262:15 <b>noncommercial</b> 139:3 149:24 <b>non-copyright</b> 10:23 11:1,5,11 170:10,19 188:8,10,11 189:18 193:25 224:15 234:20 <b>non-</b> <b>copyrightable</b> 185:1 262:8 <b>non-copyrighted</b> 10:4 <b>non-diagnostic</b> 222:16 <b>none</b> 6:9 36:25 173:10 175:10 182:15 203:19 211:20 240:20 <b>non-emission</b> 216:19 <b>non-emissions</b> 216:7	<b>non-exhaustive</b> 231:24 <b>non-infringing</b> 35:7 36:10 39:17 72:17 87:23 88:2 91:11 188:23 189:16 191:5,13 231:21 232:5,7 239:17 <b>non-public</b> 198:9 <b>non-software</b> 246:3 <b>nor</b> 90:13 178:19 259:15 292:11 <b>norm</b> 285:2,10,12 <b>normal</b> 93:22 197:21 <b>north</b> 126:1 <b>notable</b> 138:15 285:24 <b>NOTARY</b> 292:1 <b>note</b> 23:25 90:24 93:25 101:25 102:8,17 146:5 161:23 228:17 230:1,11 <b>noted</b> 114:18 146:5 <b>nothing</b> 37:22 127:7 171:9,14,15 273:21 274:1 <b>notice</b> 230:4 <b>notices</b> 200:10 <b>notified</b> 59:15 <b>notify</b> 53:22 <b>notion</b> 106:1 134:2 263:7 <b>notwithstanding</b> 143:19 <b>November</b> 134:10 <b>NPD</b> 122:1	<b>nuanced</b> 65:22 <b>nuclear</b> 179:23 <b>numerous</b> 64:17 69:5 243:4 <hr/> <b>O</b> <hr/> <b>OBD</b> 251:5 <b>object</b> 253:17 285:2 <b>objecting</b> 104:18 <b>objection</b> 288:25 <b>objective</b> 202:7 254:14 <b>objects</b> 22:10,15 151:9 <b>obligations</b> 36:5 183:25 <b>obliged</b> 33:8 <b>observation</b> 20:16 <b>observations</b> 170:10 <b>obtain</b> 68:20 <b>obtaining</b> 220:5 223:14 274:22 <b>obviates</b> 95:23 151:12 <b>obvious</b> 60:11 83:13 246:8,14 <b>obviously</b> 32:19 33:3 40:12 69:20 123:23 136:24 222:13 231:24 257:4 259:10 270:10 281:3 285:4 <b>occasionally</b> 125:10 <b>occupant</b> 28:14 <b>occur</b> 245:15 258:9 288:8 <b>occurred</b> 31:25 73:4 231:9
--	--	--	---

<b>occurring</b> 32:8	195:20 209:10	256:15	188:2 269:16
<b>occurs</b> 278:25	229:2 256:7	<b>openly</b> 48:6	280:17
<b>o'clock</b> 164:7	<b>old</b> 184:13 207:16	<b>operate</b> 65:22	<b>opposite</b> 150:22
<b>October</b> 101:7	<b>older</b> 24:2 194:18	111:1 117:22	<b>opposition</b>
<b>odd</b> 189:7	196:17 204:3	126:11 140:15	175:10,24
<b>OEM</b> 263:16,17	219:4	209:18 210:16	240:20
264:2	<b>Oldsmobile</b>	261:9 278:10	<b>optimized</b>
<b>OEM's</b> 31:5	225:16	280:5	206:10,11,12
<b>offer</b> 111:4 166:6	<b>one-day</b> 215:6	<b>operated</b> 140:13	<b>option</b> 257:24
212:10 215:7	<b>one-owner</b> 206:13	237:13	<b>options</b> 53:13 75:1
251:20 255:6	<b>onerous</b> 208:18	<b>operates</b> 86:24	202:16
<b>offered</b> 145:2	<b>ones</b> 22:4 33:21	109:7	<b>Oracle</b> 287:15
160:11 212:20	77:3 90:6	<b>operating</b> 26:17	<b>order</b> 6:2 18:10,21
221:16	145:1,2,23	201:10 206:9,24	38:25 63:14 69:2
<b>offering</b> 166:11	174:13 257:14	<b>operation</b> 26:19	73:12 107:13
221:3	<b>one-time</b> 129:18	31:6	143:14 152:16
253:11,14,16	132:5	<b>operations</b> 31:2	153:1 157:8
254:2,5	<b>one-way</b> 232:16	<b>operator</b> 49:9	177:5 194:21,23
256:10,16	<b>ongoing</b> 258:25	<b>operators</b> 116:20	247:11 252:24
<b>office</b> 2:5,7,9,11	279:13 283:7,13	<b>opined</b> 170:24	269:12
4:9,12,14,15	<b>online</b> 80:25 90:11	<b>opinion</b> 101:25	<b>ordinary</b> 245:18
11:1 22:25 23:6	91:21 107:6	102:7 148:12	<b>Oregon</b> 204:13
24:22 25:7 39:5	111:5 114:16	152:21 170:23	<b>organization</b> 69:2
40:20 52:6 59:20	116:18,22 197:4	171:4,6 185:23	87:10 108:21
74:18 81:17	<b>OnStar</b> 16:17	198:7 262:3	<b>organizational</b>
82:13 84:1 85:22	63:12 183:19	<b>opinions</b> 148:8	34:12
97:23 99:24	276:14 277:4	<b>opponent</b> 172:25	<b>organizations</b>
100:16 112:2	278:13,14,22	<b>opponents</b> 10:20	31:1 34:9
147:10,23 148:6	279:3,6,11,19	11:5 12:2 80:13	140:15,23
149:11 167:12	280:14,24 281:5	147:20 178:24	141:3,13
179:12 181:5	283:1,2	180:12 186:2	<b>origin</b> 179:19
190:1,6 193:3	<b>onto</b> 14:2 18:10	188:7 190:20	<b>original</b> 13:1,20
208:12 224:14	55:3 104:7	232:18 241:20	21:22 23:20
232:1,20,22,25	123:18 192:9	<b>opponent's</b> 37:16	66:15 67:16
234:14,21	197:6	<b>OPPONENTS</b>	76:16 137:18
239:11 258:11	<b>op</b> 112:10	3:12	152:2 185:17
<b>officer</b> 34:14	<b>open</b> 30:24 126:7	<b>opportunity</b> 7:4	186:15 192:9
86:21 128:17	168:10,11 194:6	14:6 52:2 65:20	211:17 242:4
<b>Office's</b> 149:4	<b>open-ended</b> 189:6	121:11 165:17	246:24 249:16
<b>off-road</b> 173:20	<b>opening</b> 6:6 7:25	225:13	279:10
<b>oftentimes</b> 111:17	14:2 85:10	229:17,20 272:9	<b>originally</b> 118:16
117:23	136:17 165:9	<b>opposed</b> 103:15	244:12 254:24
<b>oil</b> 237:8,11	167:8 170:9	110:20 169:7	<b>ostensibly</b> 174:4
<b>okay</b> 166:3 188:18			<b>others</b> 5:23 16:3

40:9,25 49:13 61:9 73:9 111:20 115:17 116:9,21 126:4 179:14 223:20 267:23 285:22 <b>otherwise</b> 23:11 55:15 106:3,21 143:16 179:6 182:7,25 198:19 <b>ought</b> 64:14,15 269:4,17 <b>ours</b> 117:21 <b>outcome</b> 180:2 <b>outcomes</b> 179:1,15 188:1 242:11 <b>outlet</b> 213:1 <b>outlets</b> 128:7 <b>outputs</b> 146:7,11,13 <b>outset</b> 23:18 <b>outside</b> 38:8 76:23 261:12 271:1 288:5 <b>over-aggressive</b> 74:8 <b>overall</b> 35:13 41:8 144:22 158:7 233:13 <b>overcome</b> 88:19,21 95:16 <b>overcoming</b> 91:14 96:3 <b>overflowing</b> 182:9 <b>overlap</b> 272:16 <b>overlooked</b> 105:11 <b>overnightened</b> 203:8 <b>overstatement</b> 239:24 <b>overview</b> 128:18 129:21 <b>overwhelms</b>	155:15 <b>owned</b> 82:2 93:19 95:5 162:3 275:15 <b>owner</b> 49:9,13 93:6,8 99:8,18 118:24 119:24 120:8 161:19 162:10 172:21 183:11 184:10 206:17,18 225:23 226:5,7 233:19 248:16 253:2,4 258:5,20 275:16,18 276:16 277:11 278:5 279:3,10 285:7 289:19,20 <b>owners</b> 108:23 113:21 143:10 172:17 176:2 182:11,19 206:15 220:21 227:1 233:18 244:24 249:9,12 275:25 276:3 277:18 <b>owner's</b> 80:1 <b>ownership</b> 93:21 153:8 169:9 172:14,22 174:10 176:23 183:21 275:11 277:5,23 278:1,5 283:10,21 284:5,10,18 285:14,19 286:1,8,11 290:1,4,9 <b>owns</b> 162:19 169:9 <hr/> P <hr/> <b>p.m</b> 1:18 164:14,18 291:4 <b>P023</b> 217:7 <b>pace</b> 204:24	<b>pack</b> 136:6 <b>package</b> 115:22 205:9 206:8 281:2 <b>packages</b> 80:24 135:17 <b>packet</b> 197:19 222:16 <b>packets</b> 198:1 200:8 <b>packs</b> 135:15 <b>page</b> 37:14 175:23 <b>PAGES</b> 1:25 <b>paid</b> 33:5,18,21 34:22 69:23 116:20 121:3 284:6 <b>panel</b> 2:3 15:1 120:24 165:8 170:11 207:4 227:10 229:11 231:12 275:8 290:23 <b>panelist</b> 55:11 <b>panelists</b> 6:25 <b>panels</b> 108:2,7 <b>panoply</b> 156:6 <b>paper</b> 50:20 56:5,23 <b>papers</b> 43:6 66:17 156:17 170:6 193:23 268:15 276:10,11 <b>parade</b> 240:24 <b>paradigm</b> 59:2 <b>paradigmatic</b> 88:5 92:13 139:1,3 <b>paradigms</b> 63:24 <b>paragraph</b> 138:25 139:15 259:18 <b>parameters</b> 196:24	<b>parking</b> 18:2 <b>parks</b> 132:10 <b>partial</b> 113:19 <b>partially</b> 142:13 189:25 <b>participant</b> 278:18,19 <b>participate</b> 20:22 34:22 110:25 135:5 267:19 <b>participated</b> 33:17 <b>participates</b> 227:8 <b>participating</b> 112:23 113:10 <b>participation</b> 30:25 227:7 <b>particular</b> 30:12 34:4 39:12 49:7 63:1 66:11 75:12 80:9 90:2 91:3 93:2 95:19 97:17 111:20 112:7 140:9,10 148:17 151:10 153:8 160:7,9,25 169:16 179:19 183:13 185:10 186:4 201:16 203:7 231:21 255:23,24 273:15 280:12 282:8 <b>particularly</b> 5:15 6:20 10:7 27:8 31:8 41:22 54:6 78:2 113:24 143:2 173:16 201:25 232:6,23 235:21 257:7 261:24 <b>parties</b> 75:2 101:5 161:22 173:3 251:19 292:12 <b>partner</b> 20:4 30:18
---	--	--	--

<b>partnering</b> 38:24	118:23,25	271:20 276:21	95:3,5
<b>partners</b> 32:17	120:12	282:7	<b>permission</b> 257:23
127:14	<b>payment</b> 279:16	<b>people's</b> 180:6	258:3
<b>partnership</b>	<b>payments</b> 279:11	200:1	<b>permit</b> 163:3
134:6,11,16	<b>peace</b> 14:21	<b>per</b> 154:22	225:5
<b>party</b> 33:4 68:15	<b>pendency</b> 59:16	<b>perceived</b> 120:22	<b>permits</b> 163:1
162:19 220:20	<b>pending</b> 101:4	234:2	<b>permitted</b> 88:12
226:8	<b>people</b> 5:23 6:2	<b>percent</b> 122:4	163:12
<b>pass</b> 234:22 251:9	16:6 19:21,23	126:1,2 177:16	<b>permitting</b> 91:23
271:7	20:1,7,19 52:25	236:11	170:16 224:22
<b>passed</b> 22:13	53:24 62:2 63:5	<b>percentage</b> 158:13	<b>person</b> 93:5 94:1
39:14 179:20	72:12 75:24	<b>perception</b> 10:12	109:17 116:1
180:3 259:12,13	76:10,20,21	60:24	150:14 151:24
<b>passenger</b> 260:13	82:17 84:11,12	<b>perfect</b> 21:6,8	197:21 220:19
<b>passes</b> 259:11	97:3,19 98:5	255:21 260:21	252:3 255:14
<b>past</b> 6:13 35:11,15	103:16 107:12	261:7	256:9 257:18
36:22 38:18 39:6	110:14 111:2	<b>perfectly</b> 158:13	258:4 273:8
46:5 82:6 100:17	114:14 116:21	179:16	278:21 279:7
102:18 120:25	117:20,24 118:9	<b>perform</b> 15:16,25	<b>personal</b> 43:13
121:17 125:7	125:23 126:22	16:12 203:21	87:22 88:11
127:19 147:19	127:9 129:3	219:4 244:19	102:1 103:17
149:5,6 194:17	132:9 143:1,10	252:13 272:25	106:6
201:7 224:16	151:5 155:16,19	274:23	144:7,11,14,20
232:23 249:23	157:24	<b>performance</b>	150:2,6,7 152:25
266:24	158:13,17	26:25 194:10	174:14 274:9
<b>patch</b> 13:17	159:6,12,18,19,2	199:20 209:14	<b>personalization</b>
<b>patches</b> 21:5,13	5 160:14 165:9	211:16 212:1	176:6
<b>Patel</b> 41:15 69:15	178:5 179:2,5	235:24 237:21	<b>personally</b> 78:18
<b>patently</b> 263:9	181:16 182:12	243:24 245:1	110:2 194:22
<b>patient</b> 53:20	183:14	<b>performing</b>	209:4
55:18 136:12	186:17,18,19	252:3,17,18	<b>personnel</b> 149:23
<b>Paul</b> 274:20	187:1 194:7	259:2 282:21	<b>persons</b> 169:22
<b>paused</b> 161:10	197:4 198:3	<b>perhaps</b> 111:3	231:19
<b>pay</b> 98:6 105:19	199:20,22 202:6	125:24 126:1	<b>perspective</b>
117:17 119:12	204:12 208:13	148:22 165:14	143:18
120:17 121:1	211:24 212:24	174:22 186:21	161:16,24
145:18 187:1	219:22 220:12	201:4 212:1	188:19 223:9
199:25 214:19	223:19 225:18	219:24 256:18	261:19 284:1
215:18 219:24	231:18	282:1,20 283:5	<b>perspectives</b>
220:14	235:13,18	<b>period</b> 70:6	207:15
221:18,25 224:7	236:14	71:2,20,22	<b>perusing</b> 265:8
266:19 279:18	239:12,18 240:1	<b>periods</b> 215:5	<b>PG-13</b> 127:8
<b>paying</b> 33:7 96:24	241:14,21	<b>perks</b> 202:19	<b>phase</b> 94:10
106:15	245:14 250:20	<b>permanent</b> 75:5	
	251:15,22		
	254:11		
	255:10,16 257:6		
	262:6 267:21		

