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U.S. COPYRIGHT OFFICE  
SECTION 1201 ROUNDTABLE

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MONDAY  
APRIL 23, 2018

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The Section 1201 Roundtable met in Room 1314, UCLA School of Law, located at 385 Charles E Young Drive East, Los Angeles, California 90095 at 10:00 a.m., Regan Smith, Deputy General Counsel of the U.S. Copyright Office, presiding.

PRESENT

REGAN SMITH, Deputy General Counsel of the U.S.  
Copyright Office  
ANNA CHAUVET, US Copyright Office  
STACY CHENEY, National Telecommunications and  
Information Administration  
JOHN RILEY, US Copyright Office  
JULIE SALTMAN, US Copyright Office

ALSO PRESENT

JAMES CLARENDON

CHRIS CONNELLY, Juelsgaard IP & Innovation  
Clinic

MICHAEL DEAMER, Samuelson Law, Technology &  
Public Policy Clinic

BROOKES DEGEN, Samuelson Law, Technology &  
Public Policy Clinic

STEVE ENGLUND, Entertainment Software Association

ALEX HANDY, Museum of Art and Digital  
Entertainment (MADE)

DAVID PETCHY

DYLAN SCHER, Juelsgaard IP & Innovation Clinic

ROBERT WALKER, Samuelson Law, Technology &  
Public Policy Clinic

KYLE WIENS, iFixit

J. MATTHEW WILLIAMS, Association of American  
Publishers, Entertainment Software  
Association, Motion Picture Association of  
America, Inc., and Recording Industry  
Association of America (Joint Creators II)

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

(10:00 a.m.)

MS. SMITH: Okay, I think we're ready to start and I don't know if anyone on the A/V teams needs to be alerted to that. So this is the warning that we are going to start.

All right, so welcome everybody. My name is Regan Smith. I'm Deputy General Counsel of the Copyright Office here for hearings on the section 1201 triennial rulemaking.

And before we start this hearing, which concerns video game preservation, we wanted to thank the UCLA Law School. This is, I guess, the fourth time that we've been able to host hearings here at UCLA Law School, and we're very appreciative that they have extended all these resources to us.

And in particular, we wanted to thank Professor David Nimmer, Professor Neil Netanel, Sue Akens who is the executive director of the Ziffren Center for Media, Entertainment, Technology and Sports Law, and Eisen Yoon, the program coordinator for the Ziffren Center.

Before we get started, we are privileged to have Professor Nimmer here who will say some opening remarks.

PROFESSOR NIMMER: I just wanted to take

1 the pleasure of welcoming everyone to UCLA. It is  
2 almost mind-boggling for me to reflect that 20 years  
3 have now elapsed since the passage of the DMCA and  
4 when the rulemaking was instituted. It was  
5 something completely unknown when Marybeth Peters  
6 called me when the second rulemaking was going on  
7 and asked if they could have a room at UCLA. We were  
8 very happy to accommodate the Copyright Office and  
9 to welcome them back many times since.

10 And I can only promise that whatever  
11 comes out of the rulemaking undertaken today, I will  
12 be analyzing it in due course. So I welcome you all,  
13 and I'm glad to have you here.

14 MS. SMITH: Thank you, Professor  
15 Nimmer. So as I just said, this concerns Class 8:  
16 Computer Programs -- Video Game Preservation. For  
17 the next few hours, we're going to be discussing  
18 whether or not to modify or expand an existing  
19 temporary exemption for which the Acting Register  
20 has determined it is already appropriate to  
21 recommend renewal of.

22 If you are new to these hearings, we are  
23 going to try to focus on areas where there may be  
24 gaps or conflicts in the legal or evidentiary bases  
25 and try to get to sort of the heart of disputes.  
26 We think it's important but this is a rather

1 complicated class and there's a lot of submissions.  
2 So if we ask you to sort of keep it snappy, you know,  
3 please try to be understanding. We're just trying  
4 to make sure everyone has a chance to say their piece  
5 and that we get to cover all of the issues.

6 If you wish to speak, just tilt your  
7 placard up and then we'll call on you in due course.  
8 And speak into the microphones. If you are  
9 speaking, because the court reporter is just looking  
10 at your backs, we ask that you do say your name each  
11 time so that he knows who is speaking. And I think  
12 that is about it. The microphones are always on,  
13 so if you're not called on, keep it quiet I guess.  
14 But other than that, I think we're ready to start.

15 First, we will introduce ourselves. If  
16 Mr. Cheney, you wish to start?

17 MR. CHENEY: Sure. My name is Stacy  
18 Cheney. I'm with the Office of Chief Counsel at  
19 NTIA. It's good to be here.

20 MR. RILEY: John Riley, Attorney  
21 Advisor, Copyright Office.

22 MS. CHAUVET: Anna Chauvet, Assistant  
23 General Counsel at the U.S. Copyright Office.

24 MS. SALTMAN: Julie Saltman, Assistant  
25 General Counsel at the Copyright Office.

26 MS. SMITH: And Mr. Degen?







1 Pong through the Xbox 360. We feel that that's what  
2 the public wants.

3 We engaged with the public in a way for  
4 a long time with curated exhibits. We found out  
5 very quickly that 95 percent of the people who come  
6 in the door want to play Mario Kart and Duck Hunt  
7 on original equipment. They've got to have their  
8 Duck Hunt. So we gave the public what they wanted  
9 by allowing them to play the games they wanted in  
10 our facilities.

11 But we also have free programming  
12 classes for kids, community meet-ups. We do  
13 projects to restore old software. We find stuff all  
14 the time. It is remarkable how much of the games  
15 industry is in people's garages. It's probably 80  
16 percent of this industry's history is in people's  
17 garages. It's a horrible state of affairs.

18 These are the some of the organizations  
19 doing preservation work in the world right now.  
20 Specifically in the United States, Stanford and the  
21 University of Michigan are very good, but they have  
22 library access only. National Video Game Museum  
23 down in Texas is the largest video game museum in  
24 the country. It is completely playable, you can  
25 play all their stuff.

26 Strong Museum, in Rochester, New York,

1 is humongous, has a spectacular group up there.  
2 There's Video Game History Foundation, which is  
3 about scanning old documents, doing really deep,  
4 investigative work but it has no facility. And  
5 there's the MADE, where we're doing pioneering work.

6 This is the state of institutional  
7 massively multiplayer online game preservation,  
8 virtual worlds. There was a paper in 2008 saying  
9 how to do it, which basically sort of shrugged and  
10 said you kind of can't. And then there's us.  
11 Nobody else is doing this work. And all the work  
12 that is being done in this space is being done by  
13 fan groups in completely illegal space.

14 This is Habitat. In 1986, Lucasfilm and  
15 America Online's predecessor, Quantum Link,  
16 launched the first virtual world, Habitat. It was  
17 playable on Commodore 64; the back end ran on a  
18 system called Stratus VOS, which even this pack of  
19 humongous nerds right here had never heard of.  
20 That's how rare this stuff was.

21 We had to find the original company,  
22 Stratus, and get them to send us equipment to make  
23 this thing work. We had the original source code  
24 from the original authors, which normally you can't  
25 get that, but Habitat's source code has probably  
26 been discussed in this law school many times. It

1 is public domain. It has been used in numerous  
2 online cases to invalidate virtual world patents  
3 because it predates everything.

4 As of 2013 when we started this project,  
5 Habitat existed as a two-hour video on YouTube and  
6 a bunch of screenshots and a bunch of blogs. That's  
7 it. You could not play this game. We brought it  
8 back. It is online right now, you can sign in and  
9 play this game. There are people in Germany playing  
10 this game right now. The Germans love this game.  
11 They have original Commodore 64s, playing this game  
12 on the internet.

13 But we allow people to play it with an  
14 emulator. You run a Commodore 64 emulator on your  
15 computer, you load the original game client, and  
16 you log into our server.

17 In order to make this work, there was  
18 a piece missing that AOL gave us --- was supposed  
19 to give us. And we could not get it from them because  
20 they just couldn't get past their own lawyers.

21 This piece of software was from 1985.  
22 It allowed a request from a server to be sent to  
23 the Commodore 64, and it told it what that meant.  
24 Not very useful intellectual property in the modern  
25 world, but AOL would not let us have this -- they  
26 pulled it off their tapes. They had the original

1 people who worked on it get this library for us.  
2 They were ready to give it to us. And then it went  
3 to legal, and they're like we're not letting any  
4 of this stuff go.

5 This is the ---

6 MS. SMITH: Did they give a reason why?

7 MR. HANDY: We never got a reason why.  
8 We were told that they were going to do a big press  
9 release and release it all open source and do a big  
10 thing -- even more than we had asked. My guess is  
11 that it was totally fine in the AOL department. And  
12 then it went to the Verizon lawyers because Verizon  
13 owns AOL and it just -- they didn't even know what  
14 it was. They just said no.

15 The rest of the way on this project,  
16 Lucasfilm Games, which doesn't even exist anymore,  
17 had sold the game to Fujitsu. We talked to Fujitsu.  
18 Fujitsu loved this. They thought this was great.  
19 The guy who had negotiated the original contract  
20 was sitting next to the lawyer that I called about  
21 this and was like great, I'll go trace the contract.  
22 They basically waived it and said you can do whatever  
23 you want with this thing.

24 So we did work with the original rights  
25 holders there. The issue was, this like little tiny  
26 Lego block that we couldn't get out of AOL. And we

1 had to go around them. We had to re-engineer all  
2 the way around them in order to make it work. And  
3 that piece set us back a year and a half. This  
4 project took four years.

5 And this is the -- this game is so simple.  
6 The logic for playing this game is 32 kilobytes in  
7 RAM. The graphics are 32 kilobytes in RAM. This  
8 is the most simple virtual world ever. And it took  
9 us four years to bring it back with the original  
10 authors, the original source codes, the original  
11 equipment, everything.

12 This work is so incredibly complicated  
13 and complex that even if we have this exemption,  
14 we still have mountains of work to go through. The  
15 --

16 MS. SMITH: Would this exemption  
17 request have affected your work on Habitat? And if  
18 so, how?

19 MR. HANDY: On Habitat, it would have  
20 allowed us to -- it would have probably saved us  
21 time on that year and a half with AOL.

22 MS. SMITH: In what way?

23 MR. HANDY: We would not have been  
24 coming to AOL from a position of begging. We would  
25 have been coming to AOL from a position of being  
26 able to say: can you help us with this? We have an

1 alternative. But if you were to help us with this,  
2 you'll be involved in the project.

3 MS. SMITH: Sorry. Could you talk more  
4 specifically in terms of said current technology  
5 though?

6 MR. HANDY: Oh, the technology?

7 MS. SMITH: Right. Like what could you  
8 do that you cannot do because of section 1201? What  
9 access control would you be able to circumvent?

10 MR. HANDY: So that piece that we were  
11 missing was the access control piece. So that was  
12 the piece --- okay. The original Q-Link is like a  
13 black box. And when I sign on to it, it would be  
14 like, here's my username. And the Q-Link  
15 intermediary would say okay, that username  
16 corresponds with this person who's paying \$6.00 an  
17 hour to play the game.

18 That intermediary piece is the whole  
19 thing we were missing. And without it, we had to  
20 go to a group that was implementing Q-Link all over  
21 again outside in a grey area, right. And that is  
22 the stuff we had to use. And we didn't want to. We  
23 wanted to use the original stuff, but we did not  
24 have an option because AOL couldn't get it to us.

25 MS. SMITH: So what would you have done  
26 if this expansion to the exemption were adopted

1       instead?

2                   MR. HANDY: We would have had more of a  
3       recourse for -- well first off, it would not have  
4       been a risk to use that grey area stuff, you know  
5       what I mean, the ---

6                   MS. SMITH: That you used anyways  
7       though, right?

8                   MR. HANDY: Yes, this is --

9                   MS. SMITH: I'm not discounting that but  
10      just in terms of technologically, what you would  
11      have done differently. What circumvention would  
12      you have engaged in?

13                  MR. HANDY: The circumvention that we  
14      would have engaged in would have replaced the login  
15      stuff. And we didn't actually have to do this in  
16      the end. So the issue being that AOL is not  
17      litigious against us doing it. They just wouldn't  
18      give us the stuff. Do you understand -- do you see  
19      what I mean? Like --

20                  MS. SMITH: Well I mean I can't -- we  
21      cannot make AOL give you the stuff, right?

22                  MR. HANDY: No, no, no. But we can  
23      circumvent their stuff now without having to worry  
24      about them coming back at us. Right? Like if --  
25      now that we've done this, if we get this exemption,  
26      we're like -- we're safe. Right? And it literally

1 is that authentication piece that was missing, and  
2 then we had to go around in order to make this work.  
3 It would not have worked without it.

4 MS. SMITH: Okay, thank you. You can  
5 keep going.

6 MR. HANDY: I hope that -- is that enough  
7 technical?

8 MS. SMITH: Yes, that was helpful.

9 MR. HANDY: Okay. I can basically end  
10 pretty quickly here. I don't have to keep going.  
11 But I hope this -- this is what I really wanted to  
12 discuss. And I can answer all the questions you  
13 have about Habitat and the process here. The thing  
14 that must be understood about Habitat is this was  
15 like the absolute perfect scenario. We had the  
16 authors. We had the source code. We had the people  
17 from the server. It will probably never happen like  
18 that again. Do you see what I mean?

19 Like the people who made these games are  
20 older than the games themselves, at least by 20 to  
21 30 years. And now these games are 30 to 40 years  
22 old. Without that knowledge on the staff, we would  
23 never have been able to bring back Habitat. We  
24 needed to do this when we did because Chip and Randy  
25 are, you know, they're in their 60s now. And you  
26 know, God knows what happens. And if they're gone,



1 that game is gone. Nobody can bring it back.

2 Because it was written in a time where  
3 you didn't write pretty word source code like Python  
4 like we have today where a source code can be easily  
5 written. This stuff's written in assembly. It's  
6 one step up from DOS -- 1's and 0's. It's really,  
7 really complicated stuff.

8 And Habitat was written in PL/1. That  
9 stands for Programming Language One. That's a  
10 really old programming language. And the only  
11 people who can still like even talk about that is  
12 IBM. Right? Like IBM will sell you some PL/1  
13 stuff. You know? Nobody else will do any of the  
14 PL/1.

15 Really quickly I wanted to rebut a couple  
16 of the things that were said in the ESA and MPAA's  
17 rebuttals. First off, they were arguing that  
18 there's enough preservation institutions. No way.  
19 You can never have enough preservation  
20 institutions.

21 Look at this, HP's museum was in Santa  
22 Rosa. It's gone. Everything -- their history, all  
23 that paper burned down. Aardman Films in the U.K.  
24 that did Wallace and Gromit. They had all their  
25 stuff in one vault. Burned down.

26 The MPAA's entire history is basically

1       gone because of fires and archives. Three quarters  
2       of all films made in the silent film era are gone  
3       because they were kept in a film vault inside of  
4       a film studio nobody was allowed to go in. And they  
5       caught fire and burned. And that's it. They're  
6       gone. No more copies.

7                 We can't let that happen to the video  
8       game industry. It's happening right now with  
9       virtual worlds. They're all gone. When they're  
10      taken off, that's it. They're gone. There's no  
11      recourse. There's no bringing it back.

12                Rob pointed out to me that there was a  
13      gentleman who's 70 years old who plays a game called  
14      Asheron's Call. Played it from launch to when they  
15      took it off 18 months ago. The guy's 70 years old.  
16      Talks to his kids in this game, his whole social  
17      interaction is through this game. They take it  
18      offline and he's got nothing. You know? These  
19      players generate half of the content in these games.  
20      These games exist but unless there's players in  
21      them, there's no reason to play them. So the  
22      players are like half the content. And when they're  
23      gone --

24                MS. SMITH: Are you seeking an exemption  
25      for preservation or for continued gameplay?

26                MR. HANDY: So this is for preservation.

1 MS. SMITH: Okay.

2 MR. HANDY: Like this is the grease trap  
3 to make sure the stuff isn't just vanishing. This  
4 is not about putting it back online and allowing  
5 that old guy to play it again.

6 MS. SMITH: So right -- I think he would  
7 not be able to benefit from the exemption.

8 MR. HANDY: You're right.

9 MS. SMITH: I just wanted to make that  
10 clear. I'm not saying, you know, what we're --

11 MR. HANDY: No, absolutely.  
12 Absolutely.

13 MS. SMITH: Okay.

14 MR. HANDY: But without the exemption,  
15 it's all gone. There's nothing. We're just asking  
16 for sort of a grease trap to catch the stuff where  
17 the companies that owned it are gone. The servers  
18 are gone. The people that wrote it aren't working  
19 on it anymore. Nobody's making money on it. Nobody  
20 even knows it existed. Like Habitat is where we're  
21 starting, 1986. We want to start working forward  
22 from there.

23 A lot of people ask us: Is this for WoW?  
24 Is this for City of Heroes? Is this for Star Wars?  
25 Absolutely not. Maybe 50 years from now. Today we  
26 have a problem where basically everything in the

1 80s and 90s that was an online game is gone.

2 MR. CHENEY: I have a question for you  
3 on some of this. You just -- you indicated that a  
4 lot of the content online is user-generated. Is  
5 that part of your preservation efforts to --

6 MR. HANDY: We can't preserve that.

7 MR. CHENEY: That whole part of the game  
8 is gone, so you go back to basically ground zero  
9 where the game was pristine. Is that correct?

10 MR. HANDY: Yes. We go with whatever we  
11 have the ability to work with. There's a lot of  
12 questions about what revision of the server would  
13 you bring back? We usually don't have the ability  
14 to choose. You get what you get, whatever we have  
15 available.

16 MS. SMITH: Okay. So Mr. Handy, I think  
17 you've raised a lot of interesting questions.

18 MR. HANDY: Sure.

19 MS. SMITH: But we do want to be able to  
20 probe the whole group. So maybe if you can take a  
21 minute to wrap up the presentation and we'll sort  
22 of, you know, sit you back down or is that --

23 MR. HANDY: That's fine. That's fine.

24 MS. SMITH: Okay.

25 MR. HANDY: That's what I wanted to get  
26 through. Thank you very much.

1 MS. SMITH: Great. Okay, thank you.  
2 Okay, before we dive into -- Oh I'll let Mr. Englund  
3 briefly speak and then we'll get to questions.

4 MR. ENGLUND: Yes, I'd like to just very  
5 briefly comment on a few of the points that Mr. Handy  
6 made. First, at both the onset and toward the end,  
7 he said if an online game is not online, it doesn't  
8 exist. And plainly, that's just not true. Right?  
9 The Habitat project he talked about, demonstrated  
10 that. Decades after the game went offline, the  
11 copyright owner had the source code and provided  
12 it to MADE. So plainly it did not turn into digital  
13 dust when the servers were shut down.

14 Second, Mr. Handy said early in his  
15 presentation that play is what the public wants and  
16 I think that's a critical point here for trying to  
17 make sense of this proposal. This is not a proposal  
18 about taking historic artifacts, putting them into  
19 a safe space so that a scholar can access it --

20 MS. SMITH: Well I'm actually confused  
21 about that because when I read their pleadings --  
22 or their papers, it is -- that is what they seem  
23 to be looking for. And it's -- I wasn't really  
24 bothered by the fact that a museum might engage in  
25 preservation activities on the one hand and  
26 exhibition activities of other materials on the

1 other hand. It seems like, a fairly frequent  
2 occurrence at museums and archives.

3 MR. ENGLUND: In the back of our  
4 comments, we provided pictures of the main facility  
5 from its website and its shelves loaded with video  
6 games. It is not a scholarly place.

7 MS. SMITH: So one question for Mr.  
8 Handy is if this exemption were granted, the \$10  
9 play all day, would these games be part of that or  
10 not?

11 MR. HANDY: So even Habitat is not a part  
12 of that right now.

13 MS. SMITH: So is the answer no?

14 MR. HANDY: No. I mean it's not a hard  
15 no, I could see us having an exhibit on some of these  
16 things someday, but that's not what we're planning.  
17 No.