<b>PhD</b> 20:4 <b>phone</b> 146:16 201:5,6,9,13,15, 16 206:7,14 234:18 240:8 <b>phones</b> 22:21 28:6,11 55:6 109:13 134:13 201:8,19 206:7 285:6 <b>phone's</b> 201:14 <b>photocopy</b> 149:20,24 150:1 <b>physical</b> 16:8,9 18:9 90:9 99:23 100:1 112:16 134:16 136:10 151:9 248:10,19 249:5 283:16,18 <b>physically</b> 99:25 249:3 <b>pick</b> 5:25 74:16 160:7,8,12 178:23 <b>pickup</b> 196:11 198:16 218:6 <b>picture</b> 3:25 104:1 105:20 <b>piece</b> 95:19 178:3 214:5 <b>pieces</b> 89:25 132:8 271:15 <b>piloting</b> 274:5 <b>pinning</b> 256:21 <b>piracy</b> 270:4 <b>pirate</b> 255:10 <b>pirating</b> 269:6 <b>Pixar</b> 127:8 130:20 134:21 <b>placard</b> 5:25 84:16 165:6 239:2 282:24 <b>placed</b> 92:16	<b>places</b> 120:14 131:24 133:7 <b>plan</b> 18:13 23:23 45:18 <b>plane</b> 274:4,6 <b>planning</b> 45:21 <b>plans</b> 123:17 <b>plant</b> 177:9,13,14 203:1 <b>platform</b> 130:23 <b>platforms</b> 69:5 128:20 129:19,25 135:9 <b>play</b> 15:15 27:16 59:17 111:7 113:12 127:23 140:20 146:19 154:5,8,20 157:14 160:6 161:9 281:10 <b>player</b> 126:3 154:5,19,20 155:4,9,17 156:2,17,23 157:14,15 270:6,8 <b>players</b> 146:7 154:25 158:6 <b>playing</b> 262:9 270:17 <b>plays</b> 103:18 270:7 <b>PlayStation</b> 135:1 <b>pleadings</b> 271:18 <b>pleasant</b> 5:2 <b>please</b> 6:19 87:8 109:21 229:19 <b>pleasure</b> 205:6 <b>plenty</b> 165:16 235:12 <b>plug</b> 154:19,25 <b>plugged</b> 123:8 <b>plugging</b> 247:4	<b>Plus</b> 129:9 <b>point</b> 10:16 18:8,24 21:21 23:17 24:15 25:9 33:12,14 39:3 66:1 67:25 69:13 72:10,25 73:5 75:8 77:1 98:3,8,20 101:24 102:24 104:5 106:24 120:11 123:13 124:10 128:5 133:19 139:13,18 140:1,3,7,21 143:17 146:3,18 151:11,12 154:18 160:19 161:3 170:9 171:20 172:7 178:21 179:18 188:4,13,15 190:15 191:10 200:6 223:22 239:6 242:20 246:12 257:9,12 258:7,9 261:1 268:12 273:16 274:11,25 284:8,16 290:13 <b>pointed</b> 11:1 72:3 80:16 81:6 103:11 179:13 190:6,22 262:11 271:22 286:21 290:14 <b>points</b> 21:20 25:23 31:11 35:8 65:18 67:16 83:3 136:25 137:7 147:18 153:11,14 179:9 223:23 227:20 290:12 <b>policies</b> 234:1 <b>policy</b> 25:6 64:13 118:3 176:1	<b>polluting</b> 219:2 <b>pollution</b> 206:3,10,24 207:23 211:14 212:2 237:10,12 238:5,8,16,17,18 240:11 243:12 244:2 <b>portability</b> 113:4 <b>portable</b> 128:24 129:6,12 <b>portal</b> 229:22 <b>portfolio</b> 228:12 <b>portion</b> 119:16 127:3 191:8 282:8 283:4 <b>posed</b> 100:15 <b>posited</b> 185:6 <b>position</b> 54:18 57:2 71:16 75:14 78:23 103:15 105:17 150:6 172:24 183:3 188:5,6 235:5 241:20 260:16 275:14,17,24 280:2 <b>positive</b> 192:19 <b>possesses</b> 257:19 <b>possible</b> 18:6,9 21:11 33:25 34:8 65:5 68:19 99:21 203:13 225:1 246:25 265:11 <b>possibly</b> 213:15 <b>post</b> 195:9 200:9 229:15 <b>posting</b> 197:4 <b>posture</b> 100:24 <b>potency</b> 180:23 <b>potent</b> 179:16 <b>potential</b> 13:16 59:6 73:6,10
---	--	--	---

84:3 94:21 95:24,25 96:5,12 151:1 179:25 180:23 185:3 191:3 <b>potentially</b> 12:24 24:11 74:9 185:7 240:10 244:9 245:10 248:8 <b>pouring</b> 237:12 243:11 <b>power</b> 22:17 185:12 190:6 222:11 258:19 <b>powered</b> 237:9 <b>practical</b> 255:12 <b>practice</b> 7:15 28:11 29:7 54:6 78:11 168:6 278:10 <b>practices</b> 9:2 20:25 74:19 76:13 281:23 <b>praise</b> 37:12 <b>precedent</b> 148:25 <b>predate</b> 65:12 227:24 <b>predated</b> 100:7 <b>predict</b> 49:21 78:17 <b>pre-digital</b> 125:12 <b>predominantly</b> 290:20 <b>preface</b> 21:19 <b>preferred</b> 99:19 155:25 <b>preliminary</b> 137:18 138:6,13 <b>premarked</b> 166:5 <b>premise</b> 225:24 <b>premised</b> 105:25 154:10	<b>premium</b> 136:10 <b>preproduction</b> 99:17 <b>preprogram</b> 221:15 <b>preselect</b> 163:18 <b>presence</b> 66:2 87:24 90:1 160:20 <b>present</b> 18:13 30:16 35:17 37:1 85:15 98:13 184:4 <b>presentation</b> 85:11 108:13,15 109:8 110:1 112:6 121:16 128:10 129:21 <b>presentations</b> 84:9 85:7 86:9 108:3 <b>presented</b> 227:9 <b>preservation</b> 68:5 <b>preserve</b> 54:14 <b>preserving</b> 12:5 <b>President</b> 86:11 <b>presiding</b> 4:10 <b>press</b> 8:25 54:13 111:7 113:11 122:2 <b>pressure</b> 74:7 <b>presume</b> 98:17 <b>pretty</b> 59:10 60:10 72:14 95:11 118:8 127:2 158:10 161:13 164:2 208:18 235:7 256:23 257:22 287:19 <b>prevalence</b> 88:11 <b>prevent</b> 63:18 244:6 265:1 <b>preventing</b> 158:1	170:2 <b>prevents</b> 20:19 <b>previous</b> 10:25 17:23 18:1 23:5 48:15 206:17 226:7 234:17 235:1 248:15 273:18 <b>previously</b> 85:1 178:10 197:2 282:19 <b>price</b> 100:9 104:5 114:16 116:2,6,12 133:19 135:23 204:7 211:14 212:1 214:13 264:8 <b>prices</b> 116:7,13 160:13 262:15,17 <b>pricing</b> 116:12 235:14 272:14 <b>prima</b> 38:15 169:2 <b>primarily</b> 255:7 256:21 260:5 261:5 272:16 <b>primary</b> 38:12 47:9 155:3 256:17 <b>principles</b> 204:17 278:20 <b>prior</b> 55:4 97:13 101:19 154:4 190:5 <b>prioritize</b> 202:20 <b>priority</b> 28:15 <b>pristine</b> 204:15 <b>privacy</b> 26:23 28:18 39:25 269:14 278:18,19,23 <b>private</b> 64:18 107:8 168:6	198:9 <b>probably</b> 5:4 53:24 77:21 113:14 120:24 122:10 126:17 136:15 146:1 148:15 157:20 230:6 245:14 <b>problem</b> 20:16 33:6 35:21 38:2,6,7,8,10,11, 12 41:4 66:16 74:23 89:22 132:1 143:12 144:13 173:24 199:17,20 206:21 220:3 223:25 234:22 238:5 247:23 255:16 266:9 286:20 <b>problematic</b> 268:21 <b>problems</b> 8:16 45:17 58:8 61:7 199:24 202:13 218:12 232:17 248:1 272:4 <b>procedure</b> 107:16 <b>proceeding</b> 22:14,21,24 35:11 38:5,9 60:19 62:19 64:24 72:14 76:12 83:16 84:2 164:13 165:12 229:7 231:15 259:15,16 291:3 <b>proceedings</b> 5:3 23:5 97:13 148:23 154:4 164:23 292:5,7 <b>process</b> 4:7 6:23 11:8 29:21 30:11,13 36:13 41:17 67:17,21 72:21 80:19
--	--	--	---

<p>104:2 107:7 118:8 132:5,15 173:22 197:11 198:25 246:21 249:7 258:11,19 286:23</p> <p><b>produce</b> 17:9 20:18 21:4,8 216:14 244:2 255:7 260:14</p> <p><b>produced</b> 19:10 123:19 127:18 162:11</p> <p><b>producer</b> 95:21</p> <p><b>product</b> 10:12,15 34:14 59:4 69:21 127:21 222:18 249:5 255:24 266:16 287:21 289:18,19</p> <p><b>production</b> 94:10 137:3</p> <p><b>products</b> 21:6 56:16 58:19 103:7 104:4,5 106:20 129:15,22 202:9 248:20 249:9 269:17,20</p> <p><b>professional</b> 32:14 83:4</p> <p><b>professionally</b> 145:2</p> <p><b>professionals</b> 63:6</p> <p><b>Professor</b> 4:23,24 51:19 175:8 176:22 178:23 181:12 260:8</p> <p><b>professors</b> 63:7</p> <p><b>program</b> 63:12 89:25 116:20 119:21 211:7 212:25 221:8 282:8,14 288:4,5,7</p>	<p><b>programmable</b> 208:2</p> <p><b>programming</b> 221:9</p> <p><b>programs</b> 32:25 33:18,19 91:21 121:1 211:23,25 250:25 271:20 282:14</p> <p><b>progress</b> 25:4 46:17</p> <p><b>prohibit</b> 180:16 241:14 285:22</p> <p><b>prohibited</b> 143:16</p> <p><b>prohibition</b> 11:9 26:5 38:4,14 65:7 78:25 88:22 157:24 187:24 188:13,15 189:18 190:9 226:22 231:16,20 232:3 235:6</p> <p><b>prohibitive</b> 214:24 266:20,21</p> <p><b>prohibitively</b> 273:12</p> <p><b>project</b> 7:16 42:24,25 43:1 168:4,7 169:15</p> <p><b>projection</b> 113:24 128:13</p> <p><b>projects</b> 45:20</p> <p><b>proliferation</b> 140:14 184:22</p> <p><b>prolong</b> 202:9</p> <p><b>promise</b> 127:7 134:3</p> <p><b>promote</b> 25:4 49:9 140:13</p> <p><b>promotion</b> 9:24</p> <p><b>promptly</b> 230:8</p> <p><b>prong</b> 91:12</p>	<p><b>proof</b> 78:24</p> <p><b>proper</b> 31:6 246:1</p> <p><b>properly</b> 6:16 10:23 59:15 85:4 227:2</p> <p><b>properties</b> 105:16</p> <p><b>property</b> 62:23 168:1 169:21</p> <p><b>proponent</b> 106:17 235:1 288:1</p> <p><b>proponents</b> 26:4 27:7,15 28:1 35:5 37:2 39:7 60:3,9,14 72:15 181:17 205:19 206:25 213:20 214:22 225:21 226:11 227:20 231:4 232:17 233:3,5,6 239:1 243:20 285:12 286:2 287:4</p> <p><b>proponent's</b> 102:22</p> <p><b>Proponents</b> 3:3 28:4 226:20</p> <p><b>proportion</b> 90:8 120:7 124:23</p> <p><b>proposal</b> 144:14 277:6</p> <p><b>propose</b> 50:21 206:1</p> <p><b>proposed</b> 1:8 5:7 11:14 13:13 14:8 21:25 22:6 25:25 72:8 82:3,16 84:6 93:7,17 97:12 100:15 102:18 144:6,21 164:24 187:8,25 191:4 226:14 245:24 268:23 269:5,18</p> <p><b>proposing</b> 92:3 96:17</p>	<p><b>proprietary</b> 15:23 212:11</p> <p><b>prosecute</b> 46:10 233:24</p> <p><b>prosecuted</b> 44:7 45:11</p> <p><b>prospect</b> 245:17</p> <p><b>protect</b> 26:25 27:19 28:14 31:6 60:22 62:3 74:12 142:7,22 181:20 269:13</p> <p><b>protected</b> 12:9 24:7 49:19 61:16,22,24 207:12 269:18 271:5</p> <p><b>protecting</b> 65:25</p> <p><b>protection</b> 25:24 71:24 141:23 142:23 207:25 216:3 254:12 288:6</p> <p><b>protections</b> 92:16 130:1 208:21 210:17 242:24 243:2 244:6</p> <p><b>protective</b> 62:3</p> <p><b>protects</b> 10:14</p> <p><b>protocol</b> 197:7 217:17</p> <p><b>prove</b> 233:8 283:15</p> <p><b>proven</b> 37:5,6</p> <p><b>proves</b> 253:24</p> <p><b>provide</b> 95:12 118:9 133:10,14 137:3 142:9 176:3 202:19 214:12 216:6,9,11,12 223:6 253:17 264:7,20 265:17,24</p>
--	---	--	---



<p>267:16</p> <p><b>provided</b> 121:11 175:11 229:10 262:21 264:6</p> <p><b>provider</b> 120:5 126:13 258:5 266:13</p> <p><b>providers</b> 114:2 124:5 126:9 130:24</p> <p><b>provides</b> 81:10 111:15 217:18 265:14</p> <p><b>providing</b> 4:23 156:4 253:19 263:22</p> <p><b>provision</b> 47:24 48:25 59:24 62:18 64:16 84:4 228:4 229:14 259:17</p> <p><b>provisions</b> 5:8 40:3 43:22 65:9 143:20,22 210:4</p> <p><b>psychoanalyze</b> 72:11</p> <p><b>public</b> 3:6 6:17 29:23 30:24 48:12 49:4 50:19 59:7 60:11,12 67:14 73:23 76:10 85:2 86:11 103:23 106:25 139:12 140:3 141:17 143:14 171:15 176:1 185:25 192:12,16,25 206:2 209:13 230:4 234:5,11 255:6 284:17 292:1</p> <p><b>publication</b> 41:2 44:15</p> <p><b>publications</b> 9:9 78:8</p>	<p><b>publicly</b> 51:5,14 70:7 71:6 136:8 195:7</p> <p><b>publish</b> 8:24 42:20,21,22,23 43:11,17,19 45:24 46:2,18 77:17 198:7</p> <p><b>published</b> 43:5 44:10 78:13 223:3 230:15,17</p> <p><b>publishes</b> 52:1</p> <p><b>publishing</b> 45:21 49:12</p> <p><b>pulling</b> 218:16</p> <p><b>punish</b> 54:10</p> <p><b>purchase</b> 93:23 114:16,25 129:18 133:23 157:10 275:3 278:25 279:2 289:18 290:3,20</p> <p><b>purchased</b> 33:6 89:2 94:2 97:4,6,7 103:7 104:24 105:20 109:11 111:6,22 113:5 115:11 118:2,16 140:9 156:1 157:2 158:5,6</p> <p><b>purchaser</b> 275:2,5</p> <p><b>purchasers</b> 226:5 248:2</p> <p><b>purchases</b> 128:25 129:7 278:21</p> <p><b>purchasing</b> 183:24 276:22</p> <p><b>pure</b> 126:21 170:20 240:22 249:25</p> <p><b>purpose</b> 11:7 12:20 13:20 25:8 39:19 49:17 82:10 98:17</p>	<p>104:24 141:4,25 144:4 151:21 191:19,25 192:1,6,8 233:9 255:7 271:1 282:9</p> <p><b>purpose-built</b> 26:9</p> <p><b>purposes</b> 10:4,6 24:9 30:15 42:13 48:23 68:4 147:9 184:2,10 192:18 260:5 277:11</p> <p><b>pursue</b> 45:15</p> <p><b>pursued</b> 42:7</p> <p><b>pursuing</b> 105:13</p> <p><b>push</b> 181:5</p> <p><b>puts</b> 206:1 213:1 268:7</p> <p><b>putting</b> 77:8 171:3 236:23 245:9 246:9 253:12</p> <p><b>puzzle</b> 188:17</p> <hr/> <p style="text-align: center;">Q</p> <hr/> <p><b>qualifications</b> 19:23 20:3 32:22,23 72:2 82:15</p> <p><b>qualified</b> 130:5 176:18</p> <p><b>qualify</b> 150:13</p> <p><b>quality</b> 119:15 129:17 207:18</p> <p><b>quarterly</b> 34:15</p> <p><b>question</b> 11:24 14:5,7 23:14,15 28:23 31:18 39:11 40:19 41:12 43:10 50:13 51:24 53:13 55:11,16,20 56:9 60:17,18 61:19 62:9,17 64:3</p>	<p>65:6 68:1,4,11,14 70:1 74:25 75:21 76:6,8 78:23 79:4 81:21 83:4,5 90:25 91:4 92:12 94:11 95:15 97:18 98:1,2 100:23 104:9 107:24 116:1,16 118:13,15 119:3 121:6,17 122:7 123:12 126:6,20 133:2 149:7 151:6 153:8 154:2,10,14 158:11 160:11,17 162:9,23 163:7,9 171:23 181:4 182:5 188:24 191:6,12,20 192:7 193:10 200:25 207:3 208:24 210:2 211:2 214:16 219:23 227:18 231:11 240:7 244:18 254:6 255:12 275:10 277:23 278:1 281:14,16 283:21 284:18 290:9</p> <p><b>questioning</b> 81:15 91:6 137:10</p> <p><b>questions</b> 5:19 6:7,22 27:12 35:4,13 67:8,22 72:21 92:1 96:13 109:18,22 130:5 153:13 157:20 165:14 167:9 169:12 175:14 194:12 225:13 239:4 251:10 273:14 275:9 287:16 289:13</p>
---	---	--	---

290:10 <b>quick</b> 90:24 100:23 128:11 142:14 168:25 171:23 175:23 250:14 268:12 <b>quickly</b> 76:14 81:2 85:19 106:25 130:8 152:4 163:19 167:23 172:10 221:20 281:7 <b>quite</b> 30:20 48:6 59:15 63:8 79:21,22 80:11 111:17 150:22 193:21 <b>quo</b> 60:4 147:24 148:1 <b>quote</b> 106:24 175:23 <hr/> <b>R</b> <hr/> <b>race</b> 212:4,8 <b>Racing</b> 212:15 <b>radical</b> 35:10 <b>radio</b> 26:11 197:15 266:19 267:6 281:11 <b>radios</b> 197:15 <b>rain</b> 203:2 <b>rainfall</b> 177:10 <b>rains</b> 177:15 <b>raise</b> 72:20 178:24 190:20 225:1 <b>raised</b> 12:2 23:14 27:7 37:16 55:10 75:2 91:24 140:4 174:2 180:12 181:7,8 182:18 188:7 231:11 247:6 290:13 <b>raises</b> 23:22 35:12 269:21	<b>raising</b> 10:22 13:15 257:8 <b>rambled</b> 200:15 <b>ramifications</b> 71:21 <b>ramp-up</b> 122:15 <b>ranch</b> 176:10,11 <b>rancher</b> 177:12 <b>random</b> 186:19 <b>range</b> 5:10 8:11 26:10 47:16 48:20 117:12 182:6 187:21 216:24 217:3 262:19 288:10 <b>rapidly</b> 124:18 <b>ratchet</b> 232:16 <b>rate</b> 122:4 <b>rather</b> 5:13 41:5,9 48:8 82:1 121:15 137:5 140:17 155:23 171:13 187:25 195:14 232:20 262:5 282:21 289:10 <b>rationale</b> 147:6 <b>ratios</b> 238:11 <b>reach</b> 23:19 24:1 180:8,23 256:25 274:11 <b>reached</b> 157:9 261:1 <b>reaches</b> 23:21 24:9 <b>reaching</b> 66:24 <b>reacquire</b> 121:2 <b>reaction</b> 63:10 <b>readily</b> 282:19 <b>reading</b> 60:11 156:16 161:8 197:12 <b>readings</b> 196:14 <b>ready</b> 149:15	203:2 <b>real</b> 89:10 101:20 122:15 139:2 141:15 191:12 225:4 226:17 250:14 <b>realization</b> 180:1 <b>realize</b> 5:4 <b>realized</b> 199:19 <b>really</b> 5:14 19:12 30:10 33:15 40:22 46:15,20 60:21 84:23 96:15 104:1 105:3 106:4,8,12 114:10 117:25 124:20 129:4 132:17 133:7 134:2 138:3 139:21 161:17 166:7 171:14 172:15 173:4,5,6 174:9,14 185:21 191:16 198:6 202:24 221:20 223:5,17 232:9 240:8 244:15 248:12 250:11 254:18 260:6 261:22 267:12 273:21 287:9 289:2 <b>realm</b> 22:18 121:5 149:11 202:11 249:4 254:15 289:23,24 <b>realty</b> 22:24 <b>real-world</b> 233:1 <b>rearrange</b> 151:16 <b>reason</b> 11:2 44:5 48:2 100:4 101:18 124:18,19 127:6 152:10 198:8 245:23 247:4 249:6 285:13	288:25 <b>reasonable</b> 105:4 154:15,16 214:13 230:20 264:18 <b>reasonably</b> 40:21 <b>reasoning</b> 101:20 <b>reasons</b> 9:4 14:19 27:9 73:7 113:8 194:15 276:6 282:4 <b>reassurance</b> 46:9 <b>rebought</b> 89:20 <b>rebuilding</b> 90:14 <b>rebuy</b> 91:20 <b>rebuying</b> 89:13 <b>recall</b> 271:18 273:4 <b>recalled</b> 79:25 276:5 <b>receipt</b> 117:24 <b>receive</b> 120:19 229:15 <b>received</b> 16:6 17:8 46:24 89:6 228:14 <b>recent</b> 12:8 18:14 45:20 65:12 121:20 126:15 <b>recently</b> 248:22 274:4 <b>recognition</b> 149:4 <b>recognizable</b> 22:15 155:20,21 <b>recognize</b> 127:9 160:15 198:18 209:14 <b>recognizes</b> 41:13 <b>recognizing</b> 35:9 42:2 82:24 190:11 <b>recommendation</b>
--	--	--	--

146:6 <b>recommendations</b> 81:17 <b>reconcile</b> 67:1 <b>record</b> 5:6,13 6:17 8:1 9:6 37:3 38:23 40:7 41:14,21 42:13 47:25 50:25 62:24 63:2 64:1 67:12,22 68:7 71:15 72:19 73:17 76:10 82:25 85:2,5 88:9 94:1 110:8 121:18 130:11 148:25 165:25 172:8 182:9 193:12 214:25 227:14 228:17 233:15 234:18 236:22 240:4 241:2,8 242:1,10,20 256:24 268:13 278:3,4 285:15 286:4 292:7 <b>recorded</b> 110:16 <b>recording</b> 3:25 88:11 92:23 139:6 <b>recordings</b> 89:16 <b>records</b> 150:15 <b>recoup</b> 107:13 <b>recovery</b> 140:16 <b>Redbox</b> 93:10 158:15,22 <b>redeemed</b> 131:21 <b>redemption</b> 135:13 <b>redo</b> 197:11 <b>reduce</b> 17:10 39:1 58:2 233:13 <b>reduced</b> 106:22	<b>reducing</b> 17:13 <b>reduction</b> 10:2 <b>redundancy</b> 178:9 <b>redundantly</b> 150:10 <b>reestablish</b> 278:14 <b>refer</b> 84:21 182:13 228:20 <b>reference</b> 22:3 69:9 140:7 149:12 268:24 283:22 <b>referenced</b> 69:14 116:23 142:3 173:16 229:9 250:23 <b>references</b> 24:19 <b>referencing</b> 6:14,20 63:4 219:15 <b>referred</b> 69:17 151:1 183:19 <b>referring</b> 84:20,25 156:11 190:3 192:13 205:2 <b>refers</b> 47:17 91:1 <b>refine</b> 217:2 <b>refinement</b> 71:11 <b>reflash</b> 274:23 <b>reflect</b> 40:23 149:3 256:25 <b>reflects</b> 54:5 <b>refrain</b> 109:21 <b>refrigerators</b> 22:20 <b>refused</b> 224:16 <b>Regan</b> 2:11 4:14 85:25 167:15 <b>regard</b> 34:16 54:22 68:14 88:17 90:23 91:8 99:20 104:21	147:21,24 153:16 224:24 232:23 235:17 257:13 <b>regarding</b> 188:6 <b>regardless</b> 88:24 147:11 <b>regards</b> 272:15 <b>regime</b> 97:19 <b>regimes</b> 26:24 64:12 172:5 <b>region</b> 202:1 <b>regional</b> 100:2 <b>regions</b> 100:4 <b>regulate</b> 175:1 208:13 <b>regulated</b> 59:18 174:17,23 <b>regulating</b> 26:11 <b>regulation</b> 181:9 209:23,25 216:2,18 233:7 271:23 <b>regulations</b> 56:17 57:18 65:11 171:16 174:25 175:21 179:14 180:10 204:21 208:22 213:22 214:10 215:15 <b>regulator</b> 54:13 241:17,19 <b>regulators</b> 8:25 51:15 190:12 242:7 <b>regulatory</b> 26:3,20 28:2 36:4 55:10,13,22 56:6,25 58:15 59:5 64:3,6,11,19 65:20 172:5,15 203:18 207:10 225:25 226:18	227:4 260:12 276:6 <b>rehash</b> 137:5 <b>reinforced</b> 9:22 <b>reinstall</b> 211:19 <b>reintroduce</b> 167:10 <b>reiterate</b> 182:18 <b>rejected</b> 11:20 14:11 97:8 171:4 <b>relate</b> 160:23 183:8 189:3 219:17 <b>related</b> 205:20 216:18 217:7 222:2 260:13 274:5 <b>relates</b> 192:6 282:7 <b>relating</b> 26:21 184:1 226:1 <b>relation</b> 5:7 175:17 <b>relationship</b> 46:14,16,19 119:20 140:11 220:2 278:15 <b>relationships</b> 68:15 267:18 <b>relative</b> 202:16 292:11 <b>relatively</b> 126:15 200:7 262:15 <b>release</b> 122:2 <b>released</b> 90:9 <b>releases</b> 125:3 <b>relevance</b> 174:15 <b>relevant</b> 38:5 56:11 63:1 103:19 108:2 191:16 287:15 <b>reliable</b> 12:4 176:4
--	---	--	--