18 MS. SMITH: Actually how is it not a hard  
19 no? Because you have said it is limited to  
20 preservation uses and not built out a case for a  
21 non-infringing basis for exhibition purposes or the  
22 public performance. Right?

23 MR. HANDY: So certainly. What I'm  
24 saying that it's not a hard no is I don't want to  
25 say we will never exhibit one of these games that  
26 we preserve on our show floor. The purpose is to

1 eventually be able to. Maybe that's 30, 40 years  
2 down the road, I don't know. But for now, no. We  
3 just need to stop this stuff from vanishing.

4 And you know, yes that source code was  
5 available, but that source code was in personal  
6 hands. That source code was not in corporate hands.  
7 That source code was not in Disney's hands or, you  
8 know, Lucasfilms' hands. It was in the guys who  
9 wrote it, hands. And that's sort of what we're  
10 trying to help with. This is a very young field,  
11 video game preservation. And as I said, most of its  
12 history is in people's garages. And we can't allow  
13 that to continue.

14 MS. SMITH: Okay, I'll let Mr. Englund  
15 continue.

16 MR. ENGLUND: Yes, so my third point  
17 continuing to comment on Mr. Handy's original  
18 presentation, he said that nobody else is doing it.  
19 Or at least nobody else is doing it legally. And  
20 that MADE has restored precisely one game after four  
21 years of use. That sounds to me under the rubric  
22 of this proceeding, a lot like an individual case  
23 or a de minimis use. Not an instance where the  
24 anticircumvention provisions of 1201 are  
25 substantially impeding non-infringing activities.

26 Fourth, Mr. Handy talked about Habitat

1 and Habitat is a fascinating example to think about  
2 in the context of his proposal. Because as I  
3 understand the architecture of Habitat from the  
4 presentation a moment ago and from the comments,  
5 that the one piece of software that MADE was not  
6 able to get from the copyright owners is not actually  
7 software that is clearly covered by the proposed  
8 exemption. Because everything that is covered by  
9 the proposed exemption seems to have been provided  
10 by the copyright owners.

11 And MADE has variously described this  
12 missing piece of AOL software as communication  
13 software, billing software, possibly something  
14 that once was TPM controlling access to the  
15 software. But it wasn't controlling access to the  
16 software once the copyright owner provided it. It  
17 was an independent piece of third party software  
18 that was part of the service through which the game  
19 was provided. It's not video game software. And  
20 so peculiar in my view to be basing a proposed  
21 exemption based on the need to do some circumvention  
22 with respect to software that's actually not covered  
23 by the exemption.

24 Finally and briefly, Mr. Handy  
25 mentioned the HP museum or I think the comments  
26 referred to his archive, I tried to do a little bit



1 of looking into the reporting on the event and the  
2 Santa Rosa fire. There was initially after that  
3 event some fairly alarmist reporting, kind of  
4 consistent with Mr. Handy's comments.

5 It appears that HP subsequently issued a  
6 statement picked up in some further reporting that  
7 this was actually an archive that belonged to a  
8 spinoff of a spinoff of a spinoff. And I'm not  
9 completely clear what the story there is to the  
10 extent it might be relevant. And some historical  
11 documents were probably lost, but this is not the  
12 HP archive that's in Atlanta. It's not Mr.  
13 Hewlett's papers which are in the Stanford Library.  
14 So I think it's not particularly relevant but also  
15 not what has been described here.

16 MR. RILEY: Mr. Englund, before we move  
17 on, I have a brief question. You made a comment  
18 about the fact that the MADE charged an admittance  
19 fee to go and play games. Certainly there are  
20 museums that charge you to get in. Is what you're  
21 saying here, that it would affect the market or it's  
22 just a flat -- you don't want people to be paying  
23 to play games even in a preservationist context?

24 MR. ENGLUND: I think -- I've tried to  
25 study MADE's comments and figure out exactly what  
26 the proposal here is. And it seems to shift from

1 time to time. But if the proposal were to take a  
2 bunch of online games, restore them or recreate  
3 them, and put them in a public place for recreational  
4 game play for a charge, that sure sounds to me like  
5 something that's infringing. Entirely possible  
6 that the fair use analysis would be different if  
7 this were a more traditional museum type exhibition  
8 setting.

9 MS. SMITH: Does anyone want to -- on the  
10 other side, I mean speak as to what it is?

11 MR. HANDY: I can speak to the MADE.  
12 Yes, the MADE does have shelves. It may not look  
13 like a traditional museum. That's because we're  
14 really poor.

15 MS. SMITH: No, no, no. I'm more  
16 focused -- this may be more of a lawyer question,  
17 I don't know, in terms of what the particular  
18 exemption request is. Because when I read it, it  
19 is to circumvent for preservation activities, not  
20 continued play which is a separate subpart. And it  
21 also wasn't clear that exhibition activities would  
22 be included because under the current exemption,  
23 they are excluded.

24 MR. HANDY: Yes --

25 MS. SMITH: Mr. Degen?

26 MR. DEGEN: Yes, sorry. Mr. Degen,

1 that is me. The language of the proposed exemption  
2 with regard to public exhibition is identical to  
3 the language of the current exemption. We're not  
4 asking for any sort of expansion in that regard.  
5 It's really not an issue legally in this hearing.

6 MS. SMITH: Okay. So in 2015, the  
7 Register said exhibition uses, the case hadn't been  
8 made. It's not included. And so if we have three  
9 categories of things that maybe socially beneficial  
10 being arcade uses or continued play, exhibition uses  
11 -- when you look at it -- and preservation uses,  
12 it seems like it is only the third that is at stake.  
13 Does anyone disagree? Okay, all right.

14 MS. CHAUVET: Actually, one question I  
15 had because I -- with Habitat specifically, you said  
16 that it was like a very small, like virtual world  
17 that was needed -- sorry a persistent world was like  
18 a very small piece. So I guess my question is for  
19 these games that you want to preserve, how much of  
20 it would have been on the server so that you would  
21 need to get that from the copyright owner? Like is  
22 it like a small part of the game relatively speaking,  
23 or is it maybe 50/50 or maybe it depends? But I think  
24 it would be good to know that information.

25 MR. HANDY: Sure. Mr. Handy.  
26 Generally speaking, it varies from game to game.

1 But most of the time, the way that an MMO or an online  
2 world works is that the client has all the graphics,  
3 the sound, the maps, all of the sort of physical  
4 things and fancy things that make the game look good.  
5 And the server has all the telemetry, where you are,  
6 who that person is. Whether there's a monster next  
7 to you or not. But the actual like images of the  
8 monster are on the client's side.

9 And that's how it works on Habitat.  
10 Like all the graphics are on the client's side. The  
11 major difference with Habitat is the map. The world  
12 itself is server side. Usually like in a game like  
13 World of Warcraft or something, the map is on the  
14 client's side.

15 MS. SMITH: Mr. Clarendon?

16 MR. CLARENDON: To give you a little  
17 more insight into that, often times the Commodore  
18 64 at the time, could only hold so much memory. But  
19 you had dozens of megabytes of data on that server.  
20 So it held hundreds or thousands of times what one  
21 individual client could hold in its memory at any  
22 given point in time.

23 MS. SMITH: Mr. Englund, I don't know if  
24 you have an idea, like maybe in terms of percentage  
25 where like 30 percent is on the client side and maybe  
26 70 -- I just don't know.

1                   MR. ENGLUND: I think it's not possible  
2 to provide one answer to that question.

3                   MS. SMITH: Okay.

4                   MR. ENGLUND: There are huge numbers of  
5 games in the marketplace with diversity of  
6 architectures. I didn't at a very high level  
7 disagree with Mr. Handy. I think that it tends to  
8 be the case that the assets are local and the logic  
9 is at the server, but every game is different.

10                  MS. SMITH: So this exemption would only  
11 kick in if the server has been discontinued for six  
12 months. So I am assuming there is no circumvention  
13 to get to the server because it has been  
14 discontinued. What exactly are you circumventing  
15 and how do you put the game back together if the  
16 server has been taken off? Mr. Degen, yes?

17                  MR. DEGEN: Yes. I did want to point out  
18 that in 2015 the ESA argued that there was no  
19 distinction between the single player games at issue  
20 in the hearings in 2015 and the multiplayer games.  
21 And that in their argument at that point, which  
22 they've now changed, the majority of data they  
23 argued was stored locally with the client, not on  
24 the server.

25                  MS. SMITH: All right. I want to keep  
26 moving to focus on my question. What would be

1 circumvented under -- with this expansion, and how  
2 would the preservation be achieved? Mr. Clarendon?

3 MR. CLARENDON: Sure. So in many  
4 online games and mobile games in particular, like  
5 the game itself will have to call out to a server  
6 to say: Am I entitled to do this? Do I possess this  
7 content? Am I allowed to do this? And it needs to  
8 have that authentication from that remote server,  
9 come back and say yes you're okay to do this. Those  
10 -- if that server doesn't exist, you aren't able  
11 to access that content and that may block access  
12 to all the artistic merits.

13 MS. SMITH: So the content is stored  
14 locally, just the authentication check is  
15 preventing it from loading or playing?

16 MR. CLARENDON: Right. And there are  
17 times also that the client may ask the server what's  
18 going on. And the server may say hey, here's some  
19 additional content that I need to send to you.

20 MS. SMITH: So if this exemption were  
21 adopted, what would happen in that case if the  
22 external server is not there to send the additional  
23 content?

24 MR. CLARENDON: Often times it results  
25 in the player being blocked from getting a pass to  
26 even just the start screen.

1           MS. SMITH: Well right but the server  
2 has been shut down. So what you do? How would the  
3 preservation be achieved?

4           MR. CLARENDON: So what the exemption  
5 would do is -- we would be able to emulate that back  
6 end or alter the code that verified that  
7 authentication and admitted the player through in  
8 order to keep playing.

9           MS. SMITH: So how would you do that?

10          MR. CLARENDON: There's a number of ways  
11 we can do that. It depends on the types of  
12 communications. In particular, a lot of times  
13 we're doing HTTPS calls from the client's server.  
14 And if it -- we would intercept those calls  
15 essentially, acting as an intermediary, and send  
16 back authentication.

17                 Another option might be we go in and we  
18 edit the client code itself to just simply skip those  
19 verifications from the server.

20          MS. SMITH: So what about in the case  
21 where it's not just the verification check, but it's  
22 actually needing additional content that would have  
23 been pushed through the external server that's no  
24 longer there.

25          MR. CLARENDON: Sure.

26          MS. SMITH: How would the game be played

1       if --

2                   MR. CLARENDON:  So a lot of times -- and  
3       one of the groups that was mentioned earlier, the  
4       history museum, is doing exactly this.  They've  
5       found old disks that had some of the content that  
6       had been downloaded prior.  And then they go and  
7       they take that and they put that on that emulated  
8       server.  So they can send that original data back  
9       through.  But again, it's been recovered from old  
10      machines that otherwise would have been lost.

11                  MR. RILEY:  So how do you get access to  
12      those old disks or old machines?

13                  MR. CLARENDON:  Right.  So you scour  
14      Yahoo auctions oftentimes in Japan, and you find  
15      some kid had downloaded this game in 1987.  And he  
16      still has the floppy disk for it and you get it.  
17      You purchase it and you --

18                  MR. RILEY:  You're talking about the  
19      server side copy?

20                  MR. CLARENDON:  Oh, no.  Not server  
21      side copy.  You're talking about the client side  
22      copy in this case.

23                  MR. RILEY:  Okay.  So how do you get --  
24      we're talking about the server side has additional  
25      content.  How are you going to lawfully access it?

26                  MR. CLARENDON:  You're reconstructing



1 it from other people who had downloaded it  
2 successfully.

3 MS. SMITH: Okay. I see Mr. Englund  
4 being patient. I think we just want to stick at this  
5 --

6 MR. CLARENDON: Sure.

7 MS. SMITH: -- and then we'll let you --  
8 And I'm still going to ask Mr. Clarendon and then  
9 we'll get to Mr. Englund. I think this seems to be  
10 a key question. So this person in Japan on their  
11 floppy disk, they have downloaded contents from the  
12 server?

13 MR. CLARENDON: They were a player  
14 originally when the game first came out.

15 MS. SMITH: Sure.

16 MR. CLARENDON: Yes. And their game --  
17 and that content came down to them. And so what we  
18 can do is we can say how did they produce that  
19 content? And we can go take that content that was  
20 downloaded and we can send it now to other people  
21 who are connected to the server.

22 MS. SMITH: And is the contention made  
23 that this is not infringing because under the first  
24 sale doctrine or how is it -- what is the  
25 non-infringement analysis for this?

26 MR. DEAMER: Mr. Deamer. The primary

1 argument we're making is that this is one game that  
2 is being fair use of that game for preservation  
3 purposes.

4 MS. CHAUVET: I think her question is  
5 going more specifically to how the server copy is  
6 being acquired? If you look at a lot of the existing  
7 exemptions, that is a limitation. If a copy can be  
8 made, it usually has to be done from a lawfully  
9 acquired original copy. So we're trying to get at  
10 are you -- would it be reasonable to limit this  
11 exemption to a lawfully acquired original server  
12 copy, which I don't know if it's possible.

13 MS. SMITH: It may be close to an offset.

14 MS. CHAUVET: Right. So I think we're  
15 trying to understand how you're getting that and  
16 is it or is it not lawful and is it fair use and  
17 what your basis is for having that be the basis for  
18 the exemption?

19 MR. WALKER: Robert Walker. So in a lot  
20 of these cases, what you're actually doing and my  
21 colleagues here who are the technical people can  
22 correct me if I'm wrong, but it's not that you would  
23 have access to the server copy that existed at that  
24 time, but rather you would be creating a new emulated  
25 server that functions like the original.

26 But as Mr. Clarendon was saying here,

1       you know, if you watch the calls that went out via  
2       HTTPS, basically what is the server looking for?  
3       And then what does it expect to receive back?  
4       Through a very time intensive trial and error  
5       process, you can actually replicate in a new  
6       installation, a server that is emulating what was  
7       going on originally from the server.

8                 So effectively, you are building into  
9       the client the functionality that you need in order  
10      for it to work. You wouldn't necessarily have to  
11      have the original server side software to do that.  
12      It's a much more labor intensive process the way  
13      I just described it, but it is theoretically  
14      possible and it has been done.

15                MS. SMITH: So in the case where you  
16      don't have the server side software, how are you  
17      getting the expressive content that is typically  
18      saved on it? Is this through individual users who  
19      bit by bit have had it pushed to them? Is someone  
20      writing code from scratch to make it just look the  
21      same based on their memory? Are there clean rooms  
22      -- how is this done?

23                MR. HANDY: Mr. Handy. For example on  
24      Habitat, we rewrote the server from scratch. We did  
25      have the architecture laid out in the original  
26      source code. But because that original source code

1 was written for a server that doesn't even exist  
2 anymore, we had to rewrite it from scratch to run  
3 it in a modern environment. There are methods  
4 available to tweak that stuff out of the client.

5 So this exemption is not for World of  
6 Warcraft. And I'm going to use World of Warcraft  
7 as an example. World of Warcraft has expansions.  
8 Like they have the Pandaren Forest, right? They  
9 distributed that on a disk on a client. So that data  
10 is out there already. Somebody has a license to  
11 have that on their computer. The server side  
12 triggers that stuff and maybe pushes some stuff  
13 down. Generally -- like on Habitat, the stuff the  
14 server is pushing down, we did not include.

15 MS. SMITH: Right. I think we're  
16 focused on pushing the stuff down is the realm of  
17 the questioning --

18 (Simultaneous speaking.)

19 MR. HANDY: Right and what I'm saying is  
20 like on Habitat for the stuff that was pushed down,  
21 we didn't have it. We didn't include it. We built  
22 without it. We go around it, you know what I mean?  
23 These are big things. There are things you can take  
24 out.

25 MS. CHAUVET: So if you can take things  
26 out like that, why is circumvention necessary?

1 Like why can't you just --

2 MR. HANDY: The authentication piece.  
3 We're not allowed to go around the DRM, the  
4 authentication pieces.

5 MS. SMITH: So is this a useful  
6 exemption for you if it allows you to bypass -- I  
7 swear Mr. Englund will be next because I think there  
8 is probably a lot he has wanted to comment on. But  
9 would this exemption be useful for you if it just  
10 allowed you to bypass the authentication checks but  
11 did not allow, I guess, or set a line against  
12 copyrightable content when something needed to be  
13 pushed down?

14 MR. HANDY: It's a different scenario  
15 for every game. So the narrower the exemption, the  
16 more likely we're going to hit up against something  
17 where there's a little piece beyond the  
18 authentication.

19 MS. SMITH: Yes, I understand that.

20 MR. HANDY: So it's a tough question to  
21 answer because like I said, we've only done the first  
22 one and there's thousands. And they're all  
23 different. And you know, some may have some strange  
24 pieces that we're not even accounting for here.

25 MS. SMITH: Right. So we just need to  
26 be very careful to understand what it is you're

1 seeking to do beyond authentication checks as  
2 opposed to -- right, especially if every game is  
3 different. So Mr. Englund, I will let you speak  
4 now.

5 MR. ENGLUND: Thank you. So first just  
6 very briefly to respond to Mr. Degen who a few  
7 minutes ago accused ESA of changing its position  
8 since 2015 and I don't think that's true. I believe  
9 the description of game architecture as between the  
10 client/server that I gave ten minutes ago is highly  
11 consistent with what we said in 2015.

12 To more fundamental points in the line  
13 of questioning the Office has been pursuing for the  
14 last several minutes, I think that's really the key  
15 issue here for considering this exemption. And I  
16 don't think you got satisfactory answers to the  
17 question of how it is proposed that people acquire  
18 the server side aspects of the games. You've heard  
19 one group of answers that essentially describes the  
20 current exemption where the server only performs  
21 an access control role. Well you don't need the new  
22 exemption to cover that.

23 MS. SMITH: Well I think that we said  
24 it's not for online game play. Right? So I think  
25 in this case it is like the current exemption and  
26 just the class of games you cannot do, but the actual

1       -- what you're circumventing that acts within  
2       change.

3               MR. ENGLUND:  You know I think the  
4       distinction in terms of online games versus games  
5       covered by the current exemption is whether the game  
6       itself as opposed to the access control, sits in  
7       part on the server.  I think the current exemption  
8       applies to games where the game itself is wholly  
9       local and the server performs only an access control  
10      function.  I think at one point Mr. Clarendon was  
11      describing that kind of scenario, but you don't need  
12      this exemption for that.

13              MS. SMITH:  Well I think -- I mean, what  
14      if through the preservation activity, there is a  
15      server set up that is just sort of facilitating --  
16      the dummy authentication checks or something like  
17      that?  I don't know if that's covered under the  
18      current exemption.  And I don't know if that is  
19      getting to the concerns expressed by ESA.  I also  
20      don't know if that's a realistic scenario or not  
21      to be useful.  I'm just trying to understand.

22              MR. ENGLUND:  I believe that scenario is  
23      what the current exemption is for where the game  
24      is entirely local.  Somebody has lawfully acquired  
25      a copy of it but a server is required for  
26      authentication.  The current exemption permits

1 someone to set up a substitute authentication or  
2 preservation organization to set up a substitute  
3 authentication server.

4 So I think what distinguishes the new  
5 proposal from the current exemption is cases where  
6 some aspects of the game live on the server.

7 MS. SMITH: Okay. Keep going.

8 MR. ENGLUND: And as for that, you heard  
9 I could get another set of answers to your previous  
10 set of questions that concerned distributed emails.  
11 And things that have been downloaded 30 years ago  
12 to floppy disks. And I agree that is possible that  
13 could happen because some game elements are  
14 downloaded in the case of game play. But that again  
15 is not kind of the core of what is proposed here.  
16 Those elements sound a lot like stuff that might  
17 be subject to the current exemption.