186:6 <b>relied</b> 61:15 92:4 207:6 232:22 <b>relief</b> 284:16 <b>relies</b> 49:14 286:19 <b>reluctance</b> 232:19 <b>reluctant</b> 224:15 <b>rely</b> 48:25 109:1 210:3 287:4 <b>relying</b> 47:23 60:22 65:7 68:2,3 282:7 <b>remain</b> 9:3 153:17 <b>remains</b> 72:10 283:5 <b>remark</b> 85:10 <b>remarks</b> 85:15 136:18 137:6 170:9 224:12,22 225:12 <b>remedies</b> 171:1 <b>remedy</b> 35:23 <b>remember</b> 67:13 124:7 131:24 174:6 <b>remote</b> 19:11 26:16 51:22 65:18 66:21 <b>remotely</b> 16:12,20 18:16,17 43:2 44:23 <b>remove</b> 11:8 64:24 190:8 196:21 <b>removed</b> 248:16 <b>removing</b> 35:25 231:19 <b>rent</b> 93:9 158:14 <b>rental</b> 159:15 <b>repack</b> 220:14 <b>repair</b> 165:1 168:14 169:21	170:1 173:17 176:4,8 177:5 180:17 182:12 191:10,12 200:23 202:6 203:16 204:8 205:13,18,21,23 213:19,24,25 214:1,6,8 215:12 217:12 218:3 219:16,19 221:17 223:9,25 224:4 227:2,3 228:3 235:4,8 241:15 244:17 252:18,23 254:6,7 256:17 260:1,22 261:16 262:2 264:15 265:11,14,20,25 269:10 272:25 282:21 283:13,16 284:2 286:25 <b>repair/ modification</b> 260:3 <b>repaired</b> 188:1 253:4 <b>repairing</b> 255:2 259:1 <b>repairs</b> 194:10 195:14 196:5,8 204:25 205:15 226:23 252:13 258:25 259:2,6,7 262:25 <b>repeat</b> 87:6 <b>repeatedly</b> 148:10 <b>replaced</b> 89:23 <b>replacement</b> 282:16 <b>reply</b> 40:8 107:19 140:3 169:11 230:14 233:16 <b>report</b> 8:13 9:2	51:13 274:4 <b>reported</b> 1:23 186:1 <b>reporter</b> 7:9 87:5,8 129:1 292:3 <b>reporting</b> 10:8 <b>reports</b> 34:15 <b>represent</b> 86:6,7 87:15 103:12 108:24 129:25 167:24 <b>representative</b> 207:5 209:5 <b>represented</b> 124:21 <b>representing</b> 7:19 104:13 137:2 142:9 168:13,17,21 205:11,14 <b>represents</b> 89:4 127:2 149:2 <b>reproduction</b> 99:7,11 106:5 151:13,23 152:3 <b>reprogram</b> 218:9 219:7,8 221:19 <b>reprogramming</b> 221:7 <b>reprograms</b> 242:2 <b>reputation</b> 62:7 186:8,11 <b>request</b> 22:2 34:21,22 138:7 139:23,25 149:3 <b>requested</b> 45:6 97:2 141:5 143:14 <b>requests</b> 230:16 <b>require</b> 32:17 96:7 157:18 247:16 252:14 254:7,9	<b>required</b> 11:6 18:22 31:3 39:16 56:15 57:7,17,25 208:17 214:11 238:20 252:23 258:15 265:17 278:24 <b>requirement</b> 36:17 54:4 70:20 72:6,13 73:7 74:15 78:12 82:23 156:5 209:11 215:22 251:2 <b>requirements</b> 26:3,20 32:19 55:15 56:2,25 57:7,8,9,16 72:1 188:2 226:1 238:22 243:1 <b>requires</b> 39:13 247:13 <b>resale</b> 275:22,23 <b>research</b> 8:6,10 9:5,9,11,18 10:7 11:10,17 14:18 15:4 16:5,11 17:10,14,23 18:1,13,14,21 19:1,4,8,22 20:6,23 24:17,20,23 29:16 30:4,15 31:3 32:8,9 33:5,18,19 34:22,24 36:24,25 37:6,8,24 38:23 39:1,12 40:5,10,14,15 41:1,3,11,21,23 42:7,16,18,20 44:1,3,13,16,19, 22 45:9 46:5,9 47:18 48:5,14 49:3 51:2,18 54:3,11,16,25 60:2 62:25
--	--	--	---

63:9,13,18 66:6,8,11,15,17, 19,21 73:3 76:3,11,16,20,23 78:5 81:9 82:5 122:1,3 194:10 <b>researched</b> 30:7 51:22 <b>researcher</b> 7:13 14:24 20:4 49:3 52:14 54:22 73:12 74:8 82:9 <b>researchers</b> 8:8,15 9:7,13 10:10 12:11 14:16 15:5,9,23 17:2,4,11,18 18:12,25 21:11 27:25 29:9 30:18,22 31:20 32:1,10,11,15,20 33:12,14 34:2 38:25 41:6,14 43:14 44:9 45:14 47:11,17,23 48:1,15,22 49:11 51:1,4,9 52:16 65:1 66:25 67:2 68:16,25 76:18 77:2 78:7 81:7,22 <b>researches</b> 9:25 20:21 <b>resell</b> 183:14 184:5 267:4 278:8 283:3 <b>reserve</b> 194:1 <b>reserving</b> 183:1 <b>resides</b> 183:21 <b>resolve</b> 29:4 132:1 <b>Resource</b> 250:20 <b>resources</b> 34:20 57:24 61:4 176:3 197:22 200:11 207:21,24 208:8,16,19	213:8 216:2 <b>respect</b> 48:7 66:9 76:6 148:8 164:24 217:2 225:17 240:15 267:13 268:6 270:11 277:16 282:4,25 290:10 <b>respectfully</b> 28:6 <b>respond</b> 41:4 57:20 63:20 64:2 68:10,13 71:17 78:22 84:15 126:5 179:12 192:7 194:2 200:25 229:17 230:5,8,25 260:8 <b>Respondents</b> 88:14,18 90:12 <b>responding</b> 32:9 110:3 <b>response</b> 18:7 27:8 37:12,18 70:16 80:1 136:16 152:22 179:9,21,25 186:23 229:19 246:2 <b>responses</b> 229:22 <b>responsibility</b> 34:10 276:5 <b>responsible</b> 41:1 50:24 51:1 54:12 72:1 79:1 82:5,6 <b>responsibly</b> 51:1 <b>responsive</b> 230:12 <b>rest</b> 96:9 180:9 190:2 193:17 <b>restate</b> 165:21 <b>restrain</b> 184:25 <b>restraint</b> 183:15 184:4 <b>restrict</b> 247:15	<b>restricted</b> 31:1 <b>restricting</b> 88:25 <b>restrictions</b> 92:5 285:23 <b>restrictive</b> 183:4 282:6 <b>result</b> 8:17,23 9:16 51:13,18 100:21 143:6 208:21 235:3 253:18 254:5 284:13 288:13 289:9 <b>resulting</b> 25:2 <b>results</b> 8:24 39:21,23 41:3 45:22,24 46:22,24 48:15 68:17 120:13 213:5 <b>retail</b> 127:14 129:19 132:16 133:17 <b>retailer</b> 113:6,9 116:5,7 119:20 120:4,8 131:20,21 132:20 133:3,13 134:16 <b>retailers</b> 112:23 113:22 114:1,19,24 115:1,11,15 117:6 122:17,24 123:8 127:22 128:2 131:18 132:18,23 133:1 135:10 <b>return</b> 253:3 275:11 <b>revealing</b> 201:21 <b>revenues</b> 106:18 <b>reverse</b> 16:13 184:25 195:13,17,18 196:6 199:12,23	222:15 262:6,24 263:4 281:18,22,23 285:24 286:17,23 <b>reversing</b> 171:4 <b>review</b> 230:5 273:15 <b>revolution</b> 204:10 <b>revolves</b> 114:10 <b>rewrite</b> 185:15 <b>rewritten</b> 221:9 <b>RIAA</b> 86:19 100:14 103:12,14 104:13 <b>RIAA's</b> 104:9 <b>ridiculous</b> 176:17 <b>rights</b> 95:19 99:4 110:15 115:2,21 117:4 119:9 120:14 125:2,11 128:1 133:25 151:14,20 161:25 162:1 182:17 183:1,12 184:13 223:19 284:5 <b>Rio</b> 139:5 <b>rip</b> 156:15 160:15 161:2 <b>ripped</b> 157:4 <b>ripper</b> 157:3 158:10 <b>ripping</b> 104:10 156:22 157:25 159:5,20 160:1 <b>rise</b> 91:14 96:2,8 <b>risk</b> 28:2 30:17 59:6 94:14 170:17 171:3 177:3,7 178:25 190:19 206:2
---	--	---	--

224:23 247:23 <b>risks</b> 8:9 10:23 11:8,12 41:22 188:8,11 189:12 190:18,19 193:25 233:9 235:20 <b>risky</b> 185:8 <b>RMR</b> 1:23 <b>road</b> 5:22 80:18 233:11 238:18 <b>robust</b> 38:23 226:13 261:25 262:3,4 263:19 <b>role</b> 15:15 27:16 55:13,21 56:9 59:17 64:3 109:16 189:20,25 <b>roll</b> 107:3 <b>rolled</b> 106:20,21 <b>rolling</b> 105:2 135:9 <b>room</b> 4:20,25 5:2,21 56:2 112:11 134:23 135:3 239:1 <b>roughly</b> 136:2,19 <b>round</b> 37:11,15 228:20 235:1 236:13 <b>rounds</b> 37:2 <b>routine</b> 246:17 282:21 <b>routinely</b> 211:22 <b>row</b> 85:19 <b>RPR</b> 1:23 <b>rule</b> 53:9 128:3 165:11 225:19 246:11 259:22 <b>rulemaking</b> 1:5 4:7 9:24 35:3,11 52:21 84:2	164:23 258:11,18 259:16 287:17 <b>rulemakings</b> 10:25 190:5 <b>rules</b> 5:22 65:22,23 84:9 199:6 <b>ruling</b> 101:2 189:20 <b>rulings</b> 101:19 <b>run</b> 47:21 108:25 109:1,8 128:12 168:10 237:11 245:8 247:1 250:25 <b>running</b> 17:3 179:23 199:23 212:3 247:5 <b>runs</b> 87:11 178:3 204:15 236:12 237:3 <b>Rusty</b> 4:24 <b>Ruwe</b> 2:9 4:13 32:11 45:1 85:21 108:10 151:11,17 167:13 189:21 212:5,17 213:4,12,17 229:23 269:8 275:10,21 281:15 <b>Ruwe's</b> 230:3 <hr/> S <hr/> <b>SAE</b> 69:6 <b>safe</b> 19:6,7,11,14 20:9,18 26:18 33:25 34:8 130:21 176:3 188:14 194:23 195:2,7,25 198:11 220:13 233:11	<b>safeguards</b> 72:9 <b>safely</b> 175:21 202:8 204:21 205:2 249:10,12 <b>safer</b> 8:4,12 17:16 <b>safety</b> 8:7 9:1 11:13,18 15:25 16:22 19:2,5,16,17 20:15,23 21:9,14 26:2,11,23 27:16 28:2,14,17 30:15 31:9 49:15 57:8 58:22 59:7 66:5,8,10 171:15 187:22 188:2 189:8 190:19 191:7,15 192:1,20 193:3 194:14 195:24 198:6,13,17 203:19 206:4,12,24 223:6 226:1,17 227:3 232:17 241:23 248:7 269:23 272:4 <b>safety-critical</b> 27:20 <b>sake</b> 71:15 254:13 <b>salable</b> 53:24 <b>sale</b> 91:3 95:25 115:20 184:10 285:3 <b>sales</b> 116:13 <b>San</b> 15:7 43:4 <b>satisfaction</b> 117:9 122:4 <b>satisfactory</b> 75:7 <b>satisfy</b> 75:10,11 <b>saturation</b> 125:4,5 <b>sauce</b> 231:10 232:14 239:7 <b>sauce-for-the-</b>	<b>gander</b> 193:6 <b>sauce-for-the-</b> <b>goose</b> 193:6 <b>Savage</b> 51:19 <b>save</b> 89:21 <b>saw</b> 148:1 170:16 171:25 268:15 274:3 <b>scant</b> 285:7 <b>scares</b> 19:12 <b>scenario</b> 40:21 70:24 <b>schedule</b> 69:18 136:19 <b>scheduling</b> 108:6 177:8,18 <b>scheme</b> 35:14 41:8 172:15 <b>school</b> 112:1 162:12 <b>science</b> 63:6 249:25 266:24 <b>sciences</b> 25:4 <b>scope</b> 38:8 64:25 269:5 288:5 <b>scratch</b> 44:9 <b>scratched</b> 110:21 <b>screen</b> 109:25 114:21 155:25 <b>screens</b> 109:12 111:8 119:11 146:10 <b>screwed</b> 244:16 <b>scrutiny</b> 14:14 <b>sea</b> 147:23 <b>seal</b> 59:20 268:7,10 <b>seamless</b> 130:21 <b>Search</b> 263:10 <b>searching</b> 284:15 <b>second</b> 10:6 17:12
--	--	--	--

23:17 35:12 36:7,20 39:3 47:24 67:25 73:5 87:24 88:17 120:16 129:20 132:14 140:2 142:6 192:12 228:19 275:1 <b>secondary</b> 102:12,16 <b>Secondly</b> 89:7 <b>seconds</b> 14:1 274:16,17 <b>secret</b> 243:7 <b>secrets</b> 211:12 <b>section</b> 4:6 5:9 9:5,21 23:2,18 36:23 37:22,23 38:14 42:8 59:2 65:7,10 99:5,12,13 151:16 158:20,23 164:22 178:13,15,19 181:23 182:17 183:12 184:2 189:17 207:6 210:4 231:17 232:9 250:12 268:1 277:12 <b>sector</b> 287:2,3 <b>sectors</b> 63:25 <b>secure</b> 14:13 26:18 33:25 128:22 269:1 <b>security</b> 7:13 8:6,7,15 9:5,9,25 11:13,17,21 14:8,9,12,18,24, 25 15:4 17:13 19:4 20:1,25 21:5,9 24:17,20 26:2,22 27:17 30:15,19 31:10,15,22	34:2,11,14,16 35:19,21,25 36:2,11 39:15,19 40:1 47:11,16,22 48:1,5,12,20,22 49:9 51:18,21 52:24 54:3,10,16,23 58:8 59:2 63:13 69:21 71:20 73:2 74:5,19 76:3,11 82:9 190:18,23 194:10 199:12,15 200:4 206:3 226:17 227:3 232:23 249:18 250:4 269:9 <b>security-related</b> 35:16 <b>seeing</b> 118:14 173:14 204:2 273:4 <b>seek</b> 27:18 207:1 <b>seeking</b> 21:24 219:22 268:16 <b>seem</b> 27:17 48:21 89:13 269:9 <b>seemed</b> 92:4 <b>seems</b> 68:7 95:11 143:17 246:13 <b>seen</b> 9:1,6,8,11 12:7 40:9 41:24 47:25 48:5,10 51:15 75:24 102:21 105:9 116:13 194:14 201:17 230:14 234:7 241:14 259:24 <b>Sega</b> 286:16 287:5,13 <b>self-reports</b> 47:11 <b>sell</b> 135:15 136:5 185:5 198:3 205:17 220:20	254:24 272:24 <b>selling</b> 99:22,23 233:21 255:24 <b>sells</b> 220:19 233:19 <b>sell-through</b> 133:23 <b>Senator</b> 8:13 51:12 <b>send</b> 15:24 93:15 162:25 <b>sends</b> 145:16 <b>Senior</b> 86:1 167:17 <b>sense</b> 40:13 79:18 114:5 121:12 123:15 125:5,21,22,25 126:1 137:24 149:25 157:23 185:14 186:5 214:17,24 240:4 252:7 255:21 259:25 286:16 289:7 <b>sensitive</b> 259:8 <b>sensor</b> 203:4,7,8,14 217:8 <b>sensors</b> 196:20 206:19 <b>sent</b> 15:22 42:23 173:9 203:5 <b>sentences</b> 24:7 <b>separable</b> 283:8 <b>separate</b> 100:3 185:5 210:20 274:8 <b>sequence</b> 138:18 <b>serendipitous</b> 69:18 <b>series</b> 194:7 <b>serious</b> 8:16 9:17	28:11 82:4 <b>serve</b> 10:5 12:19 <b>servers</b> 22:19 <b>serves</b> 12:3 23:9 <b>service</b> 38:7 81:9 93:1 112:7,10 114:21 115:5 116:24 117:8,12,21 118:11 119:6,7,25 120:1 126:11 130:17 133:16 202:24 205:12 215:11 216:9 252:4,6,18,19 253:14,16,20 254:2,6 255:6,24 256:2,11 258:24 259:6 279:4 281:4 <b>services</b> 33:5 90:1,11,15,17,18 ,20 105:2,3 106:18 107:3,12 110:24,25 111:2,4 123:16 129:9,23 159:13 226:14 251:20 252:3 283:7 <b>sets</b> 57:24 <b>setting</b> 30:25 97:15 <b>settings</b> 82:14 287:13 <b>settled</b> 139:17 <b>several</b> 16:14 22:23 31:20 34:11 45:19 122:2 147:17 155:21 188:7 264:9 <b>shape</b> 142:12 <b>share</b> 15:19 31:15 46:1 125:23 136:16 167:3
---	---	---	---

<p>194:8 195:7,23 196:2 200:5,24 255:1 267:22 <b>shared</b> 50:8 167:4 283:24 <b>sharing</b> 41:16 45:22 127:10 196:7 197:5 198:25 <b>sharpen</b> 83:8 <b>shed</b> 30:10 <b>shelf</b> 149:11 <b>Sheriff</b> 152:14 <b>sheriff's</b> 152:20 <b>Sherman</b> 86:10 <b>Sherwin</b> 3:6 105:6 152:10 <b>Sherwin's</b> 105:17 <b>shift</b> 118:15 137:24 139:14 199:3 <b>shifted</b> 23:9 <b>shifting</b> 83:15 91:10 137:19,21 142:12 156:19 198:22 <b>shocking</b> 274:6 <b>shoes</b> 202:14 <b>shop</b> 134:3,4 205:13 214:8 217:14 260:2,3,4,22 <b>shops</b> 205:15 214:1 221:18 <b>short</b> 14:7 28:9 57:23 72:19 110:1 130:7 <b>shorthand</b> 292:2,8 <b>Shortly</b> 17:7 <b>showed</b> 15:10,23 16:12,19 17:19 <b>showing</b> 38:13</p>	<p>94:16 96:18 <b>shown</b> 19:9 90:8 94:13 95:7 106:2 <b>shows</b> 18:14 50:25 69:18 76:10 98:3 110:12 115:7 121:24 122:22 288:22 289:16,24 <b>shut</b> 145:21 <b>shutting</b> 143:24 <b>shy</b> 192:22 <b>sides</b> 11:15 193:7 232:10 251:23 <b>sign</b> 173:11 284:20 <b>signal</b> 213:2 <b>signed</b> 103:6 276:10,11 <b>significant</b> 34:19 40:2 75:3 89:4 127:2 139:13 143:17 155:7 173:14 174:10 226:21 256:18 283:4 284:6 <b>significantly</b> 24:4 228:13 <b>Silberberg</b> 7:18 86:18 168:21 <b>similar</b> 34:6 92:3 95:9,12 113:3 121:4 135:14 139:25 141:6 162:21 212:21 213:5 275:19 281:25 <b>similarly</b> 49:20 88:9 112:5 184:12,24 <b>simple</b> 106:15 130:21 197:7 251:5 272:25 <b>simplistic</b> 59:3 <b>simply</b> 31:7 38:18</p>	<p>55:4 95:4 99:23 100:6 138:13 140:6 174:4 213:21 262:22 <b>single</b> 89:24 120:9 131:19 138:25 139:19 156:1 264:13,23 <b>Sirius</b> 280:8 <b>sit</b> 163:6 <b>sitting</b> 6:11 169:17,20 <b>situation</b> 65:15 120:10 201:6 203:12 224:18 <b>Sixth</b> 1:4 4:6 35:3 84:1 164:22 <b>Siy</b> 3:6 85:13 86:9,10 87:18,19 92:10,20,24 93:13,20 94:20 95:15 96:7,25 98:7 118:13 123:10 136:15 144:6 146:22,23 148:22 149:23 150:7,13,18 151:15,18 153:2,16 154:9,21 155:2,18 156:1,11,19,25 157:15,18,21 160:1 <b>Siy's</b> 123:13 144:14 <b>sizes</b> 178:3 <b>skip</b> 99:2 121:17 124:1 <b>skipped</b> 50:7 <b>slash</b> 85:11 <b>slated</b> 21:18 <b>slave</b> 121:15 <b>slide</b> 124:3 225:19</p>	<p>246:11 <b>slides</b> 121:16 <b>slightly</b> 124:16 <b>slow</b> 129:2 <b>SlySoft</b> 145:25 <b>small</b> 15:14 89:13,19 288:12 <b>smaller</b> 126:25 155:19 <b>smart</b> 21:1 109:13 204:11 206:6,7,14 234:18 <b>Smith</b> 2:11 4:14 34:21 85:25 92:1,18,22 93:7,17 94:8 95:6 117:15 118:5,12 144:5,13,23 153:15 157:19 158:19 160:16 163:3,9 164:1 167:15 168:10 194:4,5 196:10 198:21 199:3,11 200:15 218:4 219:23 221:20,23 223:16 224:5,10 228:17 237:18 245:8 249:17,18 251:8,17 260:19 263:1 266:1,4,10 <b>snack</b> 164:10 <b>snacks</b> 83:14 <b>Snider's</b> 47:20 <b>snow</b> 236:23 <b>social</b> 233:25 <b>societal</b> 19:5 <b>Society</b> 63:11 <b>soft</b> 287:25 <b>software</b> 3:24 10:3 23:4 26:17 31:10</p>
---	--	--	---



48:7 49:25 51:8 56:21 57:13,19 58:17,18,24 59:3,8 61:2,8,9,15 77:4,8,11 80:22,24 99:13 151:5 152:11,19 153:2 164:25 165:1 172:21 173:3 176:4 178:4 182:19,22 183:16,21,24 184:21 185:5,8,11,14,15 ,17,18,24 186:4,5,12,14,15 ,20,23,25 187:1,2,4,6,13 194:20,23 196:18 201:3,15,16 202:3 203:6,13,23 204:24,25 206:6,7,8,9,16 207:7 208:1,4,5 210:7 211:13,17,19 213:9 220:9 221:11,15,19 222:2 226:4 238:2,4,16 241:15 243:8,15 244:25 245:5,11,20 246:13,18,20 247:3,12,13,14 248:21 249:14,16 252:12 253:10 262:6 263:5 268:24 269:16 272:20,22,24 273:9,10,11,24 274:1 275:18,25 276:2,3,7,23 277:3,4,19 280:5,9 283:5,8 284:11,21	285:1,8,22 287:25 288:2,9,11,20,23 289:2,6,19,20  <b>sold</b> 57:10 109:1 183:16 184:18 215:13 223:17,19 248:7 281:1  <b>sole</b> 39:19 82:10 190:8 282:9  <b>solely</b> 22:18 49:8,17 141:3  <b>solo</b> 7:15 168:6  <b>solution</b> 52:18  <b>solutions</b> 61:5 130:1  <b>solve</b> 20:16 58:8  <b>solved</b> 266:8  <b>solving</b> 61:7  <b>somebody</b> 40:15 67:15 93:14 99:10 144:3 151:9,23 152:1 155:2 156:1,6,12 195:9 210:22 233:24,25 234:22 236:23 250:4 254:3 264:14  <b>somehow</b> 41:20 53:15 245:11  <b>someone</b> 12:16,24 34:23 51:25 52:3,6 61:12 106:9 116:23 118:1 156:13 185:15 186:14 220:19 224:7 229:17 233:20,21 237:2 244:16 245:7 246:9,10,17 248:4,19 249:13 254:1 268:25	270:13 278:13  <b>something's</b> 244:11  <b>somewhat</b> 32:7 98:25 152:18 274:6  <b>somewhere</b> 75:11 102:10 126:1 198:24  <b>son</b> 111:25  <b>Sony</b> 21:2 102:2,5,8,11 287:5,13  <b>Sony's</b> 102:1  <b>sophisticated</b> 246:18 249:8 253:9 257:8 259:2  <b>sorry</b> 14:3 62:15 145:4 248:12 250:13 273:2 286:7  <b>sort</b> 11:25 19:20,22 20:2 46:14 50:11 52:13 56:23 58:12 61:18,20 62:16 70:24 71:7 74:19 75:11,13 76:2,4 85:10 95:1 96:14 98:2 103:13,15 104:11 125:22 140:2 147:22 151:6,20 152:1 153:19 155:15 157:23 161:10 170:15 173:21 180:2,5 181:18 187:13,14 188:7,20 189:6,10,13 190:18 191:24 193:5 199:2 207:8 216:24 220:3 227:22,25 237:5 240:23	250:12 251:12,13 256:20 261:11 271:4,6  <b>sorts</b> 151:3,4 171:1 186:1  <b>sought</b> 27:21 129:16  <b>sound</b> 89:15 270:11  <b>sounds</b> 46:13 70:2 283:4  <b>source</b> 37:10 269:15  <b>South</b> 259:5  <b>space</b> 83:15 91:10 119:12 190:12  <b>space-shift</b> 86:14 91:20 97:22 117:13 120:14 137:24 157:17  <b>space-shifted</b> 89:20  <b>space-shifting</b> 84:6 87:22 88:4,8 91:13 97:11 111:12 141:8 148:2 154:11  <b>spans</b> 113:20  <b>sparse</b> 68:7  <b>speak</b> 5:22 6:1 20:3 84:10 87:1 110:12 209:6 210:10 261:23 282:15,19  <b>speaking</b> 180:25 205:16  <b>special</b> 212:16,19 229:21  <b>specialist</b> 245:7  <b>specialize</b> 217:15  <b>specialized</b> 11:6
---	---	---	---