18 I think the core of what is proposed here  
19 is what Mr. Handy described a bit ago when he said  
20 the game logic for an online game lives on the server  
21 and the case of Habitat, the map lives on the server.  
22 That piece of software is what we're talking about  
23 that distinguishes the proposed new class from the  
24 old class.

25 MS. SMITH: So in the example of  
26 Habitat, they were able to I guess acquire a copy



1 of the server side.

2 MR. ENGLUND: That's what I understand.

3 MS. SMITH: And that was with  
4 permission. Right? So if this exemption were to  
5 say there needed to be a lawfully acquired copy or  
6 something, does that mitigate the concerns to --  
7 what's the infringement risk there?

8 MR. ENGLUND: Yes, right. I'm sure  
9 there's circumvention that needs an exemption at  
10 that point. What this proceeding is about is  
11 circumvention of technological protection measures  
12 that control access to works. If the copywriter  
13 gives you a copy of the work --

14 MS. SMITH: Sure. And they have said  
15 there could be a Lego block piece in-between, which  
16 when pressed, you've said maybe that's not a  
17 TPM-related issue and they've suggested maybe it  
18 is. And maybe we can get an answer as to whether  
19 that would fall under -- but I mean in this instance  
20 of just dealing with a Lego block piece, although  
21 you've gotten a server side copy lawfully --

22 MR. ENGLUND: Well I think the game  
23 copyright owner can only speak to its interest.

24 MS. SMITH: Right.

25 MR. ENGLUND: If the owner of the  
26 copyrighted game has handed over a copy of the source

1 code for the games and said go to it, it seems like  
2 any possible claim by the game copyright owner has  
3 been exhausted. So yes, in the case of Habitat, I  
4 gather this is billing or communication software  
5 that was owned by AOL or Verizon, the game copyright  
6 owner can't speak to that. But to the extent that,  
7 that little piece of software is a TPM controlling  
8 access to the game, I think the game copyright owner  
9 exhausted its right when it said here's the source  
10 code to have access.

11 MS. SMITH: Mr. Petchy?

12 MR. PETCHY: Yes, I just want to bring  
13 up a point that the communication between the server  
14 and the application is a complex  
15 inter-relationship, especially if you're dealing  
16 with positioning characters in the field or two  
17 different people remotely. So I mean when I look  
18 at that, I mean I can see that as copyrightable  
19 material in its own right. And if one is getting  
20 in-between and essentially cutting the game in two  
21 and pulling one side off, one is already in the  
22 milieu of interfacing and violating the copyright.

23 MR. RILEY: So I'm curious as to whether  
24 you have any thoughts on how the exemption is  
25 currently working. Because we have had a little bit  
26 of discussion about maybe there could be a server

1 created and a game under the current exemption could  
2 have, you know, the call and answer of that server  
3 authenticated locally. But maybe a different  
4 interpretation could be that you as a  
5 preservationist amend either the game or the console  
6 or some combination to not ask the authentication  
7 question.

8 Is there -- can you talk in your  
9 knowledge about any kind of issues with the current  
10 exemption and is that working for you guys for those  
11 particular uses?

12 MR. HANDY: Yes, I can speak to that.  
13 The current exemption is working. One of the great  
14 things that I think the current exemption did is  
15 it allowed us to circumvent DRM protections on  
16 console games to allow them to bring back, like,  
17 online console games versus preservation. And  
18 because of this -- I think very much because of this  
19 exemption, Microsoft now offers all of its original  
20 Xbox games for sale on their marketplace. So you  
21 can go into an Xbox One marketplace, buy Halo 2,  
22 and play it online again.

23 If every company did that we wouldn't  
24 be here. Like Blizzard does a great job serving  
25 their stuff. I think the exemption sort of in a way  
26 pushed them to do that because they realized people

1 are out here trying to play these old Xbox games.

2 MR. RILEY: But for the ones -- for the  
3 companies that didn't do that, are you actually  
4 using the exemption to preserve the games? And how  
5 are you doing so?

6 MR. HANDY: So in terms of using the  
7 exemption to preserve games in the space if we need  
8 access to a game for historic purpose -- and there  
9 are people who come and do research at the museum  
10 and, you know, use our old games. And there are  
11 games we have had to use say a circumvented console  
12 in order to play the game. I can't necessarily  
13 speak about what it was because the various research  
14 projects. But we have a --

15 MS. SMITH: Can you name one game that  
16 has benefitted from the current exemption?

17 MR. HANDY: We've done this like twice,  
18 I think. But it's been -- we've been able to run  
19 a game that we had to circumvent the DRM in order  
20 to get the game just to load. Right? We're one  
21 organization. I can't speak to how any other groups  
22 have utilized this exemption. But to my mind, the  
23 existing exemption is useful and I don't know that  
24 it needs any tweaks aside from what we're trying  
25 to do with MMO stuff.

26 So in terms of like a game can't be played

1 without an online authentication server where  
2 there's DRM and it's on a console, that's -- I mean  
3 that's what it covers. That's what we've used it  
4 for and I think it works.

5 MR. RILEY: So are there any  
6 circumstances -- I think your submission talked  
7 about local area network play. Can you use the  
8 existing exemption to engage in any multiplayer  
9 play, whether or not on a local area server?

10 MR. HANDY: We haven't. I don't know  
11 that -- I never read the existing exemption as  
12 allowing that because that would mean that you  
13 replace the server. Right?

14 MS. SMITH: You can create a LAN.  
15 Right?

16 MR. HANDY: But if you're creating a  
17 LAN, like there's -- I mean -- So for example, if  
18 I put a bunch of Xbox's on a LAN, they can talk to  
19 each other because that's the way the game is  
20 designed. They're designed to pick each other up.  
21 So that's fine. That would -- You know if we had  
22 to do -- I don't know how the exemption would apply  
23 there. But there are other games where you can't  
24 do a LAN play. You would need an intermediary  
25 server to connect all of them even on a LAN. And  
26 we have not touched that because we have to replace

1 a server and that's not covered by the exemption.

2 MR. RILEY: I remember I played video  
3 games and if someone quit the game unexpectedly,  
4 the multiplayer play would shut down.

5 MR. HANDY: Oh yes, yes. This is --  
6 That's the way it used to be. They've taken away  
7 LAN play. Nobody puts LAN play into their games  
8 now.

9 MR. RILEY: They were using the console  
10 as like a type of listen server, right? Is there  
11 something you can do under the current exemption  
12 to -- because remember you can jailbreak consoles  
13 --

14 MR. HANDY: Yes, yes, yes.

15 MR. RILEY: -- for exemption for  
16 preservationists.

17 MR. HANDY: It's a per game thing. Yes,  
18 games use to have LAN play built in. Like Blizzard  
19 still has the ability in all their games. And  
20 Blizzard is another terrific preservation  
21 organization. If everybody was like Blizzard, we  
22 would not be here. But their games allow it but 95  
23 percent of modern PC and console games do not have  
24 LAN support anymore. They just don't do it. They  
25 do online play and then they connect you somehow.

26 Now like Halo 2 on Xbox did but that was

1 the Xbox, 2001. A long time ago. It's just not  
2 something that's on anybody's agenda for building  
3 in games anymore. There are a few that do it but  
4 literally it's a feature that's just been removed.  
5 You need servers for most of these things that have  
6 been made in the last ten to 15 years.

7 MS. SMITH: And you need the server --  
8 what is the server doing, I guess? I guess Mr.  
9 Petchy's explained some of the copyrightable  
10 content --

11 MR. HANDY: Sure.

12 MS. SMITH: -- can be on both places.  
13 And that to me is one issue. And maybe another issue  
14 is -- I don't know if this is what you're saying  
15 so I'm trying to understand.

16 MR. HANDY: Sure.

17 MS. SMITH: Is using the external server  
18 to form -- I don't know, would you call it like the  
19 matchmaking --

20 MR. HANDY: Yes, matchmaking. Right.

21 MS. SMITH: -- the LAN would do, but you  
22 need to do this on a server instead of a LAN.

23 MR. HANDY: The LAN itself was not doing  
24 the matchmaking. Those individual clients were  
25 able to look for each other and find each other.  
26 Sort of a peer to peer kind of a thing. Again, that's

1 just a feature that takes a little bit of extra  
2 coding. And not many people use it, so they don't  
3 put it in anymore. I think James can talk to this  
4 too.

5 MR. CLARENDON: Yes. The other piece  
6 is that the server is also doing arbitration if two  
7 people try to occupy the same space at the same time,  
8 something in there needs to say no, that person gets  
9 the square and that other person is omitted. So  
10 that server code is executing its own logic too.

11 MS. SMITH: Is it necessary to emulate  
12 that for preservation activities if you're not able  
13 to -- you know, as opposed to continued play? I mean  
14 --

15 MR. CLARENDON: Yes, absolutely because  
16 otherwise you're breaking the rules of the game,  
17 which might say that two people cannot occupy the  
18 same space at the same time.

19 MS. SMITH: Okay.

20 MR. PETCHY: And other example would be  
21 if you're firing a bullet at your opponent, you've  
22 got to make sure that bullets hit them before you  
23 can move the game into the next stage. And that  
24 requires a bunch of transactions.

25 MS. SMITH: Thank you, Mr. Petchy.  
26 That's helpful. Mr. Williams?



1                   MR. WILLIAMS: Yes, thank you. I think  
2 a lot of these questions, which are very targeted  
3 and helpful to hear the answers to, kind of get to  
4 the bottom of one of the big problems with the  
5 proposal. And that is, I think the reason EFF  
6 excluded this type of stuff last time. And the  
7 reason the Office said the fact that it was excluded  
8 was critical to its analysis is that although at  
9 the beginning of this proceeding, we established  
10 this is supposed to only be about preservation.

11                   Preservation doesn't always mean what  
12 is being described. It doesn't mean emulation. It  
13 doesn't mean creating a derivative work so that you  
14 can kind of almost get to what it felt like to do  
15 something in the past when it was in the market as  
16 a commercial product. Usually preservation is more  
17 about actually reproducing or preserving the  
18 original.

19                   And so this gets into all kinds of  
20 derivative work questions and issues that are not  
21 addressed by the current statutory limitations.

22                   We talked some about this in Washington  
23 so I won't belabor it. But there's a whole process  
24 going on related to section 108 reform and what is  
25 legitimate preservation activity and where does it  
26 cross the line? And because as Steve said earlier,

1 it's not really true to say just because something's  
2 not currently commercially available that it no  
3 longer exists. We've got to be very careful about  
4 where those lines are drawn. So I would just  
5 express some caution on that issue.

6 The only other thing I wanted to mention  
7 is something that came up a little earlier. I think  
8 you were talking about well if the copyright owner  
9 has provided some of the server side content and  
10 endorsed the project would -- you know, would there  
11 be infringement -- it sounded to me if I understood  
12 correctly, like some of the copies that the  
13 proponents might be talking about, I'm not so sure  
14 that they are copies that were lawfully distributed.

15 And whether technically server side  
16 content that somehow ended up stored in a computer,  
17 whether that was really lawfully distributed or  
18 acquired. I'm not sure how that content ended up  
19 resident on the device. But it seems like there's  
20 a little bit of a different section 117 license  
21 versus acquired question there.

22 MS. SMITH: I mean I think that  
23 proponents are only articulating a 107 basis. And  
24 in the instance where, content has been -- different  
25 content has been pushed to different users and  
26 they're sort of trying to put the puzzle pieces

1 together and stitch up the functionality but not,  
2 you know, paint broad swaths of the universe. Can  
3 you talk to whether you think that -- how the 107  
4 analysis would play out?

5 MR. WILLIAMS: Sure and I mean, we  
6 addressed this some in our comments and I think Steve  
7 might want to address that more in length. But when  
8 you're talking about these types of adaptations of  
9 copyright, both software that includes both  
10 functional elements and expressive elements, I  
11 don't think it's enough to just say, we're  
12 interested in preservation and therefore we satisfy  
13 section 107 factors. The copyright owner still has  
14 a right to the market, regardless of whether they're  
15 choosing temporarily to withdraw work from the  
16 marketplace. That doesn't mean the fourth factor  
17 would automatically weigh in favor of someone else  
18 creating a derivative work in the meantime.

19 And if you look at the new *Oracle*  
20 opinion, you know, it's a narrower reading, I think,  
21 than the Office had made in the past of the 9th  
22 Circuit interoperability cases. And I don't think  
23 this activity, if I am understanding it correctly,  
24 fits within those cases because in those cases,  
25 there was only intermediate copying to study only  
26 the functional elements. Then they created their

1 own new expression to enable interoperability.

2           Whereas this is not that as I understand  
3 it. As best they can, they attempt to copy the  
4 original expression during the process. So I don't  
5 think it fits squarely within the prior  
6 interoperability cases.

7           Commercial, noncommercial factors, you  
8 know, are in some ways impacted by what level of  
9 access they're providing to the public. And, you  
10 know, these fees for entry, and I understand that  
11 at least on the face of their pleadings, they're  
12 trying to limit some of those things and say, well  
13 it's not really about public performance. Or, it's  
14 not about -- we're not going to charge admission  
15 for these particular games.

16           But then if you start -- and I'm sure  
17 you'll get to do this -- but if you start looking  
18 at, well, how are you actually going to enable all  
19 these affiliates to --

20           MS. SMITH: We are going to get to that.

21           MR. WILLIAMS: -- conduct, that really  
22 impacts the fair use analysis as well, I think. And  
23 would involve unauthorized public performance as  
24 I understand it and probably unauthorized  
25 adaptations as well.

26           MS. SMITH: Mr. Englund?

1                   MR. ENGLUND: Yes, so I agree with Mr.  
2 Williams and will just provide a very little bit  
3 of gloss by way of response to a couple things from  
4 folks further down the panel.

5                   First, I think that Mr. Handy a few  
6 minutes ago suggested that the current exemption  
7 has pushed Microsoft, or the game companies, to  
8 re-release games. I disagree with that analysis of  
9 cause and effect. And what we are seeing in the  
10 marketplace is the maturation of the video game  
11 industry. And just like the motion picture  
12 industry, games now have re-release cycles. There  
13 is demand for classic games and copyright owners  
14 are in the business of satisfying consumer demand  
15 by re-releasing their works.

16                   I think that is a reason not to grant  
17 the exemption, rather than a reason to grant the  
18 exemption. Copyright generally permits copyright  
19 owners to decide how to commercialize their works.

20                   MS. CHAUVET: Mr. Englund, just a  
21 thought --

22                   MR. ENGLUND: Yes?

23                   MS. CHAUVET: -- maybe you can speak to  
24 this, but, like, how do companies determine when  
25 they're going to pull a game from the market? Like,  
26 what would be their reason for pulling a game and

1 making it not commercially available anymore?

2 MR. ENGLUND: When there isn't much  
3 demand for it. The video game companies are in the  
4 business of giving consumers games that they will  
5 enjoy to play. But there is inevitably a falloff  
6 at some point in the life of a game, and when the  
7 market falls off to the point that there is very  
8 little demand, it makes more sense to put those  
9 resources into creating new games than to keeping  
10 existing ones on.

11 MS. CHAUVET: So if there's no  
12 commercial market and so the game is pulled, how  
13 -- if they go ahead and decide to preserve a game  
14 that's not commercially available anymore because  
15 there's no demand for it -- how is that impacting  
16 or having an adverse effect on the market under the  
17 fourth fair use factor?

18 MR. ENGLUND: So first, the fact that  
19 server support is discontinued for now doesn't mean  
20 that there isn't a future market. And copyright  
21 normally allows copyright owners to realize future  
22 markets for their works. We've seen it with many  
23 re-introductions of games, some of which are  
24 described in our comments. That is something that  
25 video game copyright owners do.

26 Within the specific subject matter of

1 this exemption, you know, the critical piece of  
2 software that this exemption concerns is the server  
3 software. And that software is unpublished work  
4 that the proponents want to either obtain or  
5 recreate, then have it out in the wild. And you  
6 know, that creates a potential for market harm too  
7 because that's a copyrighted work that the copyright  
8 owners have not previously seen fit to distribute.

9 MR. RILEY: So Mr. Englund, you also --  
10 your companies also engage in their own preservation  
11 activities. How do you make that decision compared  
12 to when there is no market for the game or what you  
13 just talked about, which is in the context of games  
14 being abandoned? How do you make the decision of  
15 when to preserve games?

16 MR. ENGLUND: Video game companies  
17 generally preserve their games. If you spend  
18 millions of dollars creating a game, you don't  
19 routinely throw it out.

20 MR. RILEY: Okay. In a museum then ---  
21 preserving the games on their own versus preserving  
22 the games in a museum?

23 MR. ENGLUND: It -- so, video game  
24 companies have also supported various efforts to  
25 work with museums and archives, some of which are  
26 described in our comments. For example, ESA

1 recently contributed 2,500 games to the Library of  
2 Congress.

3 MR. RILEY: But they are certainly not  
4 preserving all of their games. And these are the  
5 types of games that kind of are at issue here. You  
6 know, is there a decision to not preserve these games  
7 because of the technological challenges, or because  
8 of the market may develop for these, or -- in ESA's  
9 own preservation activities, how do you make those  
10 decisions?

11 MR. ENGLUND: Copyright owners preserve  
12 their games. And there have been discussions here  
13 of companies that have eventually gone out of  
14 business and maybe assets have been lost and  
15 bankruptcy and so forth. But just like motion  
16 picture studios do not typically discard all copies  
17 of their motion pictures when the theatrical run  
18 ends, video game companies do not routinely throw  
19 away the video games they've created.

20 MS. SMITH: Well, so MADE's reply  
21 included an index of companies that have gone out  
22 of business. Do you have any knowledge as to  
23 whether their assets have been protected or  
24 preserved?

25 MR. ENGLUND: I don't have a response  
26 for any particular company. You know, very often



1 I'm under the impression that, you know, assets are  
2 disposed of in ways that -- that leads to there being  
3 successor copyright owners, so potentially they are  
4 preserved.

5 MR. RILEY: I understand that ESA  
6 doesn't represent all video game companies, but is  
7 there sort of a blanket or umbrella approach that  
8 your companies and others talk about, about  
9 preserving games? Is there coordination between  
10 your different companies to do so?

11 MR. ENGLUND: There is some level of  
12 coordination. ESA worked with a number of key video  
13 game companies in connection with the Library of  
14 Congress gift that I mentioned a few minutes ago.

15 MS. SMITH: Has -- in your knowledge,  
16 has ESAs number of companies ever refused a  
17 preservation request? And what I'm getting at  
18 specifically is not due to a commercial aspect, but  
19 MADE says there's some instances where a game may  
20 have some social value for preservation purposes,  
21 but it might not be a corporate priority or it might  
22 be even at odds. And they give an example of a video  
23 game that included part of the Quran and thus was  
24 interesting from a social perspective but the video  
25 game company did not have, I guess, incentive for  
26 preserving it.

1                   MR. ENGLUND: I don't know the facts of  
2                   that particular situation, but I think it is  
3                   speculative on MADE's part that video game companies  
4                   are discarding their assets. Copyright owners do  
5                   not routinely discard their assets.

6                   MR. RILEY: Before we move on, because  
7                   I know a lot of the proponents are anxious to respond  
8                   to some of what you said. I did want you to have  
9                   the opportunity to follow up on what Ms. Smith said  
10                  in terms of the question Mr. Williams answered.

11                  Is the 107 analysis different for games  
12                  that are completely lawfully acquired where they're  
13                  given by the copyright owner and there might be a  
14                  piece that's missing versus the 107 analysis? I  
15                  just want to give you the -- for games that were  
16                  not completely lawfully acquired and were  
17                  reconstructed. I just want to give you the  
18                  opportunity to respond more to that if you'd like.

19                  MR. ENGLUND: Yes. So, that is really the  
20                  essence of this class, right? And we address that  
21                  at some length in our written comments, but I think  
22                  the fair use analysis is completely different, where  
23                  we're talking about server software that has not  
24                  previously been distributed.

25                  The -- what is being proposed here is  
26                  essentially recreating the logic of the game, the

1 rules of the game, in the case of Habitat, were  
2 subject to this, the map of the game, key expressive  
3 elements of the game that are being acquired without  
4 permission, without paying, that is a commercial  
5 use. It is not a transformative use, particularly  
6 to the extent that it's making the game playable  
7 exactly the way that it was playable. These are  
8 core expressive aspects to the game.

9           Somebody down the line here earlier  
10 referred to the rule that the players can't occupy  
11 the same space. What happens when a player shoots  
12 another player? That's the essence of the game.  
13 It's not the graphic elements of the game, but it  
14 is the essence of the game. And the proposal here  
15 is to obtain that software and simulate that  
16 software, and that is copying of expression.

17           The server software is a substantial  
18 part of the game, and putting the server software  
19 out into the wild where previously it's been  
20 undistributed --

21           MS. SMITH: I think you're not putting  
22 the software into the wild necessarily. You may be  
23 recreating it, which in this case, is your position  
24 that some unauthorized derivative work is not likely  
25 to be a fair use or --

26           MR. ENGLUND: It's at least a copy,

1 perhaps a derivative work. But yes, they're trying  
2 to simulate the original game. It is just like any  
3 other kind of copying that is not purely mechanical.

4 MR. CHENEY: Mr. Englund, do you have  
5 evidence that -- you've been talking about some of  
6 this in the wild, and that seems to be a fear here.  
7 Is there evidence now that preservation efforts of  
8 what these game assets in the wild you talk about  
9 use server assets?

10 MR. ENGLUND: Well, I can't cite a  
11 specific example. But this is a very substantial  
12 broadening that's been proposed here. We've not  
13 talked yet about affiliates and the comments from  
14 MADE propose a very broad concept of affiliate  
15 access, and then walk that back a little bit in the  
16 reply comments.

17 But it's kind of not clear what's being  
18 proposed, but I think the proposal is to have dozens,  
19 hundreds of people working from their homes,  
20 presumably with copies of game software, because  
21 otherwise, it doesn't seem like you'd need to  
22 mention affiliates.

23 MR. RILEY: I think the question is  
24 under the existing exemption, is there any evidence  
25 of infringement or other problems?

26 (Simultaneous speaking.)

1           MR. RILEY: They don't have affiliate  
2 archivists yet.

3           MR. ENGLUND: That is why we did not  
4 oppose the existing renewal with the existing  
5 exemption.

6           MR. RILEY: Mr. Petchy?

7           MR. PETCHY: Yes, I just wanted to bring  
8 up about preservation. In the 90's, in my  
9 experience, out of this part of a company called  
10 Mindscape, at the time one of the largest producers  
11 of CD-ROMs in the world, and I can absolutely  
12 guarantee that 30 to probably 40 percent of all the  
13 titles were never preserved. And the only thing  
14 that was generally ever preserved was the final  
15 binary that was actually shipped. The original  
16 source code is lost, as Handy mentions, you know,  
17 in garages and in peoples computers and various  
18 other places. And --

19           MR. CHENEY: Mr. Petchy, why was that  
20 lost or how was that lost? You said that --

21           MR. PETCHY: Well, let's put it -- in the  
22 function of the company, you know, at that, time  
23 especially in this company, I had -- was trying to  
24 get people to use source control, you know, to  
25 somehow keep this -- that was new, you know? And  
26 it barely worked. I mean, project after project

1 refused or did something else and, you know, it  
2 wasn't until this last decade that, you know, things  
3 have improved much. And those were the companies  
4 that have survived.

5           You know, there's been annihilation  
6 everywhere. Mindscape itself was sold seven times  
7 until finally it vanished, and bits and pieces of  
8 IP all over the place. There was no desire to keep  
9 it and no incentive. And it's only recently, you  
10 know, that -- I mean I was staggered when I went  
11 into MADE and I was like, oh my God, I haven't seen  
12 this stuff in 20 years. I thought it was all going  
13 to the garbage heap.

14           MS. SMITH: Do you know from these older  
15 games that you're talking about, whether these  
16 copies in the garages and such are -- the owner of  
17 the garage's ability to give it out or subject to  
18 some sort of --

19           (Simultaneous speaking.)

20           MS. SMITH: I see where Mr. Farmer said  
21 that part of Habitat got blocked by Legacy IP  
22 interests, and I also see that the exemption is not,  
23 you know, in one reading trying to overcome those  
24 IP interests, right? Is trying to just circumvent  
25 and then when things are lawfully okay or permitted  
26 under IP, connect together. So what is your

1 understanding of like the business status of things  
2 stuck in garages?

3 MR. PETCHY: Well, that's very much  
4 over-the-map. You know, often people, you know,  
5 companies will be working on a project and then it's  
6 cancelled halfway through, and they end up with a  
7 version of the software at a certain state and then  
8 it involves someone else --

9 MS. SMITH: Does the company own it,  
10 then?

11 MR. PETCHY: Well, it's hard to say who  
12 ends up owning it in a certain sense because the  
13 original company itself is gone.

14 MR. RILEY: But that's not the type of  
15 work we're talking about here. Not works that have  
16 never been completed, right?

17 MR. PETCHY: Well, this is a point I was  
18 thinking about a lot because you know, software,  
19 there's a point when you say it's finally done. And  
20 then you've got a binary. Then you've got a hard  
21 copy, and that's what goes generally out to the  
22 public.

23 But then there are previous versions  
24 that occur, you know? And then the modifications  
25 version 1.1, bug fixes, you know? And then as the  
26 software project evolves over time and it may take

1 two years to write this thing and at various  
2 different levels and then -- I've seen many changes  
3 in projects, you know, over the course of two years  
4 that dramatically affect the nature of the work and  
5 the software. And that can just end up in places.  
6 You know, just put it in a file box and people don't  
7 think about it, you know, until someone says hey,  
8 wow, look at this. We can actually do something  
9 with it, and -- but where's the owners?

10 And you know, I don't know legally what  
11 happens when a company goes away and still holds  
12 a copyright. And if there's no one there to hold  
13 the company. So --

14 MR. RILEY: But you're not suggesting  
15 that unpublished works should be subject to this  
16 exemption, are you?

17 MR. PETCHY: No. I'm just giving an  
18 example of what the process is like. Why things  
19 disappear. You know, why, you know, why they need  
20 to be preserved.

21 I mean from my case, just to see my art,  
22 you know, wow, it's on the wall again. You know,  
23 I mean, it was a wonderful experience. And then I  
24 think of all the other people that worked on that  
25 project. There were, you know, 30 of us, you know,  
26 pouring our guts out for two years and you know,



1 no one owns anything anymore but it's there. It's  
2 still there and it's being preserved. And that's  
3 extremely exciting to me, you know, because you  
4 know, the artists are the ones that put this  
5 together. And you know, the marketing people are  
6 the ones that own it, but if they don't sell it,  
7 if they don't put it out there, it's gone and we're  
8 gone.

9 MS. SMITH: Okay. I'm going to let Mr.  
10 Williams briefly respond to that, then go to either  
11 Mr. Deamer or Mr. Degen or both of you. I know you've  
12 been quite patient.

13 MR. WILLIAMS: Thank you. Yes, I think  
14 some of that was probably just kind of use of plain  
15 language. But as Steve said, a lot of this would  
16 qualify as unpublished material. If it's always  
17 been resident on a server and not distributed to  
18 the public in copies, that is unpublished material.  
19 And so that does impact the fair use analysis.

20 I think it also is important relating  
21 back to the question about if demand has gotten low  
22 enough that a copyright owner has decided to  
23 temporarily back out of the market, does that mean  
24 there is no market under the fourth factor? And I  
25 don't think that's the right way to look at it  
26 because it's likely or potential markets. And

1 clearly, when you've had a game that's had some  
2 success, you're seeing lots of these games  
3 reintroduced.

4 And sometimes a demand grows in the  
5 future such that you can now afford to support a  
6 product that you couldn't before. And, you know,  
7 there's all kinds of older films for example that  
8 aren't in the theaters for years and years, and then  
9 all of the sudden, there's a cult demand and they  
10 start coming back into the theaters. And so there  
11 is a potential market there at the very least, even  
12 if there's not enough demand that the copyright  
13 owner decides to continue meeting it in today's  
14 market.

15 MS. SMITH: Okay, thank you. Mr.  
16 Deamer or Mr. Degen?

17 MR. DEAMER: Yes, thank you. I'd like  
18 to first make a quick comment on the published versus  
19 unpublished. At least one federal court has said  
20 that server-side information can be considered  
21 published works.

22 MS. SMITH: Which case are you referring  
23 to?

24 MR. DEAMER: This is Archie MD versus --  
25 think it's Elsevier. It's S.D.N.Y. 2017. So  
26 there's at least some suggestion that there's a

1 question, at least in the law, about the nature of  
2 the servers --- that information -- about whether  
3 or not it's published or not. And that would  
4 obviously have a factor in the fair use evaluation.

5 The other thing I was going to quickly  
6 note regarding preservation is that the MPAA, which  
7 it was with ESA on their briefs, has suggested  
8 specifically to the Copyright Office in a previous  
9 report that the reason that they preserve things  
10 is based on monetary reasons specifically. And  
11 because of that, it's very difficult to see other  
12 reasons that they can provide for preserving other  
13 than those sort of market impulses.

14 MS. SMITH: Which report by MPAA?

15 MR. DEAMER: This is Pre-72. This is  
16 the Pre-72 copyright report. It's also in the reply  
17 comment for us.

18 The last thing I put is actually a  
19 comment Mr. Englund made earlier that I think  
20 deserves one last sort of evaluation. Which is the  
21 idea -- it was a two-fold idea about circumvention  
22 itself. Courts are now suggesting that it's a much  
23 broader understanding of what circumvention can be  
24 in the video game and server industries. So even  
25 the architecture of the game itself could be

1 considered some form of circumvention. So the idea  
2 of --

3 MS. SMITH: Sorry. So what case law  
4 supports --

5 MR. DEAMER: This is *Blizzard v. MDY*,  
6 the 9th Circuit where they said that even sort of  
7 the architecture of the game itself could be  
8 considered a form of TPM.

9 And lastly I would suggest that while  
10 there's a suggestion about considering whether or  
11 not this information comes from garages or is  
12 located -- in that, once it's given by the copyright  
13 owner, that there would be no inherent liability.  
14 But I would remind us that according to some federal  
15 courts, and this is also *Blizzard*, there is  
16 independent liability just on violating  
17 circumvention as one part of a giant circuits claim.  
18 So the non-federal circuit decision -- the non-nexus  
19 requirement.

20 MS. SMITH: Right, but in that instance,  
21 they circumvented -- they said it was circumvention  
22 without permission. Right? So if you're getting  
23 these copies under the permission of the copyright  
24 owner, wouldn't that also --

25 (Simultaneous speaking.)

26 MR. DEAMER: Presumably but it's an

1 independent right independent of the copyright  
2 owner itself, correct? It would be -- the  
3 copyright technically would not apply to  
4 traditional Title 17 things according to that  
5 report. There's no nexus requiring those.

6 MS. SMITH: Right, but if the copyright  
7 owner gives you permission to engage in  
8 circumvention, although it is separate from a 106  
9 right, you are also permitted to do that, right?

10 MR. DEAMER: I would presume that the  
11 information that Alex is typically given is  
12 something to the effect of, we give you this  
13 copyrighted material and -- not necessarily -- we  
14 also say which -- every aspect of a piece -- of TPM  
15 would be invested.

16 MR. WALKER: And I would just jump in  
17 here to say that again, if we think about the Habitat  
18 example, the TPM that was part of the overall server  
19 architecture was not actually owned by the copyright  
20 owner of Habitat. So they could not authorize the  
21 circumvention of that piece of dial-up billing code  
22 that was controlled by AOL, which is absolutely  
23 essential to the functioning of the game. It had  
24 to be circumvented to make it work. But that was  
25 a piece of the code that was owned by a third party.

26 You can see this coming up in all sorts

1 of instances, say, imagine an API or something else  
2 where there's lots of -- there's a web of copyright  
3 interests that are existing on the server side and  
4 you may have a -- a game developer could authorize  
5 certain pieces of this, but not all of them. And  
6 it could be that there were access controls that  
7 they do not have the copyright to.

8 MS. SMITH: And what would you say -- ESA  
9 said this on the written comments and Mr. Englund  
10 said this today too, that that would fall outside  
11 of the proposed exemption because it's not  
12 protecting the video game, the billing software  
13 example.

14 MR. WALKER: I'm sorry. You're saying  
15 that, that would fall outside the exemption?

16 MS. SMITH: Is that what you had said,  
17 Mr. Englund?

18 MR. ENGLUND: Yes. I mean it's not a  
19 video game. It's billing software for an online  
20 service. And I assume in the architecture of the  
21 original online service protected access to  
22 everything on the service and not just to Habitat.  
23 So it doesn't look to me like it is part of the  
24 exemption here.

25 MR. CHENEY: Let me ask a follow-up.  
26 But if it prevents game play, is it not then a TPM

1 that's preventing game play -- even if it's asking  
2 for billing information, is it still not a TPM  
3 preventing the game play? And I think that's the  
4 question at issue here. It may be in something  
5 else, but it's still controlling the game play. So  
6 is that not a TPM that we're talking about?

7 MR. ENGLUND: I think it is possible to  
8 me that it was a TPM that 30 years ago protected  
9 access to the AOL predecessor service where  
10 conducted billing operations on that service. And  
11 perhaps at that time was a TPM protecting access  
12 to Habitat also. I think it is not a TPM protecting  
13 access to Habitat once the copyright owner of  
14 Habitat hands you a copy of the server software and  
15 says preserve it. Make it playable. Do whatever  
16 you want to with it. And it's not a video game. And  
17 this is an exemption for video games.

18 MS. SMITH: What would you say, Mr.  
19 Walker and maybe also --

20 (Simultaneous speaking.)

21 MR. WALKER: I think this is -- this is  
22 a distinction without a difference. Because the  
23 point here is that the -- whatever this billing  
24 software authentication piece is, that has been  
25 incorporated into the game, it is a TPM that is  
26 controlling access to the game. And it is a

1 roadblock to the game's preservation in a functional  
2 form. You know, just because of the fact that this  
3 may have a dual use of serving some other function  
4 with regards to an online service, it's been  
5 integrated into the game. It's part of its  
6 architecture. It has to be circumvented in order  
7 for the game to be brought back.

8           It's not like there exists -- certainly  
9 not in the case of Habitat and I would -- well I  
10 can only speak to the case of Habitat. There was  
11 no pure version of Habitat that could exist without  
12 this piece that was functioning as a TPM, being  
13 integrated into it. That had to be backed up. That  
14 had to be circumvented in order for the game to be  
15 recreated.

16           Again, that was a year and a half process  
17 that the MADE had to do. Had they not had to do that,  
18 they would have gotten the game preserved much  
19 quicker. So the idea that somehow you can, you  
20 know, bifurcate between games and server access,  
21 that maybe at some point in the past acted as TPMs  
22 but don't act as TPMs now, that does not reflect  
23 the reality of how these games are architected and  
24 what the needs are for preservationists moving  
25 forward.

26           MS. SMITH: Mr. Englund, do you want to



1 respond to that? I know we're kind of --

2 MR. ENGLUND: Right.

3 MS. SMITH: -- getting into the weeds on  
4 Habitat, but it seems like --

5 (Simultaneous speaking.)

6 MR. ENGLUND: I will respond to that.  
7 So then if you'll allow me a couple of other brief  
8 points. So somebody down the line here said that  
9 billing software had been integrated into the game.  
10 And I understand it's architecture only from the  
11 proponent's comments. But it sure doesn't look to  
12 me from the comments like it was integrated into  
13 the game in a meaningful way.

14 It feels to me more like operating system  
15 software. In the case of PC games of course, there  
16 is operating system software that they run on here.  
17 Habitat was made available through an online  
18 service. So of course there was a software that  
19 powered that service.

20 MS. SMITH: Can I pause you right there?  
21 Does anyone want to talk about -- Mr. Handy, I guess.

22 MR. HANDY: Yes, certainly. The actual  
23 server itself -- I mean, the access to the service  
24 that this thing was providing -- first off, the  
25 operating system involved is Stratus VOS. QLink  
26 ran on top of Stratus VOS. This isn't like an

1 operating system. I mean, QLink provided access to  
2 things just like AOL. You could play chess. You  
3 could play checkers. There's a bunch of games it  
4 provided access to. There was also chat, but mostly  
5 people played like chess, checkers, backgammon,  
6 Habitat. I mean, it's a big game service.

7 I wouldn't call it an operating system.  
8 An operating system is documented and designed for  
9 people to integrate with. QLink is ridiculously  
10 unfriendly. The server goes 23 and the client is  
11 supposed to go, oh I know what 23 means. There's  
12 no niceness about how it's going back and forth.  
13 It's not -- like an operating system, you design  
14 it with APIs so people can build things on top of  
15 it. QLink's a black box. The guys who wrote  
16 Habitat were at the QLink headquarters writing this  
17 thing into their system while they were building  
18 QLink stuff. Like these things were built at the  
19 same time, completely integrated.

20 So the idea like QLink is some kind of  
21 operating system is a little --

22 MS. SMITH: So is it protecting many  
23 things or access to a variety of things such as  
24 chess, chat and Habitat? Or was it --

25 (Simultaneous speaking.)

26 MR. HANDY: It mediated access to a

1 variety of things.

2 MS. SMITH: It mediated access to a  
3 variety of things.

4 MR. HANDY: You know, in 1986, a variety  
5 of things. Probably ten things, you know? But the  
6 system itself is nothing like an operating system.  
7 It really is kind of a matchmaker, intermediary  
8 authentication system.

9 MS. SMITH: Okay. Mr. Englund, you  
10 wanted to finish, then Mr. Degen.

11 MR. ENGLUND: Yes, just to briefly  
12 respond to a couple of things. First, a few minutes  
13 ago, Mr. Deamer referred to the Archie against  
14 Elsevier case and I think he is significantly  
15 overreading it. I understand that case to have found  
16 that a distribution of certain animations occurred  
17 because the copyright owner provided them to a  
18 database provider to be made available through a  
19 database. That sounds like delivery of a copy.

20 I don't think that suggests to you that  
21 public performance of video games through a server  
22 is a distribution or publication. In fact, the  
23 definition of publication in section 101 says that  
24 public performance is not a distribution. And  
25 certainly software that is never handed over to  
26 anybody and then is used to render public

1 performances of video games doesn't seem like it's  
2 been published. The -- well, I think that's  
3 sufficient for now.

4 MS. SMITH: Mr. Degen?

5 MR. DEGEN: Yes. I wanted to bring  
6 attention just to the limited nature of our proposed  
7 exemption and how that relates to the 107 analysis.  
8 I think it's important to note that we followed  
9 exactly the Copyright Office's guidelines provided  
10 in 2015 regarding what preservation is and that is  
11 an extremely favored purpose under the first factor.

12 And also because of the very limited use  
13 we're proposing allowed under the proposed  
14 exemption, there is no market harm really imaginable  
15 from a game that's only accessible in one place by  
16 a limited number of scholars.

17 MS. CHAUVET: Though you do add the  
18 language to the public when you're talking about  
19 distribution and making it available. So to whom  
20 would museums be making this available to, if not  
21 the public?

22 MR. DEGEN: Yes.

23 MS. CHAUVET: I'm sorry, is not just the  
24 public. So it implies it's being -- it's going to  
25 be given to someone, just not members of the public.  
26 And I guess my question is who are these museums

1 going to be giving this to?

2 MR. DEGEN: Researchers.

3 MS. SMITH: And what are the ways you  
4 would do that and why is that necessary?

5 MR. DEGEN: Yes, I mean I'll let Alex  
6 speak to that.

7 MR. CLARENDON: Okay, so --

8 MS. SMITH: Just a second. I think that  
9 gets into the larger affiliate archivist issue,  
10 which is in fact where we want to go. But we're going  
11 to let Mr. Clarendon speak first before moving to  
12 that.