183:8 241:13 242:3 <b>specializing</b> 14:25 <b>specific</b> 6:19 11:12,16 24:24 32:18,23 42:5,24 48:13 57:5,18 77:14 81:22,25 94:4 96:14 104:4 105:7,10 127:7 163:1 169:3,5 174:5 183:1 187:23 193:13 196:5 202:21 209:24 230:2 239:4 256:10,14 <b>specific</b> 62:18 <b>specifically</b> 17:12 24:17 36:23 44:22 56:1 62:15 76:17,22 77:1 174:2 175:12 178:15 190:3 258:2 272:23 285:21 <b>specification</b> 290:7 <b>specifics</b> 239:3 <b>specified</b> 57:8 <b>specify</b> 99:18 <b>spectrum</b> 113:22 <b>speculating</b> 48:2 116:11 242:24 <b>speculation</b> 11:19 14:10,17 170:21 188:2 240:22 242:22,23 244:5 <b>speculations</b> 242:14 <b>speculative</b> 10:22 11:4 55:2 94:13 171:8 187:19,21 193:25 284:19 <b>speed</b> 15:17 27:2 199:18 217:17	243:25 <b>speedometer</b> 17:22 196:13 197:12 198:21 199:4,5 236:25 <b>spelled</b> 235:21 <b>spells</b> 88:4 <b>spend</b> 34:7 89:18 91:9 237:23 263:12,20,21,24 265:7 <b>spends</b> 267:3 <b>spent</b> 250:16,18 <b>split</b> 120:3 <b>spoke</b> 175:8 <b>sponsored</b> 44:20 <b>spot</b> 163:24 <b>spread</b> 97:5 234:7 <b>stack</b> 16:16 193:23 <b>Stacy</b> 2:13 4:15 86:1 167:17 <b>staff</b> 34:18 63:14 168:8 <b>stake</b> 180:20 <b>stall</b> 218:17 <b>stand</b> 178:7 <b>standard</b> 30:25 49:23,24 50:11 75:7 83:4 119:14 120:13 126:7 162:3 188:22 232:9 287:1 <b>standards</b> 28:20 56:7 57:25 58:22,23 75:25 76:3,5 174:24 233:14 <b>standpoint</b> 78:3 118:8 162:21,22 255:13 <b>Star</b> 130:20 134:22	<b>start</b> 7:3 44:8,10 52:4 55:17 81:15 84:5 85:13 86:8 112:20 272:10 <b>started</b> 8:15 81:21 122:10,15 151:2 199:16 200:21 208:5 <b>starting</b> 8:14 15:5 <b>starts</b> 114:9 118:3 219:2 <b>start-up</b> 267:7 <b>state</b> 34:16 48:13 162:13 167:23 188:1 210:19 211:12,20 213:22 243:7 246:23,24 250:24 271:25 292:3 <b>stated</b> 75:14 77:13 205:19 <b>statement</b> 6:6 7:25 14:2 27:8 51:19 63:5 129:22 137:6 139:1 167:2 229:8 240:3 278:18,23 <b>statements</b> 7:5,8 165:9 194:11 230:12 233:16 <b>states</b> 25:17 69:24 102:1 179:24 211:22 250:19 256:4 <b>static</b> 23:10 <b>stating</b> 54:9 129:22 <b>stature</b> 45:12 <b>status</b> 60:4 147:24 148:1 <b>statute</b> 23:18 36:15 38:3 72:15 87:21 106:2,5 139:9 151:21	171:19 178:12 179:16 190:2 208:12 231:14 234:23 <b>statutes</b> 24:11,16 178:7,11 <b>statutory</b> 9:23 10:7 35:14 39:4,9 40:24 41:8 48:19 49:1 72:13 82:23 88:1 90:23,25 171:19 188:22 189:3 256:15 258:8,14 <b>stayed</b> 101:3,4,6 <b>steep</b> 218:16 <b>steering</b> 8:19 17:24 18:3,18 27:2 <b>Steve</b> 2:9 4:12 7:17 85:21 167:13 168:8,15,20 205:7 229:8 230:3 235:21 <b>STEVEN</b> 3:15 <b>stick</b> 75:15 <b>stop</b> 6:16 85:3 110:5 <b>stopping</b> 16:2 <b>stops</b> 197:5 <b>storage</b> 157:5 <b>store</b> 93:11 112:18 158:22 <b>stores</b> 108:25 116:18 <b>stories</b> 240:23 242:15 <b>story</b> 30:2 <b>strategically</b> 28:13 <b>stream</b> 111:7 113:12 115:13 119:10 150:8
---	--	--	---

<b>streaming</b> 90:1 95:1 96:24 105:9,14 117:5 120:15 127:13,25 128:4 137:25 159:16 <b>streams</b> 95:8 <b>street</b> 40:16 245:4 <b>stress</b> 114:12 218:24 <b>stretch</b> 83:14 <b>strict</b> 54:4 209:17 <b>stricter</b> 49:23 165:10 <b>strictly</b> 282:9 <b>strike</b> 42:2 64:9 238:10 <b>strip</b> 183:11 253:17 <b>strips</b> 254:4 <b>strong</b> 36:22 50:17 111:19,20 233:14 289:17 <b>strongly</b> 29:10 30:14 <b>struck</b> 287:12 <b>structure</b> 272:14 <b>structures</b> 125:11 <b>struggling</b> 77:22 <b>studied</b> 5:18 <b>studio</b> 86:21 116:5 117:21 119:17,21 129:11 <b>studios</b> 3:19 102:15 105:2,12 106:11 108:22 114:1 122:16 124:20 125:6,16,20,21 128:17 135:7 <b>stuff</b> 173:22 196:21 197:22	199:24 222:1,5,17 240:19 251:14 263:1 266:24 280:18 <b>subject</b> 23:4 29:15 52:22,23 173:2 183:4 225:25 277:21 283:14 <b>submission</b> 27:4 260:9 <b>submissions</b> 31:19 54:8 75:23 165:19 173:9 188:12 234:8 271:19 <b>submit</b> 37:3 107:10 172:25 234:15 240:25 <b>submitted</b> 6:15,21 47:16 67:13 85:2 108:4 166:8 170:6 176:25 240:16 259:4 273:8 <b>submitting</b> 41:25 <b>subscribe</b> 91:21 <b>subscribed</b> 292:14 <b>subscriber</b> 92:25 93:4 <b>subscribers</b> 92:23 93:3 <b>subscription</b> 214:19 215:5,6 279:14,16 281:4 <b>subscriptions</b> 90:14 <b>subsequent</b> 192:8 206:18 220:21 244:10 276:3 279:1,3 <b>subsequently</b> 17:5 241:19 <b>substance</b> 84:8	<b>substantial</b> 26:6 87:25 89:18 90:21 144:4,21 226:22 <b>substantially</b> 123:5 <b>substantiate</b> 42:14 <b>substitute</b> 13:1 90:6 95:13 <b>substitution</b> 95:16 <b>succeeding</b> 123:1 <b>success</b> 158:3 159:13,14 <b>successful</b> 143:5,23 <b>suddenly</b> 116:13 148:1 <b>sue</b> 46:25 233:24 267:24 <b>sued</b> 267:25 <b>sufficient</b> 33:1 151:14 174:8 <b>suggest</b> 28:7 55:5 120:3 178:9 206:22 214:22 220:7 241:18 <b>suggested</b> 28:24 63:23 67:11,18 161:3 226:10 258:2,10 262:12 <b>suggesting</b> 21:12 97:19 155:14 186:25 290:2 <b>suggestion</b> 31:5 255:18 <b>suggests</b> 119:25 153:24 <b>suitable</b> 107:6 <b>suits</b> 111:19,20 287:4,7 <b>sum</b> 95:20 224:21 246:21 247:1 250:15,23	<b>summarize</b> 194:11 225:3 <b>summary</b> 101:1 138:22 139:19 170:16 175:6 <b>summed</b> 224:21 <b>summer</b> 18:14 44:23 45:23 <b>super</b> 219:1 <b>supersede</b> 189:19 <b>support</b> 4:23 21:23 122:25 139:7 162:7 234:8 281:23 286:4 <b>supported</b> 263:2 <b>supporting</b> 139:20 205:9 <b>supports</b> 160:8 162:17 280:9 <b>suppose</b> 244:16 250:8 277:6 <b>suppositions</b> 72:11 <b>Supreme</b> 148:1,8,16 <b>sure</b> 6:16 14:21 20:12 27:13 29:1 33:2 34:7 51:6 63:21 71:21 72:23 73:3 78:15 85:3 94:1 102:21 104:12 113:15 133:19 136:20 153:14 165:16 178:22 195:8,20 200:9 213:16 219:12 227:17 231:13 235:17 267:11 281:15 <b>surely</b> 240:1 <b>surprise</b> 59:22 69:22 <b>surprised</b> 52:20
--	---	--	--

289:25 <b>swapping</b> 96:9 <b>sweep</b> 65:23 <b>Swift</b> 270:18 <b>switch</b> 128:12 <b>switches</b> 245:13 <b>Sy</b> 2:7 4:11 85:23 167:14 <b>system</b> 35:24 63:16 87:16 105:25 111:5 113:2,8 114:24 115:17 125:23 126:7 140:13 141:7 142:20,21 145:10 158:7 161:13,14,22 162:1,16 170:3 183:9,20 201:10 206:24 217:8 221:6 235:11,16 245:11 249:21 265:10 267:8 269:1,4,13 273:19 276:15 279:20,21,24 280:25 283:1 290:4 <b>systems</b> 14:13 26:15 51:23 81:8 176:20 183:9 242:1 247:2 262:23 265:4,9 268:16 270:4 274:5 277:20,21 280:9 283:16,18 285:17 <hr/> T <hr/> <b>tab</b> 115:7 <b>table</b> 53:19,25 55:18 239:6 251:23 <b>tables</b> 251:4 <b>tablet</b> 146:16,20 155:3,13,23	156:9 159:20 163:23 <b>tablets</b> 109:13 134:13 <b>tacitly</b> 21:22 <b>tag</b> 55:3 <b>tailor</b> 104:4 <b>tailoring</b> 64:21 <b>take-down</b> 200:10 <b>takeover</b> 51:22 <b>taking</b> 48:6,8 121:10 130:12 155:11 159:22 187:18 218:4 256:6 260:15 <b>talk</b> 11:12 15:19 30:5 47:24 60:6 63:8 75:24 76:2 77:10 92:1 96:5 104:13 107:17 130:6 131:10,22 134:4 137:8 140:22 165:4,17 166:1 169:1,4,14 170:7 174:7,19 175:10,12 177:2 195:17 196:1 198:11 215:1 232:17 243:21 249:1 255:9 <b>talked</b> 40:11 45:16 76:15 111:15 119:11 136:8 139:3 169:11 173:8 176:9,22,23 178:6 196:14 198:5 208:18 211:10 223:2 248:12 272:18 <b>talking</b> 6:18 9:7 13:7 19:20 44:22 45:21 54:11 58:24 59:4,23 76:17,22 77:20 78:19 85:4 89:7	94:24 95:4 98:15 110:22 111:1 125:19 133:22 138:3 142:4 150:17 151:2,3,4,8 152:6 154:13 161:14 169:16 172:9,20 173:14 174:1 175:22 178:4 179:4 181:15 186:10,11 189:8 193:2 209:24 212:17,18 214:21 222:3 228:9 232:15 234:13 241:11 254:8 255:2 258:16 261:24 264:4 269:6 271:8 273:9,24 282:12 285:13 <b>talks</b> 119:12 120:21 273:13 <b>Tally</b> 174:5 <b>tamper</b> 210:7,8 <b>tampered</b> 12:4 245:6 <b>tampering</b> 58:2 199:7 <b>targeted</b> 127:8 <b>tasked</b> 24:5 <b>tasks</b> 15:16 <b>Taylor</b> 270:18 <b>teacher</b> 161:8 <b>teachers</b> 161:1,5 <b>teaching</b> 163:10 202:6 <b>team</b> 51:22 63:13 <b>teams</b> 48:16 <b>tech</b> 217:14 220:2 <b>technical</b> 27:12 126:14 161:24	162:22 176:3 250:8 <b>technically</b> 126:12 161:14 <b>technician</b> 203:5 <b>technicians</b> 203:14 <b>technicolor</b> 114:22 <b>technological</b> 25:23 71:24 163:8 254:12 255:8 <b>technologically</b> 257:8 <b>technologies</b> 92:2 141:24 142:1 <b>technology</b> 18:5 48:3 58:1 86:21 92:5,17 109:3 113:22 114:1 128:16 129:15 141:4 168:1 207:25 242:3 275:1,4 281:2 <b>Teitell</b> 3:21 86:22 87:6,9 108:18,20 110:10 113:18 114:9 116:4,10 117:19 119:2,18 120:2 121:7,14 123:23 125:25 146:21 160:18 161:12 164:1 <b>telecommunicatio</b> <b>ns</b> 2:13 4:16 176:11,19 <b>telematic</b> 183:19 276:14 <b>telematics</b> 26:15 265:5,6,13,15,20 <b>telemetry</b> 265:4 <b>telephone</b> 28:8 <b>telephony</b> 182:3
---	--	--	--

<b>television</b> 111:8 124:19 155:8,9,17 156:1	<b>test</b> 66:7 96:4,6,9 109:23 210:23 238:20 247:5,7 250:25 260:6 290:21	81:4 97:12 102:1 105:8 111:25 119:2 158:17 159:18 170:4,14 171:18 177:2 184:6 192:25 193:1,5,9 197:5 200:3 209:10 213:7 216:11 220:23 221:15 222:25 238:4 243:9 244:23 246:7 248:17 251:5 255:3 256:1 257:3 260:21 261:5,7 262:4 273:22 277:22 279:9,17 280:16 290:8	182:16 187:10 189:11 191:11 192:1,24 193:15 197:23 206:10,11 215:8 217:21 237:25 240:5,19 243:3 252:17,18 259:1,8 265:17 267:15 271:5 276:1,21 279:2,4 281:1 283:17 284:9 285:16 288:15
<b>temperature</b> 218:15	<b>tested</b> 210:21		<b>thin</b> 59:11
<b>temporal</b> 92:7	<b>testers</b> 30:21		<b>third</b> 10:6 37:15 68:15 173:3 205:25 220:20 226:7 251:19
<b>temporary</b> 203:24	<b>testify</b> 57:22		<b>third-party</b> 30:18,21 54:25 121:25
<b>ten</b> 80:23 161:9 163:19 200:21 237:24	<b>testifying</b> 25:15		<b>thoughts</b> 55:25 75:17 136:15 244:21 251:24 254:19 266:1,3
<b>tend</b> 201:24	<b>testimony</b> 21:18,22 22:5 23:23 25:19,22 41:24 108:4 166:7 177:25 205:8 227:9 240:18,21		<b>thousand</b> 217:22,24 218:1 238:22 248:24
<b>tendency</b> 181:6	<b>testing</b> 39:15,19 48:20 71:20 210:20 238:14 246:10	<b>theirs</b> 211:23	<b>thousands</b> 66:17 140:18,19 145:7 217:4 262:18,19 263:9 283:25
<b>tends</b> 244:1	<b>tests</b> 218:22 238:15 245:8	<b>themselves</b> 6:25 84:13 89:10,16 147:3 159:8 177:19 204:9 252:4 255:15,17 258:25 259:8 269:13 285:20	<b>threat</b> 74:2 226:17
<b>tens</b> 217:3 262:18	<b>Texaco</b> 149:25	<b>theoretically</b> 65:4 163:10	<b>threaten</b> 73:11
<b>term</b> 24:7 94:25 95:2	<b>thank</b> 8:2 21:16 25:14 35:2 47:2,5 55:8 83:7 87:19 100:13 108:9,18 128:14 130:14 136:11,20 160:16 164:3 175:3,5 177:21,22,24 181:21 200:13,17,19 205:3,5 213:17 219:11 224:13 225:6,7,9 227:11 228:6 229:4 230:9,22 231:1 250:10 273:5 290:23	<b>theories</b> 11:20	<b>threatened</b> 54:21
<b>terminated</b> 281:5	<b>thankful</b> 4:19	<b>theory</b> 104:11 149:18,21 156:8	<b>threatening</b> 284:12
<b>terms</b> 38:7 48:14 53:11 59:11 79:18 80:4 88:2,25 99:19 118:22 122:15 123:6,7,15 139:5 148:17 153:23 156:4 158:4 160:11 163:1,3 173:15 174:23 180:22 181:6 183:20 185:11 190:22 191:14 193:13 216:24 227:25 231:9 244:21 246:9 255:18 257:6 261:23 267:20 272:19 277:5,6,9,25 278:22,24 279:5 282:15 283:12 290:6	<b>thanks</b> 52:9	<b>thereafter</b> 17:7 292:8	<b>threatens</b> 28:3
<b>terrible</b> 178:25 179:20	<b>that's</b> 33:5 60:6 66:9 75:8 76:11	<b>therein</b> 292:6	<b>threats</b> 36:24,25 74:6,9
<b>Tesla</b> 48:9		<b>thesaurus</b> 149:14	<b>three-minute</b> 165:10
<b>Tesla's</b> 48:7		<b>they're</b> 11:3 53:2,3 77:11 103:15 106:13 118:23 149:17 156:20 159:21,22 163:24 167:5	<b>three-part</b> 184:3