13 MR. CLARENDON: Sure. Yes, I wanted to  
14 correct the record on what game companies do when  
15 they're archiving with two anecdotes. In 2012, I  
16 was working for 2K Games up in Nevada and they were  
17 seeking to reissue their megahit BioShock after a  
18 period of about five years. The problem was, was  
19 that no archive of that game existed and nobody had  
20 actually put in the time to build an archive for  
21 that.

22 We had to scour people's machines,  
23 artists, engineers, everybody's machines to find  
24 the missing pieces and put it back together. The  
25 version that was re-released was not the same  
26 version that had been originally released because

1 of that.

2 Similarly in 2015, I was working on some  
3 mobile titles and I had to archive them. I got into  
4 the middle of archiving one of them for preservation  
5 and found that some of the code was proprietary to  
6 the developer. So we were the publisher and the  
7 developer had code in there that they did not want  
8 preserved as part of that. That it was proprietary  
9 to them, so I could not archive that code as part  
10 of it. There would be no way to recreate the code  
11 without getting their archive and somehow merging  
12 it in with ours.

13 MS. SMITH: So in your view, would the  
14 exemption alter that or not?

15 MR. CLARENDON: It was just to correct  
16 the assertion that many companies are archiving  
17 things --

18 MS. SMITH: Right.

19 MR. CLARENDON: -- properly. And that  
20 it often does require a lot of sources to actually  
21 get something close to the truth of what was really  
22 released.

23 MS. SMITH: But if the company was not  
24 allowing you access or you're unable to get a lawful  
25 access to it, I mean even if the exemption were  
26 granted, it doesn't seem like that would solve that

1 particular situation. Is that correct?

2 MR. CLARENDON: I'll let Mr. Handy  
3 answer that.

4 MR. HANDY: He's not trying to say this  
5 is about the exemption. He's just showing that --

6 MS. SMITH: Okay.

7 MR. HANDY: -- the game industry is  
8 really bad at preserving its history.

9 MR. CLARENDON: Or blocks because of  
10 legal --

11 MR. HANDY: And I just wanted to really  
12 quickly if I could insert that the collaboration  
13 between companies for preservation, the only  
14 collaboration that I've heard of is actually that  
15 Activision, EA, and Ubisoft give us stuff. So  
16 Electronic Arts gave us all their old floppies that  
17 they would have for replacement disks. Activation  
18 gave us some computers. Ubisoft has given us games.

19 But like that's the level at which  
20 they're collaborating -- very, very small amount  
21 with us. And we're hoping to expand that over time  
22 but like that's kind of it. And some of the other  
23 museums but not as much as we would hope.

24 MS. SMITH: I think really just the last  
25 question until we move on to access including  
26 affiliates and a good question Ms. Chauvet asked

1 is how does this exemption necessarily help that  
2 if you still have IP interests that are going to  
3 prevent you from completing some of these  
4 preservation --

5 (Simultaneous speaking.)

6 MR. HANDY: It's always going to be a  
7 challenge. It's going to be a huge problem. It's  
8 always going to be a huge problem. We need anything  
9 we can do to help make it easier.

10 MS. SMITH: But how will it help? Can  
11 you give me an example of a specific game you would  
12 like to --

13 (Simultaneous speaking.)

14 MR. HANDY: Oh my God. I can give you  
15 20 --

16 (Simultaneous speaking.)

17 MS. SMITH: Would that be in the  
18 exemption?

19 MR. HANDY: Yes.

20 MS. SMITH: Particularly requests will  
21 allow you to do something you can't do --

22 MR. HANDY: Certainly. Neverwinter Nights  
23 for 1991 in America Online. One of the first actual  
24 online role-playing games. Again, tangled up with  
25 America Online and a third-party rights holder, plus  
26 Dungeons and Dragons. All three of those people at



1 the table is going to be real hard to get.

2 There are multiple other Neverwinter  
3 Nights in modern days but --

4 MS. SMITH: So if this exemption were  
5 granted --

6 MR. HANDY: Yes.

7 MS. SMITH: -- you can circumvent  
8 something but you still don't have access to if those  
9 companies are not giving you permission to use some  
10 of their IP. How will you preserve the game?

11 MR. HANDY: I'll work with the original  
12 artists who have preserved that as much as they can.  
13 And if they don't have the actual source codes or  
14 we don't have access to the source codes, we will  
15 work with them to re-create the original server in  
16 a clean room, you know, like seriously difficult,  
17 complicated manner of figuring out the server from  
18 poking the client to see what happens when you say  
19 this.

20 It's a really complex process but that's  
21 what we have to do. I mean nobody else is preserving  
22 it. It's going to be gone. And all the rights  
23 holders involved in the game, nobody cares about  
24 a 2D online Dungeons and Dragons game that takes  
25 like a minute a half to load a screen. Right? Like  
26 these games are really slow and old and

1       inaccessible.  There's a number of games I can cite  
2       if you want or we can go on.

3               MS. SMITH:  Well maybe in the interest  
4       of time, we'll let Mr. Williams --

5               MR. WILLIAMS:  Thank you.  Yes, just  
6       very quickly.  I want to push back a little bit on  
7       the notion that it's only commercial interest that  
8       inspire copyright owners to preserve their works.  
9       I think there are a lot of preservation activities  
10      that are supported by copyright owners.  There's a  
11      National Film Preservation Board.  There's a  
12      National Recording Preservation Board.  There have  
13      been numerous gift agreements from motion picture  
14      studios and record labels for the Library of  
15      Congress.

16              And I understand from ESA members as well  
17      and there's some specifics in ESAs filing about  
18      things that they have done.  I don't recall all of  
19      them off the top of my head.  But there are some in  
20      the filing.  So as we try to express in our comments,  
21      you know, we do support preservation efforts and  
22      I think our member companies have tried to invest  
23      in those efforts.  So I don't think it's entirely  
24      accurate to say that only MADE is doing this and  
25      no one else is doing it.

26              MS. SMITH:  Okay.

1                   MR. WILLIAMS: I can't tell you that the  
2           entire market for preservation is doing it but --

3                   MS. SMITH: All right. I think in the  
4           interest of time, we're going to move on to affiliate  
5           archivists and the access if someone wants to answer  
6           --

7                   MR. HANDY: You're going to start off  
8           with --

9                   MS. SMITH: What's that?

10                  MR. HANDY: I would like to start off on  
11           this discussion.

12                  MS. SMITH: So is it your contention  
13           that this exemption, that you would like this to  
14           be expanded would allow access to researchers or  
15           other people with an affiliation to MADE to play  
16           the game after it is preserved who are not within  
17           the physical premises?

18                  MR. HANDY: The affiliate status is  
19           designed to allow us to -- now Mr. Englund before  
20           said that we would have dozens and hundreds of people  
21           working on these. Oh my God, I would be so excited  
22           if we could have that many people. The people who  
23           can do this work are extremely rare. Think about  
24           like the streetcars in San Francisco that go down  
25           the street on Market Street are preserved by  
26           volunteers who come in and fix them.

1           You can't just be some knucklehead off  
2           the street, right? You need to know how to like sew  
3           leather or how to restore linoleum on a 1930s train,  
4           right? These are very rare people. The idea of  
5           affiliate status is to allow us to get these people,  
6           to allow them to work with us on these projects and  
7           not extend any kind of risk to them. I don't want  
8           somebody who's working on one of these projects for  
9           us to get sued for copyright infringement or some  
10          other thing out of the blue.

11           MS. SMITH: After the game is preserved,  
12          would the affiliates have access to the game to  
13          continue to play it outside of the physical premises  
14          of MADE for example?

15           MR. HANDY: The affiliates would have to  
16          maintain access to continue to keep the game running  
17          and keep it playable. But we would not open source  
18          -- like it wouldn't be public access to just, you  
19          want to be an affiliate? Great. Come on in and play  
20          it. The idea would be that people who are working  
21          on the game who are physically in the guts of making  
22          the game work, will have to be able to play it in  
23          order to test it.

24           MS. SMITH: So I'm sure someone will  
25          correct me if I say something in a way that they  
26          would characterize differently. But my

1 understanding is, in software development, you  
2 might have a lot of people working on the development  
3 stage. And once it's down, it drops to a  
4 maintenance stage, which would be less people.  
5 Would you see affiliates as something like that or  
6 would every affiliate who is working on the game  
7 for preservation, once preserved, also have the  
8 ability to continue to play it outside of the  
9 physical premises?

10 MR. HANDY: So let me give you an example  
11 on Habitat. Since we launched Habitat --

12 MS. SMITH: Can you answer the question?

13 MR. HANDY: Yes. Well I'm --

14 MS. SMITH: This is a question of, what  
15 you're seeking to do for the bounds of what does  
16 it mean to be an affiliate? It's more of like a legal  
17 or a policy question.

18 MR. HANDY: Sure, sure, sure. We would  
19 focus on affiliates being physically working on the  
20 game. The idea is not to allow them to continue to  
21 have access to the game if they're done working on  
22 it. The idea is to allow them to have access on the  
23 game so they can see if what they did changed and  
24 worked in the game.

25 This is not -- if you sign on as affiliate  
26 status, you do like one line of code contribution,

1 you can now access the game. That's not the design.  
2 That's not what we're after. This is entirely so  
3 that we can get proper intelligent people who can  
4 do this work, involved and they are very, very rare.

5 But I can say on Habitat, since launch,  
6 we've had more people involved because we've had  
7 to build out the world. We've had to rebuild and  
8 reconstruct the map from forensic evidence. And  
9 that has brought in more people to help and work  
10 on it. So the team has actually gotten larger after  
11 launch because there's actually more work to do to  
12 keep the server running, to keep new people coming  
13 in and show them how to do it.

14 To add -- one of things we've added to  
15 Habitat is a second screen experience. So while we  
16 have modified the original game, what we've added  
17 is a museum experience. So if I walk into the main  
18 room in the game, a second screen with a browser  
19 will come up and say, you're now in the fountain.  
20 This is where people would congregate and talk about  
21 et cetera, et cetera, et cetera. There's a lot of  
22 work to be done like that after the initial shipping  
23 of a project. And that's sort of our desire.

24 So no, affiliate status would not be,  
25 you contributed a little bit and get to play the  
26 game. Affiliate status would be you are working on

1 this game actively.

2 MR. PETCHY: I just wanted to add, very  
3 likely should multiple projects appear, one's not  
4 going to descend to a maintenance level. One will  
5 probably find affiliates that are specialized at  
6 certain levels of expertise in graphics or a server  
7 person or someone like that. So they may be  
8 actually most likely working on multiple projects  
9 in their own particular area of expertise.

10 MS. CHAUVET: So just to follow up on the  
11 question I asked before. So because you added the  
12 language, "to the public," so the video game is not  
13 going to be distributed or made available to the  
14 public outside the physical premises? Is that  
15 meant just to limit it to these affiliates? Is that  
16 what your goal was?

17 MR. HANDY: Yes, yes. The purpose is to  
18 -- we're not going to just turn this onto the  
19 internet. This exemption is not so we can just  
20 bring the game back online for everybody. This  
21 exemption is so we can preserve it in a working  
22 fashion for future generations who will perhaps  
23 think this is the most important thing ever. We don't  
24 get to choose what they think is the most important  
25 ever. They -- you know, the future chooses that.

26 MR. RILEY: So just to be clear, these

1       affiliate archivists are working remotely in most  
2       cases?

3                   MR. HANDY:  Yes.  Yes.

4                   MR. RILEY:  You put in the qualification  
5       that they could be supervised.  What does that mean?

6                   MR. HANDY:  Well, oh, you can't just  
7       throw a bunch of people on a software project without  
8       supervision.  Nothing would work.  You have to have  
9       very strict supervision in software.

10                  The way it works is like, right now, with  
11       Habitat there are issues that need to be addressed,  
12       right?  Like you go into this screen.  If you load  
13       a chainsaw, it crashes.  That's an issue.  It needs  
14       to be addressed.

15                  And a supervisor would say, you, over  
16       there, you take this issue and go work on it.  And  
17       would say, okay, you three guys over here, are the  
18       map people.  I need you to go build that area and  
19       keep track of it and keep track of your work.  It's  
20       a fully functional software project, which has to  
21       have managers.

22                  MR. RILEY:  So what about supervision in  
23       terms of cutting through all this, I think the  
24       concern is that these affiliate archivists, if they  
25       have all the information to recreate the server-side  
26       software and then ultimately the game, they can turn



1 around and play this game at their own homes or in  
2 other places other than in a preservation context.

3 What type -- is there any type of  
4 supervision that contemplates making sure that they  
5 don't do that? And can you give any contemplation  
6 to those concerns?

7 MR. HANDY: So, I mean, you have to look  
8 at this like if you're building a roller coaster,  
9 you've got to ride it, see if it works, right? But  
10 that doesn't mean you got to live on the roller  
11 coaster, go on it every day.

12 So the access controls can be  
13 controlled, like if we load this to Git, we can  
14 control on the allow so you can replicate the whole  
15 Git repository. I'm sorry, source control. If we  
16 had a source control system with this in it, we can  
17 control that source control system.

18 We can limit people to very specific  
19 portions of it. We can keep it so that you can't  
20 download the whole thing if we wanted to. There are  
21 ways to put controls in on this.

22 MS. REGAN: So do you have current  
23 controls in the --

24 MR. HANDY: We use GitHub and GitHub  
25 allows you to have those controls. We don't have  
26 those controls on Habitat because we don't need

1       them, but we can institute those controls if we need  
2       to.

3                   MS. CHAUVET:  So why can't you just hire  
4       them as employees or like part-time employees?  
5       Well, I mean, it could be like at a certain like  
6       lower salary or whatever.  I'm just wondering why  
7       the affiliate language is necessary versus just  
8       having more -- because that really has to do with  
9       your relationship with them.

10                   MR. HANDY:  Yes, certainly.

11                   MS. CHAUVET:  So why can't you just  
12       develop more of a formalized relationship and keep  
13       the language the way that it is in the existing  
14       exemption?

15                   MR. DEAMER:  I'd be happy to answer  
16       that.  So the language is premised -- Mr. Deamer.  
17       The language is premised on the section 108 working  
18       group and the idea that we felt that some supervision  
19       is absolutely necessary, but that these sort of  
20       rigid sort of suggestions that were provided by the  
21       ESA would limit the ability to do anything.

22                   And it's the same, why you wouldn't have  
23       -- the question of why you wouldn't necessarily have  
24       an employment contract.  It's the same reason why  
25       the SFMOMA wouldn't necessarily have all of their  
26       people that are helping them have employment

1 agreements.

2 I think that the idea is that we would  
3 follow sort of a sort of reasonable sort of  
4 supervision sort of structure and that the concern  
5 we have primarily is that when the structure becomes  
6 too rigid, it really pushes out smaller museums that  
7 are doing important work, out of the ability to do  
8 that.

9 So where you only have, basically, the  
10 New York MoMA museum is able to afford to be able  
11 to participate in these types of important  
12 preservation processes. And from everything we've  
13 seen, they do not have sort of the bandwidth to  
14 consider it.

15 MS. SMITH: Would you be willing to  
16 assume the more granular recommendations of the 108  
17 study group?

18 MR. DEAMER: Some of the  
19 recommendations of the 108 study group are extreme.  
20 This is not a Copyright Office --- so this was the  
21 group that was sponsored. I believe one of them is  
22 to remove all sovereign immunity restrictions,  
23 which seems a little extreme to me, personally.  
24 That being said, I think that the basic overview  
25 is relatively reasonable.

26 MR. RILEY: What about the existing

1 section 108 exemption which requires you to not  
2 remove the works from outside the premises of a  
3 library? Would that cause you concern?

4 MR. DEAMER: The Copyright Office has  
5 suggested that the current language is stuck in  
6 time, which we agree with. I'm not sure how well  
7 the current 108 language purports into this space.  
8 That being said, Alex, I think you have a better  
9 understanding of what type of -- what you would need  
10 in order to have volunteers.

11 MR. RILEY: Yes, I mean, that is a little  
12 worrying. The volunteers do have to have chunks of  
13 code on their local machines in order to edit them.  
14 I mean, would could go around it if we had to. It  
15 wouldn't kill us. There are things like online IDEs  
16 that you can use. You open up the web browser and  
17 you edit the code in a browser.

18 So like we could, but I mean, that's  
19 also, that's like saying, you know, you can't use  
20 your tools that you brought, Mr. Carpenter. You've  
21 got to use our tools over here. And Mr. Carpenter's  
22 not going to happy about that. You know what I mean?

23 MS. SMITH: I don't. I mean, so the  
24 recommendations say things such as the agreement  
25 between the library, the archives, and the  
26 contractor preserves a meaningful ability on the

1 part of the rights holders to obtain redress for  
2 infringement. Is that something you'd be willing  
3 to assume?

4 MR. HANDY: I actually don't understand  
5 what that means in legalese.

6 MS. SMITH: I think it means if the  
7 contractor is engaging in copyright infringement,  
8 there is a way for the copyright holder to be able  
9 to take action on that.

10 MR. HANDY: Okay, yes. No, I mean,  
11 that's fair. We don't want these affiliates to be  
12 breaching the copyright rules. We have no  
13 intention of allowing them to -- I mean, there would  
14 be repercussions if they were to distribute or do  
15 anything. I mean --

16 MS. SMITH: Right, but it would be the  
17 library or the archives, assuming --

18 MR. HANDY: Assuming.

19 MS. SMITH: -- like taking on an  
20 assumption to mediate that and deal with it --

21 MR. HANDY: Yes.

22 MS. SMITH: -- would be your  
23 responsibility.

24 MR. HANDY: Yes, we -- that's our job.

25 MS. SMITH: In layman's terms.

26 MR. HANDY: That's our job is to, you

1 know, we've got to watch these people and control  
2 them and make sure that they're in line. And if they  
3 do something wrong, it's our liability.

4 MR. PETCHY: I just wanted to add that  
5 it's a common practice and I've even had the entire  
6 Windows XP source code on my laptop, buildable, and  
7 sitting on a plane on the other side of the world.  
8 So it's not uncommon, I mean, to have access to the  
9 crown jewels, so to speak. MR. RILEY: And  
10 you're saying you didn't have permission to do that  
11 or --

12 MR. HANDY: No, no. I had permission.  
13 It just, but just as an example, I mean, you know,  
14 to have, you know, Microsoft's entire source code  
15 on your laptop and not necessarily, realizing the  
16 value, and so other people, but still, as a  
17 consultant, you know --

18 MR. HANDY: It's how software is  
19 developed.

20 MS. SMITH: I mean, I think one  
21 difference is you do that as a consultant, with  
22 permission to have the crown jewels. And this  
23 exemption would potentially allow the distribution  
24 to, I guess people who sign up as an affiliate and  
25 it is not yet to me quite clear what that criteria  
26 needs to be.

1           So if we hear a little bit more to  
2 understand, it might be going beyond your  
3 experience, which I think that is helpful for you  
4 to share, sure. Any thoughts about that?

5           MR. DEAMER: So I think specifically,  
6 Alex, you can give a good conversation about, for  
7 instance, with Neverwinter Nights, what type of  
8 experiences and experience in sort of a resume, you  
9 would need in order to go through that.

10          MR. HANDY: Oh, an affiliate would have  
11 to prove -- for the Neverwinter Night project, in  
12 theory, an affiliate would have to have deep  
13 understanding of C, not modern C, C from 1988 which  
14 is a totally different dialect of C without any of  
15 the capabilities that modern people are used to.

16          They would have to have a full  
17 understanding of the internal workings of America  
18 Online and the basis of a QLink. They would have  
19 to have a completely functional understanding of  
20 the Gold Box engine which runs the Dungeons and  
21 Dragons games. They would have to have an  
22 understanding of server/client dynamics and the  
23 ability to program in client-server fashion.  
24 They'd have to understand assembly language because  
25 there's a whole bunch of assembly language in those  
26 old games.

1                   It's an insane -- one of the analogies  
2                   that I really like was if there's a law against  
3                   building a Large Hadron Collider in your backyard  
4                   and we remove that law, does that change anything  
5                   for anybody? That's kind of what is going on here,  
6                   pretty small --

7                   MS. SMITH: So how do you determine  
8                   whether someone would be an affiliate? Do they take  
9                   a test? Do they fill out a form? How do you  
10                  determine --

11                  MR. HANDY: We'd have to see how their  
12                  technical chops were. You know, we would sit down.

13                  MS. SMITH: How do you do that?

14                  MR. HANDY: So, for example, on the  
15                  Habitat project, we literally sat down with a guy  
16                  who had a resume. One of the guys who worked on it,  
17                  he had a resume. He'd done a bunch of talks on  
18                  YouTube about Commodore 64 development. And so  
19                  that was his resume. Now there's another guy who  
20                  we brought in who literally just was interested,  
21                  right, and so we gave him very low level jobs that  
22                  like you don't have that much technical chops to  
23                  do.

24                  But that's still like, you know, 10  
25                  percent of the work versus the 90 percent that the  
26                  guy with the technical chops did. Honestly, we



1 don't do like a formal interview process. We talk  
2 to them. What do you do? What do you know about  
3 this? What are your processes? What can you come  
4 up with?

5 MS. SMITH: Do they sign any agreement  
6 with MADE?

7 MR. HANDY: We do have volunteer  
8 agreements that we have signed, but those are  
9 generally -- right now those are like general  
10 volunteer liability agreements. There's nothing  
11 specifically targeted to this kind of work. I'm  
12 totally not against adding that kind of an  
13 agreement. I'm not sure how we would write that  
14 agreement, but I think we could have some help.

15 MS. SMITH: So --

16 MR. WALKER: Yes, yes, and then  
17 certainly -- let me just jump in on here because  
18 I want to sort of circle off the things that have  
19 just been said here.

20 The MADE, in its thinking, period, is  
21 that if someone is operating in a supervised  
22 capacity, that means that they, A, would not be  
23 engaging in infringement or unlawful activity that  
24 we've specifically said that this needs to be  
25 limited to lawful preservation activities as we have  
26 defined it here. And that the supervision step

1 would, as was suggested a second ago, would mean  
2 that liability flows up to the MADE were that not  
3 -- were the supervision inadequate.

4 So the whole point about it here is that  
5 you want to find people who have this deep knowledge  
6 and skill set. And quite frankly, like to Alex's  
7 point a second ago, we would love to be able to hire  
8 these people as employees. It's just simply the  
9 fact that if you're talking about an organization  
10 like the MADE or like some of the other players that  
11 are in this space, that are non-profits, that are  
12 operating on small budgets, the volunteer labor that  
13 you get is of tremendous value and you just can't  
14 hire people with this kind of pedigree to  
15 particularly get the amount of time that's necessary  
16 on these projects. It would be cost prohibitive.

17 So the idea is to create a structure that  
18 very much mirrors the kind of control and  
19 supervision and liability assumption that would  
20 come from an employee-type relationship. And  
21 again, this is flowing out of the recommendations  
22 that came out of the section 108 study report.

23 We're, again, all these instances, we  
24 are trying to mirror back the guidance that the  
25 Copyright Office has given us either in the previous  
26 rulemaking or in other documents about how do you

1 engage in a legitimate preservation exercise that  
2 applies to the digital realm.

3 And you know, obviously 108 is an  
4 imperfect vehicle for that because it does not  
5 anticipate the type of uses we have. It's just  
6 simply too old when it was -- when it was adopted.  
7 But the idea here is to -- to try to work within  
8 what the -- what the Register said last round was,  
9 you know, that this demonstrates Congress' intent  
10 with regards to what preservation activities should  
11 be. So that is the general idea here.

12 And we feel like the affiliates is not  
13 -- saying the affiliates have this -- they're a part  
14 of the user class for this exemption, does not change  
15 the nature of the work here at all. This is merely  
16 just an acknowledgment of the fact that you do need  
17 expert engagement outside of the particular  
18 employees of any institution.

19 MS. CHAUVET: So can you speak to any  
20 specific examples where you have been prevented,  
21 under the existing exemption, from using an  
22 affiliate that you needed for a specific project?  
23 Because the current exemption does not extend to  
24 the affiliates?

25 MR. HANDY: We have not come up against  
26 it, but in our evaluations of gains that are at risk,

1       there are a great deal -- there are a large number  
2       of games that we seek are at risk but are also out  
3       in a gray area. And those people are working to  
4       bring those back as a fan group.

5               And --- you know they're totally -- it's  
6       an illegal thing. They're not supposed to be doing  
7       it, right. We would like to have some way to engage  
8       with those people, because they have the technical  
9       knowledge, if we want to bring back that game. Do  
10      you see what I mean? Like there are some people out  
11      there who are already doing this in a gray area.

12              We'd like to be able to tap into their  
13      knowledge and use them to do it properly, not  
14      necessarily on the things they're already working  
15      on, but anything similar.

16              MR. WALKER: Another example of this that  
17      we mentioned in our reply brief is the game Grim  
18      Fandango, which was done by the copyright owners  
19      themselves. And they had to go outside, to the fan  
20      community, in order to remaster their own game. So  
21      this leads to affiliate arguments without the  
22      exemption currently, but there are real-world  
23      examples right now that publishers are dealing with  
24      themselves.

25              MR. RILEY:     So if there was a  
26      requirement that the affiliate archivist -- you

1       could have affiliate archivists but they must act  
2       like volunteers and be located at the MADE, that  
3       would be ineffective for you?

4               MR. HANDY: Yes, no, the brains that we  
5       need are, like probably have about a 2,000-mile  
6       radius around them of no brains. You know what I  
7       mean? Like they're out there. The guy we used for  
8       the Habitat project's from Germany.

9               MR. CHENEY: So let me follow up on  
10       something that -- Mr. Deamer? Part of your name is  
11       blocked out, I'm sorry.

12               One of the things that concerns me about  
13       one of the things that he talked about and things  
14       that have come up here a little bit is that, as you  
15       talked about the tools that these experts need,  
16       describe that a little bit.

17               Because some of the things that he talked  
18       about in just bringing those in are, seems like  
19       they're game assets that they're bringing in or  
20       things that they've been working on that they had  
21       access to, that they're bringing in to help with  
22       your project.

23               And that seems like that may be outside  
24       of what we're talking about. Or at least that would  
25       be a concern, I would think, to the content  
26       community. For them, as their experts or their

1 tools that they're bringing game assets that they  
2 preserved somehow to help you in your preservation  
3 project. So can you help us with that?

4 MR. HANDY: I'm going to let James talk  
5 about tools because tools is really complicated.

6 MR. CLARENDON: Sure. So it's not just  
7 game assets there. It's going to be also  
8 understanding of the languages used at the time,  
9 as Alex alluded to, but we're also looking at a  
10 combination of hardware that may no longer be  
11 available and that only a few fans may still have  
12 access to it.

13 We're looking at compilers. We're  
14 looking at operating systems. We're looking at  
15 linkers. We're looking at development  
16 environments. We're looking at custom shell  
17 scripts that assemble everything together, custom  
18 art tools, custom audio tools -- all those things  
19 are going to be unique, and a lot of them are already  
20 out of date.

21 Even some of the tools that I was using  
22 five years ago are no longer in use and are hard  
23 to find access to. So you need access to those  
24 original tools to be able to recreate the content,  
25 the code and content, necessary for those.

26 MR. CHENEY: And I guess what I'm trying

1 to get at is, is that are you getting those from  
2 employing these affiliates? In other words, are  
3 you going to those affiliates because they have some  
4 of these things you can't get otherwise?

5 MR. HANDY: No, it's not for data. It's  
6 for brains.

7 MR. PETCHY: Yes, I was going to,  
8 because you mentioned they may be bringing game  
9 assets in. So I think, in reflecting on tools, and  
10 tools are extremely important in game design.  
11 Usually you build an opponent of application for  
12 tools or you build a game as the tool.

13 So like for instance, we had 3D worlds  
14 that you had, if you were building the world, you'd  
15 be in there. And then we networked it up and these  
16 walls started moving and the artist was sitting  
17 there working on the walls. So, I mean, these  
18 things are part of the game. They're integral.

19 So in the sort of inverse sense of copy,  
20 you know, of an asset, the tool produces an image,  
21 but that tool can only produce images like that,  
22 for instance. So you may end up with a situation  
23 where you have the fan community and they're  
24 redeveloping a tool. And you want to use it. You're  
25 going to make your own assets out of it, but the  
26 tool itself is sort of a construction of the actual

1 game itself in a certain sense.

2 MR. HANDY: The affiliate status is not  
3 designed for tools. It's designed for human  
4 beings.

5 MR. DEAMER: Okay. And one last point  
6 on that, I should distinguish that we make a  
7 distinction between a legal definition of tools in  
8 1201 versus the type of tools they're talking about  
9 when it comes to video game design and the idea of  
10 being able to access this content in the first place.  
11 So --

12 MR. HANDY: Yes, a lot of the tools James  
13 just mentioned, early bugs, standard stuff like  
14 compilers, linkers, things like -- these are  
15 standard software development tools. Everybody  
16 uses them. They're not -- there's a lot of open  
17 source stuff that will be used.

18 MR. RILEY: I wanted to give -- thank you  
19 for your patience -- wanted to give Mr. Williams  
20 and Mr. Englund a chance to respond.

21 MR. WILLIAMS: Yes, thank you. There's  
22 been a whole lot said, so it's going to be hard to  
23 respond to all in the remaining time. And I want  
24 Steve to have some time. But a few points.

25 MS. SMITH: I think we can go a little  
26 bit over if we need to. And so we do want to make



1       sure you get time to respond.

2                   MR. WILLIAMS: Thank you. I think this  
3 affiliates issue is crucial so I guess I'll start  
4 with that. At the beginning of the presentation,  
5 Mr. Handy said that these fan groups who have set  
6 up unauthorized servers are involved in completely  
7 infringing activity. Now he's saying they're the  
8 very people that he wants to incorporate as part  
9 of this affiliate program.

10                   I credit that he's not out to try to cause  
11 anyone harm, but I think the drafting on this is  
12 going to be almost impossible for you to draft  
13 something that only allows for legitimate conduct  
14 and doesn't risk a lot of harm.

15                   One example I'll give, and it's of a  
16 different degree, but in the hearings in Washington  
17 we learned that an officially enrolled student now  
18 just means you've got a Facebook account and you  
19 click, I want to join that class online and all of  
20 a sudden an exemption applies to you.

21                   And so here I don't know how you would  
22 define a subset of people. I don't know if just  
23 clicking through the terms of use is enough to really  
24 give much protection. And that becomes even more  
25 risky when you're talking about the tools issues  
26 that Mr. Cheney was talking about.

1           The 2015 recommendation, the Copyright  
2           Office said it was quite concerned that when you  
3           start expanding this outside of the realm of -- in  
4           a physical location inside of a museum, that somehow  
5           there will be some trafficking of tools going on.

6           I'm still not entirely clear on all the  
7           types of circumvention involved. But if the museum  
8           is having to distribute these tools to people who  
9           are spread all around the world, apparently not even  
10          in the United States, how those tools get used can  
11          become problematic. And if they're --

12          MS. SMITH: Do you have a thought on what  
13          Mr. Deamer was saying, that there's a difference  
14          between, you know, tools other than 1201 and some  
15          of the tools being discussed here?

16          MR. WILLIAMS: I don't have any reason  
17          to doubt that there's many things that could be  
18          described as tools. What I would refer to as tools  
19          would be actually things that get you through an  
20          access control without permission.

21          If there are other things that, in the  
22          software universe, are described as tools, then we'd  
23          look to the statute to address that. I, again, just  
24          want to say that Mr. Riley asked about, well, what  
25          about the current parameters of section 108, and  
26          would those be good enough.

1           I think under the current provision, if  
2       you're dealing with an unpublished work, it has to  
3       be currently in your collection. This material is  
4       not, for the most part, currently in their  
5       collections. It's on a remote server that somehow  
6       they have to get at in order to access it.

7           And then with published works, there's  
8       another provision. But again, a lot of this  
9       material is unpublished. So if you wanted to try  
10      to stay within existing 108, as you have pushed to  
11      try to do, for the most part, in other contexts,  
12      I think this is a typical fit.

13           I think I'll defer the rest to Steve.  
14      But this, especially this issue of defining  
15      affiliates just seems like a real hornet's nest to  
16      me. If he's saying the people he wants to go and  
17      talk to are already involved in doing all of this,  
18      even though it's completely infringing and even  
19      though they know that they don't have permission  
20      under the law, incorporating them into this program  
21      just seems to be almost inevitably to result in  
22      misuse of the content once it's all compiled and  
23      put together, especially with this continuing  
24      access that they say will be necessary.

25           MR. ENGLUND: So I'll try to catch a  
26      number of things that were said during the last 15

1 minutes by the proponents. First, despite 15  
2 minutes of program question by the Office, I think  
3 it remains fairly elusive, at least in my mind, to  
4 who these affiliates are or what they do, how many  
5 of them there are.

6 We've heard from Mr. Handy that there  
7 are very few of them and they've got super high  
8 skills, except when there's some low skill effort  
9 so that you can bring in somebody who's an eager  
10 volunteer. And you need a lot of people to help  
11 build out the map and Habitat.

12 So Mr. Handy kind of poo-poo'd my  
13 reference to dozens earlier, but I think that  
14 actually came from one of their comments, although  
15 I couldn't find it just now.

16 I think it seems, when we hear Mr. Handy  
17 describing building out the map and Habitats, it's  
18 reasonable to assume that, for one project at the  
19 MADE, there were probably dozens of these  
20 affiliates. But that's a lot of people to try to  
21 supervise. And we have not heard about how, at  
22 least very clear answers, about how they are going  
23 to be selected.

24 Second, the MADE's reply comments,  
25 talking about the security of the simulated server  
26 software, talked about it being located on a

1 physically isolated server. And I think we've  
2 heard from Mr. Handy that's not true.

3 They're going to have dozens of  
4 affiliates making remote access to a server to  
5 access the software.

6 MS. SMITH: Yes, actually, I noticed  
7 that from the written comments too. So, Mr. Handy,  
8 do you want to clarify?

9 MR. HANDY: Yes, sure. That's a  
10 restriction we're -- we're talking about ideal  
11 versus what can be done. We could totally do it on  
12 a LAN, like you said. We could do it with just people  
13 coming to the facility. If that's what the  
14 restriction has to be in order to make everybody  
15 happy, we could do that. But that would be really  
16 hard.

17 And I basically was saying, like with  
18 that example, the idea was we have finished building  
19 this game. This game is now air-gapped on a LAN  
20 inside the museum. Development process, yes, we  
21 would have to go out and touch things, but that's  
22 touching like the source code and that would  
23 occasionally have to get into the server.

24 But ideally having this thing done would  
25 have it somewhere on a box nobody can touch, over  
26 there in the corner. If you wanted to see it for

1 research purposes, you can go and see it. That's  
2 -- and again, that's not --

3 MS. SMITH: That's different from your  
4 model that you were talking about earlier where any  
5 affiliate can come in as, you know, the maintenance  
6 level doesn't take very much effort.

7 MR. HANDY: That's the development,  
8 during the development process. So one of the key  
9 things to remember here is that the process of  
10 bringing a game back -- if it's not Habitat, it's  
11 going to be six, seven, eight years. It can take  
12 forever.

13 During that time, people will have to  
14 come in and work on the game. And they will have  
15 an incomplete game to sign into. When it is done,  
16 when we get to a point where we don't need to continue  
17 to work on it, then we can put it on the computer  
18 over there, nobody can touch it.

19 When it's in an incomplete state, I don't  
20 know who's going to want to play it anyway. It's  
21 not like we're distributing access to something  
22 that's going to be a playable, fun game. It's going  
23 to be, okay, we got region up and there's one vendor.  
24 Now we have to add all the other NPCs.

25 And it's not going to be a complete game  
26 when these people, affiliates, are using it. It's

1 going to be a piecemeal, broken thing.

2 MS. SMITH: Mr. Englund, did you want to  
3 continue?

4 MR. ENGLUND: Yes, so again, this is  
5 all, just seems very elusive. Every time you ask  
6 a question, you kind of get a different answer. I  
7 think Mr. Handy was distinguishing between the  
8 development phase and the maintenance phase and  
9 saying once the development phase ends, we go into  
10 maintenance, then we can keep it on a physically  
11 isolated server.

12 But ten minutes ago he explained how we  
13 need people to maintain the software once it's up.  
14 So it just isn't clear to me what the proposal here  
15 is. But it sometimes at least seems like it  
16 involves having people in Germany remoting into a  
17 server with access to the server source code. And  
18 that seems like a problem.

19 More generally, I think this highlights  
20 that the proponents' reply comments contain a lot  
21 of limitations on the use that aren't actually found  
22 in their proposed regulations that were set forth  
23 in the initial comments.

24 MS. SMITH: But were the Office to take  
25 those reply comments seriously and those  
26 limitations seriously, does that lessen some of the

1 concerns that the ESA puts forward?

2 MR. ENGLUND: Yes, in the sense that all  
3 of the limitations clearly make, reduce the level  
4 of risk, I think the limitations do not address the  
5 fundamental challenge here that what is preventing  
6 circumvention or what is preventing restoration of  
7 online games is, that they're powered by unpublished  
8 software that is not distributed.

9 And access, hacking some TPM isn't going  
10 to bring that back. So I think the exemption is not  
11 warranted here. But if an exemption were to be  
12 granted it should have the kinds of limitations that  
13 were discussed in the reply comments.

14 MR. RILEY: Do any of the proponents  
15 want to address more of the concerns that, obviously  
16 in the last proceeding, the Register was concerned  
17 about the trafficking issues that could be at issue  
18 here. In this case, addressing them to the issue  
19 we've been talking about of affiliate archivists.

20 MR. DEAMER: Yes, I'll do my best with  
21 1201(a) (1) and (a) (2) (B). So I think ultimately  
22 our position with the idea of anti-trafficking is  
23 that these, the role that those other aspects of  
24 don't have are nebulous at best.

25 There's currently a circuit split. We  
26 don't think that ultimately, where it currently is,



1 in the state of the law, should add any sort of  
2 ultimate deciding value in whether or not to grant  
3 the exemption or not. I'm happy to answer like  
4 follow-up additional questions but that's our top  
5 level understanding about anti-trafficking and  
6 1201(a)(2) and 1201(b).

7 MR. WALKER: And let me just jump in here  
8 too. On a practical level, I think we need to  
9 reiterate that what we're talking about when we talk  
10 about tools, or what my colleagues here, who are  
11 the technologists are talking about, talking about  
12 tools, is they're not talking about circumvention  
13 tools that if, released into the wild, could be  
14 applicable to other games, right.

15 We're talking about very bespoke tools  
16 that were used as part of the software development  
17 process in order to preserve a game, right. So  
18 even, an example, because like I can see the  
19 quizzical look on your face --

20 MS. SMITH: Well, no. I thought Mr.  
21 Handy was saying they weren't bespoke before. So  
22 maybe I mistook --

23 MR. HANDY: No, no. They're -- okay,  
24 we're talking about two totally different things.  
25 We have a complete collision of name space here.  
26 We have, in software, we call this a collision of

1 name space.