<b>three-year</b> 206:13	137:7 145:3	4 222:3,8,11,21	36:2,5 38:22
<b>throughout</b> 23:23	202:25 209:2	223:6,17,24	57:17 58:6,7
24:14 104:2	225:14,21	228:16 235:8	60:1,22,24 62:11
209:19 210:16	226:16 229:18	242:5 249:8,11	87:24 104:3
238:23	238:17 240:21	254:25 260:23	142:9,16 147:8
<b>thumbs</b> 10:11	242:24 243:2	261:15	175:18,19,25
<b>Thus</b> 26:24	244:6 245:15	262:1,7,10,23	177:4,5,19
<b>thwart</b> 28:15	264:10 275:20	263:2,10,11,16,1	180:16 206:25
<b>tied</b> 13:3	289:15 290:23	7 264:1,2,18	208:6,20,24
<b>tiers</b> 215:4	<b>today's</b> 55:6 102:9	265:23 272:15	209:8,12 210:13
<b>tighten</b> 140:17	225:15,17,25	288:17	226:3,21 241:18
<b>tightened</b> 207:22	276:13	<b>top</b> 67:16 111:16	247:15 253:17
<b>timely</b> 81:12	<b>token</b> 161:25	131:8 136:10	270:8 271:4,5
<b>time-shifting</b>	162:1	261:11	274:12
91:23	<b>tomorrow</b> 202:25	<b>topic</b> 273:7	<b>traced</b> 152:1
<b>tinker</b> 40:16	240:1 291:1	<b>topics</b> 66:18	<b>track</b> 6:13 62:24
<b>tinkered</b> 225:18	<b>ton</b> 218:6	<b>tort</b> 248:1	<b>tractor</b> 202:20,25
<b>tinkerers</b> 181:25	<b>tons</b> 243:11	<b>total</b> 121:22	203:4,13 255:3
182:6	<b>tool</b> 141:9	<b>totally</b> 36:6 38:8	273:20
<b>tinkering</b> 194:21	143:15,25 144:3	159:16 287:23	<b>tractors</b> 164:8
207:16	145:8,15 214:6	<b>touch</b> 68:1 135:12	169:6 173:20
<b>tip</b> 84:16	216:13,14,15	213:18	199:24 270:18
<b>tires</b> 236:23	217:5,18,23,25	<b>touched</b> 36:22	<b>trade</b> 25:20
<b>title</b> 90:5 259:18	220:2,5,6	171:24	199:13
<b>titles</b> 90:16 105:11	221:7,9,14,18	<b>Touchstone</b>	<b>trademark</b> 186:9
112:22 116:25	222:24	127:18	<b>tradeoff</b> 95:8
122:15 124:8	223:14,18	<b>tough</b> 263:1	<b>trade-offs</b> 235:23
126:24 127:4,10	224:3,4	<b>toward</b> 71:25	236:4
133:20	247:5,9,11	72:2,5 111:11	<b>tradition</b> 181:24
153:17,18	262:13,14	176:7	<b>traditional</b> 20:2
<b>toasters</b> 22:20	263:13,21,25	<b>towards</b> 41:1	102:19
<b>today</b> 4:10,11,18	264:4,5,16,22,25	<b>tower</b> 157:2,5	<b>Traffic</b> 19:2
5:21 6:10 7:2	265:2 266:13,16	<b>Toyota</b> 17:20	<b>trafficking</b> 251:12
17:1 19:3 22:15	267:2,3,4 268:1	212:14,15	<b>trailer</b> 18:2
25:15,19 26:8	281:19	215:9,13	<b>transaction</b> 103:1
37:19 41:25 52:8	<b>tools</b> 17:9 18:24	<b>Toyota's</b> 215:18	118:25 245:18
80:15,23,24	143:13 144:25	<b>TPM</b> 35:19,21,24	247:18
85:17 100:14	145:21 146:1,25	36:12 61:13 68:3	<b>transactions</b> 93:23
101:15 102:13	147:2 158:1	143:18 170:2	<b>transcribed</b> 292:9
104:14,15	161:5 213:25	207:11 256:9	<b>transcript</b> 84:23
107:18 108:19	214:4,12,23	<b>TPMs</b> 23:8 25:24	273:16
110:24 111:1	216:11,12,22,25	26:5,22,24 27:19	<b>transfer</b> 95:4
114:13 117:8,15	217:2,10,18	28:4,10,13,18	125:1 129:12
	218:2,7	31:3 35:25	
	219:8,14,17,18,2		
	5		
	221:3,13,16,21,2		

137:17,23 138:5,12,21 280:3,22 285:14 <b>transferred</b> 182:23,25 279:12 280:1,23 281:4 283:6,9 <b>transferring</b> 103:16 276:1 285:22 <b>transformative</b> 50:2 104:21 192:18 <b>transformed</b> 23:11 <b>translated</b> 176:21 <b>transmission</b> 15:18 221:12 <b>transmit</b> 146:19 <b>transmitting</b> 156:13 <b>transplanter</b> 169:20,25 <b>transplanters</b> 169:7 <b>treated</b> 103:25 233:19 <b>treatise</b> 149:14 <b>tremendous</b> 238:14 <b>trends</b> 160:7 204:2 <b>trickles</b> 198:4 <b>tried</b> 28:4 <b>triennial</b> 1:4 4:6 22:13 35:3 84:2 123:3 164:22 <b>tries</b> 24:17 <b>trivial</b> 147:3 <b>trivialize</b> 90:13 <b>troubling</b> 188:5 244:10 245:17 <b>truck</b> 196:11	198:16 205:11 218:6,14 <b>trucks</b> 242:2 271:24 <b>true</b> 44:18 80:23 94:17 164:1 185:6 246:3 268:19 271:2 279:20 288:3 289:7 <b>truly</b> 42:11 240:12 <b>trust</b> 21:14 142:20 144:17 220:13 246:23 247:22 <b>trusted</b> 246:5 <b>trustworthiness</b> 247:3 <b>try</b> 6:2,12,19 41:4 58:2 78:17 84:23 105:15 145:21 168:25 169:1 194:11 230:7 238:10 247:24 256:2 <b>trying</b> 10:21 53:17 60:13 71:8 75:8,13,18 77:9 82:14 104:14 106:12 107:12 122:19 131:19 133:14 140:17 170:19 188:17 191:21 193:16 195:15 198:9 200:1 220:1 222:11 234:11 239:19 256:4 260:22,25 267:7 273:10 280:20 286:15,22 <b>TUESDAY</b> 4:2 83:20 164:17 <b>tuners</b> 199:21 255:23 <b>tuning</b> 194:10 <b>turbochargers</b>	237:25 <b>turn</b> 136:13 191:21 220:17 234:21 240:13 <b>Turnbull</b> 3:17 87:14 101:14 136:12,20 137:1 141:20 142:17,19 143:21 144:10,18,25 145:5,20,22 157:21 158:3,21 159:11 <b>turned</b> 138:7 <b>turning</b> 149:8 214:15 <b>turns</b> 191:6 222:18 <b>TV</b> 109:1,12 110:12 112:11 113:6 115:1 116:20 121:24 122:22 127:2 134:14 146:15 154:19 155:24 271:20 <b>TVM</b> 137:4 <b>TV's</b> 22:21 <b>twelfth</b> 161:1 <b>twelve</b> 89:15 131:13 <b>twice</b> 106:15 <b>type</b> 16:9 22:17 23:1 24:20 40:17 59:21 72:17 80:2,25 130:1 135:20 148:16 234:3 <b>types</b> 23:8,11 39:12 58:6 103:25 104:5 106:10 119:11 152:8,12 162:7 180:11 181:9	277:3 <b>typical</b> 15:20 116:13 119:6 <b>typically</b> 116:25 117:7,20 120:6,16,17 133:20 217:20 222:4 246:5 <hr/> <b>U</b> <b>U.S</b> 4:9 5:9 37:9 48:4 69:11,12,14 114:13 115:16 121:21 216:2 <b>ubiquitous</b> 158:10 <b>UCLA</b> 4:19,22 <b>UCSD</b> 17:18 18:12 <b>ultimate</b> 277:10 <b>ultimately</b> 117:22 162:15 234:6 <b>ultra</b> 162:5 <b>ultraviolet</b> 86:24 87:12 109:7,10 110:1,23 111:13 112:5,12,21 113:2 114:4,6,9,11,18 115:2,3,10,18,21 116:14,17 117:3,4,16 118:24 119:9 121:8,23 122:1,4,6,8,19,2 3,25 123:5,7,14 124:6,8,13 125:2,6,17,20,23 126:7,10,14 127:1 130:16 131:1 132:3 133:6 135:5,14 159:23 160:24 161:4,13,22 162:15 163:12 164:1 <b>Ultraviolet</b> 3:22 <b>unable</b> 177:4
--	---	--	---

185:12 232:4 <b>unauthorized</b> 12:19 224:4 <b>unbounded</b> 144:19 <b>uncertainty</b> 49:2 180:21 <b>unchanged</b> 65:15 <b>unclear</b> 290:6 <b>underestimate</b> 83:2 <b>underlying</b> 25:8 36:10 94:5 110:4 120:8 129:15 142:23 181:11 257:15 <b>undermine</b> 26:2 142:20 144:16 <b>undermined</b> 234:2 <b>undermines</b> 41:19 206:2 <b>undermining</b> 144:21 <b>understand</b> 53:8 54:17 60:12,16 76:4 77:14 103:14 120:2 122:7 124:2 137:11 138:2 144:19 158:23 159:9 185:4 186:17 189:23 194:16 212:10 214:17 220:1 223:23 224:6 232:19 253:6 276:21 283:17 285:18 <b>understandably</b> 47:12 <b>understanding</b> 31:12 61:21 83:9 103:1 105:12 158:24 159:2 173:18 222:7	223:5 224:9 260:24 <b>understood</b> 20:14 22:12 29:1 93:22 119:2 280:13 <b>undertaken</b> 27:24 37:6 63:11 <b>underway</b> 41:19 <b>undoubtedly</b> 237:17 <b>unencrypted</b> 48:3 <b>uneven</b> 9:3 <b>unfair</b> 235:14 <b>unfettered</b> 275:22,23 <b>unfortunately</b> 8:4,20 250:6 <b>unfounded</b> 213:21 <b>unintended</b> 66:3 225:2 <b>unit</b> 222:20 <b>United</b> 25:17 69:24 179:24 256:3 <b>units</b> 26:9 <b>universities</b> 41:15 42:16 <b>university</b> 15:6 43:3 44:9 <b>unlawful</b> 23:19 64:15 <b>unless</b> 71:2 106:1 124:1 <b>unlike</b> 102:18 206:7,13 <b>unlock</b> 201:13,19 <b>unlocking</b> 37:13 201:6,12 257:25 281:25 <b>unnecessary</b> 28:2 <b>unpaid</b> 34:24	<b>unprecedented</b> 138:16 <b>unpublished</b> 138:16 <b>unsupported</b> 241:1 <b>unsure</b> 161:8 <b>unusual</b> 193:2 <b>update</b> 48:3 <b>updated</b> 24:4 80:25 <b>upgrade</b> 117:3 121:1 <b>upheld</b> 145:11 <b>upholding</b> 137:20 <b>upon</b> 90:21 91:17 92:15,16,21 93:1 100:8 149:2 151:19 153:3 161:19 162:1 171:24 207:6 <b>upset</b> 147:24 283:25 284:24 290:1 <b>upsets</b> 284:7 <b>upsetting</b> 148:1 284:8 <b>urge</b> 41:7 <b>usable</b> 140:11 <b>usage</b> 128:3 162:8 <b>USC</b> 167:25 <b>USC's</b> 273:1 <b>useful</b> 154:22 281:19 <b>user</b> 90:2 96:1 99:12 161:23 269:12 <b>users</b> 114:6 147:12 153:5 161:23 191:4 232:4 <b>usual</b> 4:22	<b>Usually</b> 217:21 <b>UV</b> 126:19 <b>UW</b> 17:18 18:12 <hr/> <b>V</b> <hr/> <b>vacation</b> 150:12 <b>vagueness</b> 49:2 <b>valid</b> 74:6 <b>Valsic</b> 17:8 <b>valuable</b> 41:11 <b>value</b> 10:8 24:25 25:6 89:5 95:18 98:11 106:19 118:14,16,23 120:22 134:19 142:13,15 160:11 165:12 171:11,13 173:25 185:10,13,17,19 186:3,25 187:3,6 201:3,14,18 202:9 <b>valued</b> 204:3 <b>varies</b> 217:1 <b>variety</b> 10:22 50:25 117:10 140:12 146:9 288:17 <b>various</b> 26:1,14,16,20 27:9,19 30:22 56:6,16 57:12 66:18 90:11 187:13 <b>varying</b> 39:5 178:2 <b>vast</b> 158:16,17 159:19 <b>vastly</b> 224:18 248:20 <b>vehicle</b> 8:7,15,18 10:3 11:13 15:9,11,15,25
---	---	--	--



16:9,15,18,24 17:3,13 18:16 20:1,8,10 21:14 26:19,22,25 28:2,5,14,19,25 30:23 31:10 34:11 44:24 48:7 49:13,15 51:8,20 57:10,11,13,14,1 9 61:9 62:5 79:8 80:8 164:25 172:1 176:2 181:24 182:11,18,22 183:11,16,22,23 184:17,18,23 185:5 191:7 195:25 196:15,16,17,19, 22 197:7,9,15 198:8 201:2,3 206:1,6 207:20,22,25 209:14 210:22 211:16 215:12 218:9 219:1,8,19 220:10,19 221:10,11 222:25 223:5,8,20 226:4,5,6,7 237:2,13 241:15 243:8 246:4 247:18,21 248:15 252:14 253:2,4 268:19,24 274:1,2 275:1,3,4,6,16,1 8,19,25 276:4,7,20,22 277:5,11,18 278:5 <b>vehicles</b> 8:12 14:25 15:5 16:21 17:15 18:5,10,19 19:6,10 20:7 25:17 26:8,15,24 27:16 29:15 30:7	31:7 34:16 48:13,18 56:24 58:21 61:2 69:4 173:19 180:17 187:24 188:1,14 194:9,18 197:24 205:17,18,20 206:8,14 208:20 209:15,16,18 210:15,20 213:25 214:7 219:4 227:6 228:2 233:10 235:19 237:9 238:20,21 241:7,11,12,14 248:10 250:21 260:14 265:21 270:22 272:2 278:8 289:23 <b>vehicle's</b> 206:23 <b>Vehicles</b> 26:13 206:16 <b>vendor</b> 49:5 50:24 54:4,7 153:7 <b>vendors</b> 51:3 63:17 <b>venture</b> 114:22 <b>venue</b> 74:18 <b>verbally</b> 271:16 <b>verbatim</b> 211:5 <b>verifiable</b> 38:13 72:16 <b>verification</b> 250:22 <b>verify</b> 238:15 248:21 249:9,15 <b>Verizon</b> 116:21 <b>version</b> 65:5 74:14 119:14 162:3 163:14,15 185:11 186:5,22,23 211:19 <b>versions</b> 163:11,17	206:9 <b>versus</b> 135:25 140:5 151:7 152:14 170:23 202:25 246:10,11 286:16 <b>vett</b> 174:13 <b>vetting</b> 40:13 72:2 <b>via</b> 15:20 90:1 114:15 129:18 <b>viable</b> 169:9 173:15 174:1,11 186:6 <b>Vice</b> 86:11 <b>video</b> 28:6,8,12 55:6 86:14,25 87:12 88:12 89:25 107:5 108:25 109:4 111:2,19 112:7 148:3 150:23 156:13 173:9 240:17 <b>videos</b> 43:9 <b>view</b> 75:8 97:24 104:9 109:20,25 112:24 117:11 148:14 151:12 156:20 172:11 180:16,18 183:20 187:12,16 191:1 198:14 220:8 234:5 235:13 240:5 <b>viewed</b> 145:11 185:25 186:15 272:23 <b>violate</b> 39:17 158:20 <b>violated</b> 195:10 249:13 <b>violation</b> 39:11,25 210:24	<b>violations</b> 28:19 39:24 <b>violence</b> 35:13 225:1 <b>virtually</b> 24:10 134:25 206:14,17 263:18 <b>virus</b> 250:5 <b>visit</b> 251:17 <b>vital</b> 26:11 <b>volume</b> 197:17 <b>voluntary</b> 31:14 209:25 <b>volunteered</b> 208:23 <b>Voris</b> 3:19 86:20 108:12,14 118:7 126:17 127:14,17 128:1,8,10,11 129:5 130:10,14 133:19,22 134:1 136:1,4 160:18 162:20 163:5,16,20 164:2 <b>voting</b> 63:16 <b>Vudu</b> 114:21 115:6,9 134:17,25 <b>vulnerabilities</b> 8:11 11:18 14:16 16:15 17:5,15 18:15,23 19:15 26:1 30:19 31:16,22 32:2 33:8 34:2 35:20 36:2 39:2 42:22 48:12 51:6,10 52:25 54:23 56:21 65:19 67:5 68:18 77:3,8,19 81:7 227:4 <b>vulnerability</b>
---	---	---	--

13:17 36:12 52:1 57:14 73:9,13 77:15 79:9,10 80:19 269:2 <b>vulnerable</b> 16:18 18:19 185:25  <hr/> <b>W</b> <hr/> <b>wait</b> 20:17 148:13 <b>waiting</b> 14:15 <b>waiver</b> 16:7 <b>walked</b> 278:21 279:5 <b>Wall</b> 152:13 <b>Walmart</b> 134:17 <b>Walmart's</b> 114:21 <b>Walsh</b> 3:10 7:4,10 8:2 12:7,23 13:6,24 14:5 42:4 47:8,9 50:23 52:19 54:1 64:2 65:11 72:24,25 73:25 74:17 75:18 76:8 81:6 168:8 181:22,23 183:23 184:8 185:16 186:7,13 187:5,17 188:22 189:15,24 191:2 192:5 193:11,22 200:25 239:9 241:5,6,12 244:8,23 245:21 246:19 247:11 248:9 251:25 252:1,13,17 253:15 256:13,14,23 257:25 258:10,17 261:21,22 262:17 267:9,11 268:14,22 269:11 271:2,10 275:13 277:2,8 278:3	281:13,17,21 282:25 286:21 289:14,16 <b>Walt</b> 3:19 86:21 128:17 <b>War</b> 179:21 <b>warning</b> 206:20 220:17 252:21 <b>warranted</b> 9:22 <b>Wars</b> 130:20 134:22 <b>Washington</b> 15:6 43:3 160:21 <b>wasn't</b> 16:7 29:24 80:23 92:7 97:21 169:21 244:12 245:22 250:1 264:16 269:25 <b>watch</b> 110:17 112:9 114:8 130:19 131:25 135:2 146:9,15 155:8,16,23 156:9 158:14,18 271:20 <b>watching</b> 43:9 155:13 <b>ways</b> 33:15 52:25 56:16 81:11 103:25 115:19 117:10 126:12,21 128:21 141:21 145:14 150:25 154:22 187:24 192:5 212:11 241:23 253:10 288:12,19 <b>weapon</b> 181:2 <b>weapons</b> 179:23 <b>web</b> 21:3 145:6 <b>website</b> 115:24 131:2 133:11 135:21 215:18 229:16 230:1	<b>websites</b> 114:15 116:18 145:7 <b>week</b> 21:22 23:24 24:14 108:3 263:21,24 <b>weeks</b> 80:6 229:18 230:15 238:14 <b>weigh</b> 41:22 55:11 88:1 192:11,21 193:18 232:20 <b>weighed</b> 235:20 <b>weighing</b> 193:1,4 <b>weighs</b> 53:10 <b>weight</b> 148:17 <b>weights</b> 196:12 <b>weird</b> 208:12 <b>welcome</b> 4:6 83:23 164:20 <b>well-fueled</b> 49:5 <b>we're</b> 4:19 5:20 6:4 8:3 46:20 52:6 56:12,19 60:6 74:25 77:4,7,8 83:10 89:7 94:9,24 102:3,14 107:16 110:7 123:1,11 125:19 130:12 131:8,18 135:8 154:13 164:6,23 165:9,11,19 172:8 181:15 195:15 209:1 223:1 228:8 234:11 239:10,16 242:24,25 261:13 264:13,23 270:25 273:7 281:12 289:14 <b>WESTWOOD</b> 4:2 83:20 164:17 <b>whatever</b> 119:20 154:20 158:15	186:23 187:14 195:15 256:8 280:8 <b>whatnot</b> 169:7 <b>whatsoever</b> 170:20 173:7 <b>wheels</b> 178:2 194:19 <b>whereas</b> 152:11 <b>WHEREOF</b> 292:13 <b>wherever</b> 105:23 112:18 <b>whether</b> 19:14 24:24 33:11 35:5 38:16 39:12,21,23 49:8,21 60:24 61:11,12 62:10 63:1,21 67:10,14 68:5 71:9,10 75:9 77:10 78:15 79:13 81:22 91:5 92:2,12,25 93:3 94:16,17 98:11,22 103:19 116:2 120:9 128:3 145:15,16 154:15 157:24 161:7,8 163:1 171:8 172:4 173:5 175:17 181:1,4 185:23 188:23 191:3,14,20 201:10,13,15 203:1 231:3 232:3,4 233:25 239:17,21 245:19 254:6 255:9 259:3 278:1 281:17 290:19 <b>whoever</b> 161:20 162:14 245:7 257:24 <b>whole</b> 118:10
--	--	--	---

142:21 193:17 198:2 249:6 266:9 269:21 <b>whom</b> 122:22 267:17,21 <b>whom's</b> 29:12 <b>whose</b> 11:7 257:17 <b>wide</b> 5:10 8:11 47:16 48:20 182:6 234:7 <b>widely</b> 37:7 68:19 160:14 185:25 <b>widely-honored</b> 113:7 <b>wider</b> 28:1 <b>widespread</b> 16:6 96:11 212:13 <b>Wiens</b> 168:12 169:17,24 173:23 200:18,19 237:18 248:13,14 258:22,23 270:15 283:20,21 <b>wife's</b> 237:2 <b>wifi</b> 146:13 <b>Williams</b> 86:17 100:12 118:17 150:25 <b>William's</b> 151:11 160:19 <b>WILLIAMS</b> 3:24 86:17 100:13 101:1,5,9,13 103:21 104:12 152:4 <b>willing</b> 8:9 <b>wind</b> 142:25 143:22 <b>windfall</b> 106:16 <b>window</b> 73:6,10	222:11,14,20 223:25 252:21 256:8 260:20 <b>windows</b> 222:18 237:20 249:20 <b>wired</b> 146:14 <b>wireless</b> 65:18 113:3,4 258:1 <b>wirelessly</b> 146:19 <b>wiretap</b> 38:6 52:23 <b>wiring</b> 215:11 222:1 <b>wise</b> 100:16 <b>wiser</b> 211:20 <b>wish</b> 9:14 35:6 71:18 165:5 <b>wishes</b> 55:11 <b>witness</b> 57:22 174:20 230:16 292:13 <b>witnesses</b> 164:24 167:4 229:11,24 234:17 <b>won</b> 48:7 <b>wonder</b> 66:25 92:1 <b>wondered</b> 161:6 <b>wonderful</b> 239:12 <b>wondering</b> 31:24 144:5 157:22 <b>worded</b> 282:9 <b>wording</b> 231:14 <b>work</b> 8:12 9:15 10:22 12:18,22,25 13:3,4,10 16:2 20:2 25:24 30:22 32:11,19 33:22 34:1 36:11 46:20 51:21 67:3 76:21 79:15 91:3 93:2,5,6,24 94:2,6 105:24	107:9 109:4 114:4 125:8,14 135:9 140:9 142:22 145:25 149:16 154:16,20 161:7 170:14 171:11,12 189:21 191:9,22 193:17 195:6 196:22 197:4 198:22 200:1 203:11 222:9 231:19 242:8 250:16 252:21 257:22 267:2 275:15,24 280:21,25 281:6 290:19 <b>worked</b> 69:19 <b>working</b> 32:10 41:13 44:1 46:4,14,21 48:18 66:24 67:24 105:15 128:19 158:8 222:13,14 223:5 <b>works</b> 9:24 10:9 13:5 20:8 67:24 84:6 91:5 100:1 102:4 103:24 108:5 109:9,19 110:2 124:2 131:11 153:25 160:24 168:3 178:18 223:20 224:6 231:18,22 257:15 258:16 268:17,24 269:7 271:4 272:5 274:12 275:12 280:1 <b>world</b> 11:21 14:12,18 25:18 55:7 69:23 130:25 134:8,17 135:14 200:23 201:22 225:4	248:10 276:13 <b>worldwide</b> 69:20,22 115:16 <b>worried</b> 180:24 245:19 <b>worry</b> 6:2 45:12 49:11 65:8 110:19 179:1 272:9 <b>worse</b> 239:21 <b>worst</b> 207:18 <b>worth</b> 135:4 190:11 201:24 <b>wow</b> 143:11 <b>wrap</b> 14:1 20:11 107:1 <b>wrapping</b> 272:10 <b>write</b> 21:6 255:13 289:24 <b>writes</b> 250:4 <b>writing</b> 290:7 <b>written</b> 5:14,18 6:15 24:25 27:4 31:19 137:6 141:1 165:19 166:7 172:16 227:14 273:4 280:14,21 <b>wrong</b> 44:11 195:4 222:23 263:9 <b>wrote</b> 23:20 209:11 <hr/> <b>X</b> <hr/> <b>Xbox</b> 135:1 <hr/> <b>Y</b> <hr/> <b>yearly</b> 214:18 <b>yesterday</b> 170:23 171:6 <b>yet</b> 38:22 50:3 77:16 100:6 225:1
--	--	---	---

<b>yield</b> 25:9 169:1 <b>yours</b> 168:24 <b>yourself</b> 7:7 42:6 202:14 245:25 253:18 <b>yourselves</b> 86:5 167:23 241:8 <hr/> <div>Z</div> <hr/> <b>zero</b> 95:20 235:7,18 <b>zone</b> 223:7			
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