2 Tools in software that we are talking  
3 about here, nothing to do with circumvention. The  
4 tools that he's talking about specifically is just  
5 a tool for circumvention which, there is no tool  
6 for circumvention. Circumvention is open it up, rip  
7 it out. It's not use this piece of software to  
8 circumvent. There's no --

9 MS. SMITH: What about prohibits  
10 trafficking or distribution in tools of  
11 circumvention?

12 MR. HANDY: Okay.

13 MS. SMITH: So I'll contemplate that  
14 there is such a thing for sure.

15 MR. HANDY: Well, yes, and that is a  
16 spurious argument. There is no way in God's green  
17 earth anybody's going to write a circumvention tool  
18 that lets you circumvent any MMO's authentication  
19 thing. That's just ridiculous.

20 Every game is totally different.  
21 You've got to do it specifically to each game.  
22 There's no such thing as a tool that does  
23 circumvention for everything.

24 Now there may be a perception of that  
25 because there's things you can do on a console to  
26 circumvent, right. This is completely different.

1       There is absolutely no way that the circumvention  
2       tools that we developed for Habitat would be useful  
3       for anything other than Habitat.

4               MR. RILEY:  It's still for each game  
5       though, right?

6               MR. HANDY:  Yes, each game you'd have  
7       it.

8               MR. RILEY:  The archivists need to share  
9       these technologies between themselves to restore  
10       access to the game?

11              MR. HANDY:  Yes, I suppose they would.

12              MR. DEAMER:  So this comes up on another  
13       thing, so this is also considering whether or not  
14       this would be considered the archivist would be  
15       considered part of the MADE and whether or not you  
16       can traffic between people within the same  
17       organization.  Presumably if you have a contract  
18       and they're volunteers, they would be part of it  
19       and 1201(a)(2) and that trafficking wouldn't apply.

20              MS SMITH:  I have a question, if the  
21       archivist, if this volunteer, is part of the MADE  
22       isn't it then unnecessary to add this language of  
23       affiliate archivists at any rate?

24              MR. DEAMER:  I think the ultimate  
25       argument with that is that it expands the idea of  
26       who can participate directly.

1                   MR. WALKER: Yes, I mean, again, this  
2 goes back to our point about, we're talking about  
3 institutions that exist and that can function only  
4 through volunteer labor and so the idea that, we  
5 could, and of course we could get into an employment  
6 law discussion about how at what point you become  
7 part of an institution. But the idea here, at least  
8 in theory, was to allow flexibility for these  
9 projects to proceed in a lawful way without having  
10 to create an ex-ante set of bureaucratic hurdles.

11                   Which again, the idea here is we are  
12 trying to do this very much in good faith and to  
13 create a set of circumstances where preservation  
14 can be done by legitimate institutions in a lawful  
15 way that do not have the resources necessary to hire  
16 a bunch of highly skilled developers to do this on  
17 that basis.

18                   MR. WALKER: And the 108 study group  
19 report does acknowledge that institutions already  
20 have volunteers that could or could not apply as  
21 affiliates in and of themselves. So it certainly  
22 is a nebulous area and yes, so according to the study  
23 group this is sort of the average for this.

24                   MS. SMITH: Thank you. Mr. Englund,  
25 did you want to respond to Mr. Walker or Mr. Deamer  
26 on that specifically?

1                   MR. ENGLUND: Yes, so I will respond to  
2                   that so then hopefully one of the points in the  
3                   previous colloquy that again what's proposed here  
4                   with in terms of what the affiliates will actually  
5                   do remains pretty elusive. It -- this is a  
6                   proceeding about circumvention, what is proposed  
7                   is exemption to the prohibition on circumvention  
8                   so presumably the proposal to add affiliates means  
9                   that it is contemplated that the affiliates will  
10                  circumvent and we've now talked about one way that  
11                  they might circumvent which is exchanging  
12                  circumvention technologies among themselves. That  
13                  sounds like a trafficking violation to me.

14                  As I read the proposed rule, it sounds  
15                  like another way that they might circumvent, at  
16                  least in the case of console games, is to jailbreak  
17                  their home consoles under color of the exemption  
18                  that was granted to the preservation institutions  
19                  so that they can do the work on those consoles which  
20                  then give them in their home, under limited  
21                  supervision of the preservation organization, a  
22                  jailbroken console that could be used for future  
23                  piratical purposes.

24                  And so I think there's certainly some  
25                  risk here in the terms of what the folks are doing,  
26                  and we just haven't heard very concrete responses

1 in terms of what circumvention the affiliates will  
2 do. Returning to the previous colloquy on  
3 supervision, I think the other proponents here agree  
4 that the liability for what affiliates do would have  
5 to flow to the preservation organization.

6 That is an important step but I think  
7 it remains critically important that the kinds of  
8 limitations and conditions that you were asking  
9 about at one point, Ms. Smith, from the 108 Report  
10 be included to ensure that there is effective  
11 supervision and I still don't understand how a small  
12 organization in Oakland supervises dozens of  
13 affiliates across the country.

14 MS. SMITH: In terms of what the written  
15 comments are on the proposed regulatory language.  
16 So Mr. Walker is saying, we've sort of tried to do  
17 this the right way. Ensure there's effective  
18 supervision, that all the content has been lawfully  
19 accessed and there may be sort of a disconnect or  
20 a fear there is a disconnect between the language  
21 Mr. Walker is saying and what you think might happen  
22 on the ground. Do you think that's fair or do you  
23 think there's a problem with Mr. Walker's proposal?

24 MR. ENGLUND: Well I think the language  
25 of the rule that is proposed in the initial comments  
26 opens up the opportunity for affiliates to do

1 circumvention and doesn't have a lot of limitations  
2 on it. And so that puts us in the position of  
3 speculating about what kinds of circumvention they  
4 might do.

5 MS. SMITH: So, here's our question  
6 though for the proponents because I didn't see in  
7 the written comments any suggestion that it would  
8 be necessary for the affiliates to circumvent the  
9 console would it or would it not and if so, what's  
10 the need?

11 MR. DEAMER: I believe the 2015  
12 exemption specifically permitted jailbreaking  
13 consoles as I think Mr. Riley said earlier. We're  
14 not, that's not at issue with this specific, we're  
15 not addressing that.

16 MS. SMITH: What about the affiliates?

17 MR. RILEY: Right, what Mr. Englund's  
18 saying is that the Office issued that, in part,  
19 because there were no affiliates. There was a  
20 limited universe of people who could have access  
21 to these jailbroken consoles. How does this change  
22 things? And I think Mr. Englund's assertion is it  
23 does. You're going to respond?

24 MR. WALKER: So I would, I would just say  
25 simply to this fact that the ESA and others have  
26 offered no examples, factually or really

1 hypothetically otherwise, that the jailbreaking  
2 that was permissible by institutions under the 2015,  
3 the current exemption, has caused any problem,  
4 market harm, that there's anything, so again the  
5 idea here is that --

6 MR. RILEY: In previous proceedings  
7 they offered extensive evidence that jailbreaking  
8 of consoles is directly related to piracy, maybe  
9 not in the preservationist context but we're talking  
10 about expanding the preservationist context to  
11 these affiliate archivists which is more akin to  
12 the general public and that's the concern.

13 MR. WALKER: So I think that it's  
14 incorrect to say that we're expanding the  
15 preservationist context because again, we're  
16 talking about affiliates working under the  
17 supervision of eligible libraries and museums and  
18 archives who are explicitly engaged in lawful  
19 preservation work. So the idea that, you know,  
20 again, that last time it was determined and there's  
21 been no evidence to show otherwise that this would  
22 not be a problem in the context of preservation work  
23 therefore we don't think that's there's any reason  
24 why to think that supervised archivists doing the  
25 same that eligible institutions are allowed to do  
26 currently is going to create any problem in the



1 future.

2 MS. SMITH: Okay, so I appreciate that  
3 perspective. I find it helpful in terms of  
4 factually what is needed to make a useful exemption.  
5 It sounds like the position is that, yes, it will  
6 be necessary for the affiliate archives to jailbreak  
7 the consoles. Is that correct? Mr. Handy?

8 MR. HANDY: Well, just on a technical  
9 point. We're not even considering console MMOs, so  
10 if they're left out of this it doesn't affect us.  
11 We're looking at 20, 30 year old games that were  
12 not on consoles or even computers and the  
13 circumvention that we're doing is for the  
14 authentication piece. Right? Not jailbreaking  
15 consoles.

16 MS. SMITH: Right. And it seems  
17 somewhat late-breaking so if jailbreaking of  
18 consoles for affiliate archivists is excluded does  
19 that make ESA lessen is that a helpful limitation?

20 MR. ENGLUND: Well, so the short answer  
21 is yes, but generally this highlights that there's  
22 perhaps a disconnect between the proposed rule and  
23 the real ask here. I think we just heard Mr. Handy  
24 say that this is about preserving games that are  
25 decades old and not even console games, but we've  
26 got a proposed rule that's about preserving games

1 that have had service support discontinued for only  
2 six months and potentially are console games and  
3 so excluding console games would help.

4 There are a lot of things that would  
5 help. Tailoring the regulation to the ask would  
6 help. Although again, I don't think that the  
7 exemption is warranted based on the circumstances  
8 here in terms of TPMs actually preventing  
9 restoration of games.

10 MS. SMITH: Let's let Mr. Handy respond.

11 MR. HANDY: Sure. I'm really speaking  
12 about how we intend to use it. There may be other  
13 organizations that will use it the other way.

14 MS. SMITH: And we appreciate that but  
15 you've provided such valuable detailed information  
16 that I think this is why we're asking so many  
17 questions about the MADE since it's, you know, so  
18 involved in this space.

19 MR. HANDY: No, I'm happy to answer.  
20 There's not -- nobody's doing this institutionally.  
21 I didn't mean nobody's doing preservation. I meant  
22 nobody's doing virtual world preservation  
23 institutionally. There are no institutions doing  
24 this, aside from us.

25 MS. SMITH: So the Internet Archive,  
26 filed a comment, do you have any sense whether they

1 would be wanting to make use of this eventually?

2 MR. HANDY: Probably not. I know them  
3 very well. Their thing is just save it all, not sit  
4 down and fix it. You know what I mean?

5 MS. SMITH: Okay, so all right.

6 MR. HANDY: I'm sure they would help if  
7 I asked. We're very close with them. But they have  
8 a different goal.

9 MS. SMITH: I was just wondering if  
10 we're talking about the concept of supervision, if  
11 there was any other institution we could point to  
12 that might have a published policy.

13 MR. HANDY: Well, we could talk to the  
14 Computer History Museum. We can talk to the Strong  
15 Museum of Play, at Rochester, New York. We could  
16 talk to the video game -- I mean, there are a lot  
17 of organizations that are beginning to do software  
18 preservation. It's a very messy field.

19 It's a weird area that is unknown. But  
20 if you need to talk to other organizations, I can  
21 introduce you to some other organizations that are  
22 doing this.

23 MS. SMITH: Okay, thank you. Mr.  
24 Williams?

25 MR. WILLIAMS: Thank you. I mean, I'll  
26 defer to Steve on the question about the limitation

1       excluding consoles and the impact -- that, of  
2       course, makes it better from our perspective, I  
3       think, but still not good enough.

4               I still think if you walk through the  
5       fair-use factors they don't come out favorably for  
6       the reasons we say in our comments.

7               And we were hearing a minute ago that  
8       while -- it's not a risk to expand console  
9       jailbreaking to affiliates because you already have  
10      allowed this to be done in the museum which of course  
11      we initially opposed but didn't oppose the renewal  
12      of.

13              It makes a big difference I think because  
14      of what was said today and last week. There are  
15      already people in the marketplace engaged in  
16      infringing conduct. Mr. Handy referred to it -- and  
17      the witness last week referred to it and so I'm glad  
18      to hear they're willing to exclude jailbreaking but  
19      the fact that some of the folks who might become  
20      affiliates are already out there engaged in  
21      infringement increases the threat of jailbreaking.  
22      But also just enabling these folks access to these  
23      games, which under the exemption maybe they're only  
24      allowed to do very specific things with, but given  
25      that they've already proven that they don't really  
26      care so much about what the regulations say or what

1 the law says, the risk of harm seems to be quite  
2 high.

3 MS. SMITH: And I guess following with  
4 that, because if there's no employee/employer  
5 relationships let's say you have an affiliate who  
6 does go rogue who starts engaging in infringing  
7 activity, what recourse do you have? What can you  
8 do to actually prevent that person from doing it?

9 MR. DEAMER: I mean not only would they  
10 be immediately terminated, as Alex mentioned in his  
11 previous comments, the copyright owners would have  
12 every recourse available to them under the law,  
13 including statutory damages, including  
14 circumvention procedures.

15 I mean they would be treated as any other  
16 member of the public that engaged in illegal  
17 conduct. The idea of the exemption is to provide  
18 a way to preserve abandoned online video games. And  
19 when people go outside of this exception, as they  
20 have in certain other cases, that violates the  
21 exemption and that's against the regulations.

22 MR. HANDY: Thank you. Mr. Handy. And  
23 this is one thing I want to keep pointing out is  
24 these guys in these gray area games -- I don't want  
25 them for the game they're working on. I want them  
26 because they know what they're doing. I need their

1 brains and they've already done this type of stuff.  
2 There are not many people out there who can reverse  
3 engineer and MMO server. You can probably count  
4 them on two hands in the United States.

5 But if there's like two of them I can't  
6 use, well, that's a lot less people I can access,  
7 you know. Obviously we want people to stay within  
8 the exemptions. These people who are doing this in  
9 great areas are not doing it to be scofflaws and  
10 make money, they're doing it because they love the  
11 game and they want it back. There's no other reason  
12 to spend three years of your life rebuilding  
13 something you're going to get sued over, right?  
14 Like these people are motivated, they're  
15 intelligent. They just need to come over here and  
16 work within the laws with us.

17 Right now they're scofflaws and it's a  
18 real shame that people who desperately love these  
19 video games and dedicate their lives to them are  
20 having to break the law in order to go back and play  
21 those games.

22 MR. RILEY: I'm just curious, you've  
23 thrown out a couple of different kind of colloquial  
24 numbers. How many people would be needed to restore  
25 one game?

1                   MR. HANDY: Habitat was a team of about  
2 a dozen -- mostly not full-time but heavy  
3 contributors within the larger sort of being a total  
4 of about 20. This is the simplest virtual world  
5 ever made and it took four years.

6                   So a larger game would take a larger team  
7 but I'll tell you, we're not going to find more than  
8 a dozen people to work on one of these things. This  
9 is extremely specialized knowledge. And just  
10 because you love a video game -- and just pointing  
11 out that there are low-level tasks. Yes, we have  
12 some little low-level tasks but when they're done  
13 still 90 percent of the work has to be done by  
14 gentlemen like these two right here who are the few  
15 and far between.

16                   MR. RILEY: So hypothetically, let's  
17 say you've got all you want under the exemption,  
18 how many games could you restore a year?

19                   MR. HANDY: None, because the four years  
20 -- give me five, I can do one. Like I said, Habitat  
21 took four years. I anticipate the next game will  
22 take five. The next game will probably take six or  
23 seven because we're going forward in time.

24                   And like I said, this is like a large  
25 Hadron collider project. The four years -- we could  
26 have shortened it by a year and a half with this

1 exemption but it still would've been two and a half  
2 years, right? This is a huge undertaking.

3 This is not something somebody does  
4 because they just feel like it. This is something  
5 you dedicate your life to. It is incredibly complex  
6 work and I cannot even begin to get into the  
7 technical details of the stuff that they did on  
8 Habitat to make this game come back.

9 We have people who are at the tops of  
10 video games companies working on Habitat because  
11 they love it. That's the level of intelligence that  
12 is required.

13 MR. RILEY: Mr. Englund?

14 MR. ENGLUND: So, several things.  
15 First, just a moment ago what Mr. Handy said --  
16 something about these affiliates want to be involved  
17 because they want the games back. They want to be  
18 able to play their favorite games again and that's  
19 -- once again, that illustrates the fundamental  
20 tension in this proposal.

21 We can all pretend that this is about  
22 the server in the reading room that's accessible  
23 only by scholars, but very little indication that  
24 that's really true. But people are putting in four,  
25 five, six years doing these projects not because  
26 some scholar 30 years from now might potentially



1 look at it and want to write an article.

2 People are doing this because they want  
3 to play the games.

4 MR. RILEY: But let me ask you this,  
5 don't you need players to play the games so you can  
6 study them?

7 MR. ENGLUND: I think, yes -- that's I  
8 think a reason to question whether this preservation  
9 activity is useful, scholarly because the  
10 experience -- a scholar's future experience of a  
11 virtual world with nobody in it --

12 MS. SMITH: I mean, I think, the  
13 Copyright Office has acknowledged that there's a  
14 value to preservation of video games, right? I  
15 think everyone in this panel has, right?

16 MR. ENGLUND: Yes, but I think you  
17 really ought to look at this proposal with some  
18 skepticism because time and again the proponents  
19 keep coming back to the idea that people want to  
20 play these games.

21 I think you've got to question whether  
22 it's really about the abstract possibility that 30  
23 years from now some scholar may want to go to the  
24 back room of the museum and play the game.

25 Two other points -- just to return to  
26 the question of console jailbreaking very briefly,

1 it's one thing to have the hacked jailed -- the  
2 jailbroken console locked up in the curatorial area  
3 of a museum -- one of them with no public access,  
4 very different to have a dozen or 20 or however many  
5 you think the number is of consoles in people's homes  
6 that are jailbroken for participation of project.

7           Next so there was some talk, I believe,  
8 by Mr. Deamer of a few moments ago about copyright  
9 owners having sufficient rights under law and they  
10 would terminate affiliates who misbehaved. And I'd  
11 like to emphasize that that really isn't a very  
12 effective right.

13           Failure to volunteer isn't a strong  
14 disincentive to misbehavior by the volunteer. And  
15 copyright owners are unlikely to have an effective  
16 enforcement remedy against misbehaving volunteers  
17 -- we don't know who they are. They're scattered  
18 around the country.

19           We don't understand what their rules  
20 are. So I think if you were to grant exemption, I  
21 don't think you should because I think the case has  
22 not been made, but our agreement earlier in this  
23 panel that the preservation organization be liable  
24 for misbehavior by the affiliates would be a  
25 critical, important piece.

26           MS. SMITH: Mr. Degen?

1                   MR. DEGEN: Yes. I do want to point out  
2                   that the focus of this hearing is on the proposed  
3                   exemption of the laws of preservation. That the MADE  
4                   is also interested in doing other work legally with  
5                   game creators to do more broad preservation does  
6                   not affect anything that has to do with the hearings  
7                   today and I think the focus should be on this limited  
8                   use that we're seeking legal cover for.

9                   MS. SMITH: Thank you. Mr. Deamer?

10                  MR. DEAMER: And just following up,  
11                  continuing on that, the idea that copyright  
12                  enforcement mechanisms aren't sufficient are also  
13                  outside the idea of a proposed exemption if the  
14                  statutory damages provision of the copyright act  
15                  is not sufficient for copyright owners then they  
16                  should try to find another way outside of this thing  
17                  to continue to argue that.

18                  MS. SMITH: Okay. I think this has been  
19                  a great discussion. I'll let Mr. Handy speak and  
20                  if there's anyone else who wants to make a closing  
21                  comment because we're little bit long on time.

22                  MR. HANDY: I have just a quick closing  
23                  comment that actually addresses the preservation  
24                  issue. This idea that maybe somebody someday will  
25                  be interested in virtual world. The reason the MADE  
26                  exists is because I found a bunch of games that were

1 never released for the Atari 2600 at a flea market  
2 out there. It was not only one game, it was like  
3 12 revisions of the game. We could see the process.

4 When I went to Rembrandt's house in  
5 Amsterdam, you go and you see how they made the  
6 paints -- the things that he painted with -- the  
7 equipment, what his life was like. That's what  
8 we're doing here. We're trying to preserve the  
9 process.

10 Now the game that I found and that shows  
11 this process is called Cabbage Patch Kids:  
12 Adventures in the Park -- not a game that anybody  
13 would have said has any kind of historic value in  
14 1984 when it was released.

15 But now because it shows the development  
16 process on the Atari 2600 it has intense value. We  
17 do not get to choose what the future thinks is  
18 important. The future gets to choose that and if  
19 we don't preserve it they don't get it.

20 MS. SMITH: Anyone else? Okay. Thank  
21 you all very much for all of your comments. I think,  
22 what time are we reconvening? 1:30 to discuss Class  
23 5. Thanks very much, all.

24 (Whereupon, the above-entitled matter  
25 went off the record at 12:19 p.m. and resumed at  
26 1:30 p.m.)

1 MS. SMITH: All right, thanks,  
2 everyone. I think we're going to start the next  
3 panel, which is Class 5, so I assume the streaming  
4 is working and we'll just get on with it.

5 So welcome, thank you for coming. This  
6 is Class 5 -- Unlocking. My name's Regan Smith, and  
7 I'm Deputy General Counsel of the Copyright Office.

8 We're here to consider whether or not  
9 to expand a current temporary exemption for which  
10 the Acting Register has determined it is  
11 appropriate to recommend renewal. So we're looking  
12 at whether it should be modified.

13 And, I think that we'll start by  
14 introducing ourselves on this side, and then if you  
15 can state your name and your affiliation.

16 MR. CHENEY: Stacy Cheney, I'm a Senior  
17 Attorney-Advisor at NTIA, National  
18 Telecommunications and Information  
19 Administration.

20 MR. RILEY: John Riley,  
21 Attorney-Advisor, Copyright Office.

22 MS. CHAUVET: Anna Chauvet, Assistant  
23 General Counsel at the Copyright Office.

24 MS. SALTMAN: Julie Saltman, Assistant  
25 General Counsel at the Copyright Office.

26 MR. SCHER: Dylan Scher, Stanford's

1 Juelsgaard IP & Innovation Clinic.

2 MS. SMITH: And who are you here  
3 representing?

4 MR. SCHER: The Institute of Scrap  
5 Recycling Industries.

6 MS. SMITH: Thank you.

7 MR. CONNELLY: Hi, Chris Connelly, also  
8 with the Stanford Juelsgaard IP & Innovation Clinic  
9 representing ISRI.

10 MS. SMITH: Thank you.

11 MR. WIENS: Kyle Wiens. I'm the founder  
12 of iFixit.

13 MS. SMITH: Thank you. And, I guess,  
14 one thing I should mention is tip your placard up  
15 if you'd like to speak. It's not a large panel, so  
16 I think everyone will get an opportunity to say what  
17 they wish to say.

18 But, if you can repeat your name for the  
19 court reporter when you start speaking, I think that  
20 will be helpful. So all right, we'll get started.

21 MS. SALTMAN: So right off the bat, I  
22 just wanted to clarify exactly what ISRI is asking  
23 for here. In your comments, you included language  
24 for two possible proposed exemptions, one that  
25 would expand the current exemption to include new  
26 devices and another that would expand it to include

1 all devices.

2 But, I noticed in the language for both  
3 of those, you included a clause that asks for --  
4 that specifically encompasses including individual  
5 and bulk circumvention.

6 The current exemption, which has been  
7 -- the Register has already approved renewal based  
8 on the streamlined process, has -- includes bulk  
9 circumvention, so is there a reason you included  
10 that language?

11 MR. CONNELLY: We don't think that  
12 language is actually changing the effect of the  
13 regulation. We included it purely as a  
14 clarification.

15 But, as you said and our understanding  
16 of the existing regulation is that it does include  
17 bulk circumvention, and we're happy to leave it  
18 there.

19 MS. SALTMAN: Okay, great, thanks. And  
20 then are you, just to clarify because you included  
21 sort of like separate -- separate exemptions, are  
22 you also looking for sort of a third exemption, which  
23 would include unlocking of all devices both new and  
24 used? Just to clarify, that's what you're asking  
25 for in the all devices exemption?

26 MR. CONNELLY: That's correct. So

1 we're asking for basically two modifications to the  
2 existing exemption. The first is deleting the word  
3 used so that new devices would be included.

4 And the second is getting rid of those  
5 four categories so that it would simply apply to  
6 all wireless devices.

7 MS. SALTMAN: Okay, great. Thank you.  
8 Let's address sort of each issue in turn. So I want  
9 to start with new devices. So particularly in your  
10 reply comment, you provided some evidence of the  
11 types of situations where this exemption could have  
12 an impact.

13 So that would be in your reply comment,  
14 you mentioned retailers who would resell sort of  
15 like phones that had been -- that were, that had  
16 been bought from another retailer who had an excess  
17 of those phones. Is that the only use you're  
18 looking to protect with this exemption, or do  
19 individual consumers ever need this kind of an  
20 exemption?

21 MR. CONNELLY: Sure. So we think the  
22 adverse effects are the same regardless of whether  
23 they're new or used phones. Our examples are sort  
24 of just demonstrating that the recyclers now  
25 receive requests to recycle new phones.

26 This has effects for the recyclers and



1 for the original consumers who are looking to sell  
2 them because it affects fair price.

3 MS. SALTMAN: Do the recyclers receive  
4 requests to do bulk circumvention of new phones?

5 MR. CONNELLY: Sure. So we provided in  
6 our submission some evidence that there are  
7 situations where there are thousands of phones that  
8 are being looked at where they are new.

9 And then we provided examples where  
10 deals of over 1,000 phones fell through, because  
11 they were locked to particular carriers.

12 MS. SALTMAN: And is there evidence of  
13 the need to unlock other devices other than phones  
14 that are new? Is there a need for it?

15 MR. WIENS: Sure. I can answer that.  
16 The reverse logistics ecosystem is much more vast  
17 than you would expect. Retailers, I mean, in your  
18 files, you have an 8.8 percent return rate on cell  
19 phones. You see that 5 to 10 percent return rate  
20 on all products.

21 And so there's not just the recyclers,  
22 there's also the world of return processors, where  
23 they'll buy those 5 percent returns from Walmart  
24 and then they're taking those products and they're  
25 selling them where they can.

26 In many cases, they have contractual

1 requirements not to resell those products in the  
2 same market, so they have to export them outside  
3 the U.S. and resell them overseas.

4 But, if it has a cellular connection,  
5 and it can't be used on the U.S. carrier, then those  
6 products have a value of basically scrap value,  
7 rather than -- rather than the functional value of  
8 the device.

9 A certain example would be, I was in a  
10 recycler the other day, and I saw a whole bunch of  
11 smart watches with cellular connections. They were  
12 brand new devices that had made it back to the  
13 recycler.

14 And, it turned out there was a software  
15 glitch, and so they were able to patch them and  
16 restore them to working functionality, but then  
17 they can't resell them in the U.S.

18 MS. SMITH: Just before, I think Ms.  
19 Saltman has a follow-up question, but for the court  
20 reporter, I think we've drifted from providing  
21 names.

22 MR. WIENS: Kyle Wiens.

23 MS. SMITH: Is it okay? Do you need  
24 everyone to say their names before talking? Okay,  
25 we're good. So we are good. So keep going, I just  
26 wanted to make sure. Sorry.

1 MS. SALTMAN: Thanks. Mr. Wiens, could  
2 you walk me through how -- the types of TPMs that  
3 need to be circumvented here and how that's done?

4 MR. WIENS: Sure. So usually --  
5 there's relatively few companies that make these  
6 cellular basebands. So you've got a company like  
7 Broadcom that makes the cellular baseband.

8 The lock is actually in the software  
9 that's on that baseband chip. So we're talking  
10 about a chip the size of a postage stamp or half  
11 the size of a postage stamp.

12 It's a relatively specific lock. And,  
13 I think, as we've been talking about, different  
14 kinds of devices, as we'll talk about in vehicles  
15 over the next few days, which is the idea that  
16 there's one monolithic lock.

17 There's really like locks inside locks  
18 inside locks. And so this is specifically the lock  
19 is on the software on the baseband processor, which  
20 has, it's the cellular modem.

21 It's the thing that has all of the smart  
22 bits to talk to the various, the cell frequencies.  
23 It's actually interesting. There's almost more  
24 money tied up in patent licensing on that chip than  
25 there is in the actual cost of manufacturing the  
26 chip.

1                   It's a couple dollars in patent  
2                   licensing for the 4G technology for that chip, which  
3                   is why in the -- in the reuse market we see people  
4                   will actually take a cell phone, and they'll  
5                   desolder the cellular baseband chip off that cell  
6                   phone, and they'll integrate that in a new product.

7                   If they want make a cellular-connected  
8                   television or something, they'll buy old chips,  
9                   because it's cheaper to take the old chip then to  
10                  pay the patent licensing again.

11                  MS. SALTMAN: So to unlock this chip, is  
12                  that -- are you circumventing the same access  
13                  control that would give you access to all the content  
14                  on the phone, or is it embedded in the chip?

15                  MR. WIENS: It's embedded in the chip.  
16                  Sometimes you have to break through another lock  
17                  in order to get to this lock.

18                  MS. SALTMAN: Okay.

19                  MR. WIENS: It's -- but, you're modifying  
20                  a bit on that baseband.

21                  MS. SALTMAN: Okay. And so the content  
22                  that it's protecting is solely related to the chip?

23                  MR. WIENS: Is the software that runs  
24                  the baseband processor.

25                  MS. SALTMAN: Okay. Great, thanks.

26                  MR. WIENS: And it's a general purpose

1 computer just like anything else. You'd like to  
2 think it's, I mean, it has some special silicon,  
3 but everything these days is a 32-bit micro  
4 controller.

5 MS. SALTMAN: So Mr. Connelly and Mr.  
6 Scher, this question starts with you. In the last  
7 rulemaking, the Register declined to exempt  
8 unlocking of new devices because there was  
9 universal agreement that the exemption should be  
10 fashioned to avoid a concern, to avoid facilitating  
11 trafficking.

12 And I understand that this is not the  
13 kind of trafficking that's contemplated in 1201,  
14 but it nevertheless is a concern that was raised  
15 in the last rulemaking. Is there any new evidence  
16 in the record that we should consider with respect  
17 to this concern?

18 MR. SCHER: I don't think there is any  
19 specific new evidence about phone trafficking, but  
20 as was said, this is not necessarily a copyright  
21 issue.

22 There is no opposition this time, which  
23 seems to suggest and reinforce the link, that there  
24 is not a large link between copyright, phone  
25 trafficking and unlocking.

26 Additionally, as we explained in our

1 2015 submissions, opponents of phone trafficking  
2 have been very successful bringing lawsuits without  
3 relying on DMCA claims.

4 There were no examples of cases where  
5 we found success under the DMCA where there wasn't  
6 also success under another kind of claim like fraud  
7 or tortious interference.

8 And, I think it's important to remember  
9 that when there was opposition about trafficking,  
10 TracFone specifically said that as long as there  
11 are comments in the record that make it clear that  
12 the exemption is not seeking to immunize and  
13 insulate traffickers that's sufficient.

14 The Register acknowledged that, and I  
15 think there is no reason that the Copyright Office  
16 can't do the same in this triennial.

17 MS. SALTMAN: Do you -- what would your  
18 position be on an exemption that allowed unlocking  
19 of new devices but not in bulk, so only on an  
20 individual device basis?

21 MR. SCHER: So it's important for ISRI  
22 to be able to do it in bulk because they represent  
23 bulk recyclers.

24 MR. WIENS: Whereas my community is  
25 more doing it one device at a time. I'm also a  
26 member of ISRI, so I have a lot of friends that

1 benefit from bulk unlocking, and I see the market  
2 need. But, our need is one device at a time.

3 MR. CONNELLY: I think, too, just to  
4 move back briefly if I may, this came up at the very  
5 beginning of this panel where we observed that the  
6 current exemption in place does include both  
7 individual and bulk circumventing.

8 So we would be very disappointed on  
9 behalf of our client in this unopposed proceeding  
10 to take a step back like that. That would be -- be  
11 something we're very much opposed to.

12 MS. SMITH: So to be clear, we're not  
13 looking to debate whether or not to renew the current  
14 exemption or take a step back, but for each  
15 modification that we're looking at, we're looking  
16 to make sure that there is a basis that the Office  
17 can decide whether there's an adverse effect on a  
18 non-infringing use, whether that -- whether there  
19 is a reason to deviate from the presumption that  
20 there will be the prohibition.

21 So in terms of extending it to new and  
22 keeping the bulk qualification, that's sort of a  
23 new thing, so I think that's why we're asking those  
24 questions, if that makes sense.

25 MR. CONNELLY: Oh, okay, I see. So as  
26 long as we're not saying we're going to get rid of

1 the exemption for used devices in bulk --

2 MS. SMITH: Right. We're not trying to  
3 question that --

4 MR. CONNELLY: It would just be  
5 tailoring it for new. Okay.

6 MS. SMITH: We're trying to say, you  
7 know, can you show us, and it sounds like Mr. Wiens  
8 has an example of stores where there is a surplus  
9 of returned goods, I guess, and other examples where  
10 there's a need such that the 1201 currently is having  
11 an adverse effect on something people want to do,  
12 because if there's not a need to do it or a desire,  
13 then the presumption that the prohibition on  
14 circumvention maintains.

15 MR. WIENS: Right. So another example  
16 would be around we're seeing every home security  
17 or commercial security device has some kind of  
18 telephone connectivity so it can phone call if it's  
19 being broken into.

20 And we're also seeing in this like rapid  
21 pace. I mean, every year, the smart home  
22 marketplace changes. So last training we discussed  
23 Revolv, which was a smart home system that Nest  
24 bought. After Nest bought them, they shut the  
25 servers down.

26 So you can very easily imagine a



1 situation where you have a home security system.  
2 A company shuts it down, they're not supporting it  
3 anymore. A recycler is going to end up with the  
4 10,000 remnant units.

5 Can't use them with the original  
6 cellular connectivity but may be able to swap out  
7 the SIM cards, use one of the open carriers and then  
8 resell with the license.

9 MS. SMITH: Is it not possible in that  
10 example to get permission to -- to go from one  
11 carrier to the next?

12 MR. WIENS: Yeah so the surprising thing  
13 about what recyclers do is that they never interact  
14 with the manufacturers. So even if -- so let's say  
15 these smart home systems are sold at Best Buy.

16 Best Buy may have the contract with Nest  
17 or Google when they're buying those things, but then  
18 when Best Buy is done with them or they get all these  
19 returns, they'll give them to a return processor  
20 or to a recycler.

21 That processor has no contractual  
22 relationship or commercial relationship in any with  
23 the manufacturer or the carrier. And so they would  
24 never -- they wouldn't have a business  
25 relationship.

26 They wouldn't have any leverage to be



1 just a bit more on that. In the previous exemption,  
2 there was a definition of used. Right? Used for  
3 purposes of this exemption, when it has previously  
4 been lawfully acquired and activated.

5 So you -- you point to the second part,  
6 but what if we eliminated that second section and  
7 just said lawfully acquired rather than just say  
8 new or used, but it's all lawfully acquired devices  
9 -- wireless devices? Would that satisfy your  
10 clients in this case?

11 MR. CONNELLY: I think that would be a  
12 change we very much would like to see, yes. I don't  
13 think that would get quite everything our client  
14 wants to see, but we certainly do think that would  
15 be a very -- a positive step.

16 MR. CHENEY: Can you give me an example  
17 of something that would not be covered that you think  
18 should be by that language?

19 MR. CONNELLY: I cannot come up with an  
20 example of that.

21 MR. WIENS: Can you give me the full  
22 sentence that you're imagining?

23 MR. CHENEY: Sure it's a -- so right now  
24 it says, "'used' for purposes of this exemption when  
25 it has previously been lawfully acquired and  
26 activated on the wireless telecommunications

1 network...."

2 So we would eliminate the second half,  
3 so it's never been activated, but it's been lawfully  
4 acquired. So it seems to me that the transactions  
5 you're talking about --

6 MR. CONNELLY: As long as it's --

7 MR. CHENEY: -- are lawfully acquired  
8 transactions. Right? So you're -- you're going to  
9 Best Buy, a reseller is going to Best Buy. They're  
10 acquiring these in bulk or a handful of them even,  
11 and then they're repurposing these. So it seems to  
12 me, does that -- does that fit the definition you  
13 think is lawfully acquired?

14 MR. CONNELLY: I think -- yes, I think  
15 it does insofar as our concerns are associated with  
16 the reverse logistics industry. I think that would  
17 solve our client's concerns.

18 MR. SCHER: Yes. I just wanted to say  
19 I think that definitely works as long as it's clear  
20 in the exemption that that's not necessarily the  
21 definition of used, because I think that it's just  
22 sort of confusing in terms of plain language.

23 Because if you get a child a gift for  
24 Christmas and you don't open it and then on Christmas  
25 Day, they open it, they wouldn't say, thank you for  
26 the used Xbox.

1                   So as long as it's clear that that's what  
2                   the definition means and maybe it's not the  
3                   definition of used, but the definition of what's  
4                   being acceptable in the exemption, I think that's  
5                   fine.

6                   MR. CHENEY: All right so in -- you can  
7                   imagine perhaps the language instead of saying used  
8                   should say lawfully acquired. Right? Because it  
9                   would be directly substitutable. Right?

10                  So that could be potentially the  
11                  language of the exemption rather than used or new  
12                  or just all devices, just say lawfully acquired  
13                  devices.

14                  MR. WIENS: I think that makes sense.

15                  MS. SALTMAN: Okay, let's move on -- I'm  
16                  sorry, let's move on to all devices. So in your  
17                  comments, you talk about various types of devices,  
18                  and it would be helpful for us to go through each  
19                  of these types of devices and get a little bit more  
20                  evidence on the record about sort of the types of  
21                  TPMs at issue, the adverse effects of the current  
22                  exemption, potential non-infringing uses.

23                  So let's start with child monitors.  
24                  Mr. Wiens, do you have experience with these  
25                  devices?

26                  MR. WIENS: Well, they're similar to

1 security systems --

2 MS. SALTMAN: Okay.

3 MR. WIENS: -- so I would lump them into  
4 the same kind of boat, or I mean, I have a -- I have  
5 a friend who has a ranch. He has a game camera with  
6 a cellular connectivity, and so every time a critter  
7 walks by, every time a deer walks by, it texts him  
8 a picture of -- of the deer.

9 MS. SMITH: I actually have a question.  
10 The child monitors in the -- in the proceedings are  
11 apparently sold in the form of a watch or an amulet,  
12 so why isn't this already permitted as a wearable  
13 device in the current exemption.

14 I didn't think that was a very useful  
15 example since it doesn't seem to be something that  
16 you need a new exemption for.

17 MR. WIENS: I haven't seen where you may  
18 --

19 MS. SMITH: Well, maybe this is more  
20 dedicated towards ISRI what -- what you meant when  
21 you said child monitor or tracker. Maybe that's  
22 different than what Mr. Wiens is describing?

23 MR. CONNELLY: Right. So I would  
24 concede that child monitors that come in the form  
25 of smart watches are included in the current  
26 exemption.

1           I think possibly our examples of some  
2 of the automobile GPS trackers we also discussed  
3 in that same section are -- are better examples on  
4 that point.

5           MS. SALTMAN: Okay. Let's start with  
6 those then. So my first question about those types  
7 of devices is sort of just like I'm trying to  
8 understand exactly what type of device you're  
9 talking about.

10           Are these like devices that are part of  
11 the car? Like when you buy the car, it comes with  
12 like an OnStar system, for example? Or are you --  
13 are you contemplating a separate device that you  
14 would buy separately and like add on to your car?

15           MR. CONNELLY: So these are separate  
16 devices, and we gave two examples. We have Sync Up  
17 Drive, which is T-Mobile's device, and we have  
18 Verizon's Hum, and those are stand-alone devices  
19 you would buy for addition to an existing car.

20           MS. SALTMAN: Okay. And when you buy  
21 the device, do you contract directly with like  
22 T-Mobile, for example and -- to obtain a cellular  
23 plan for this device? How -- how does that work?

24           MR. CONNELLY: It's not clear to me  
25 exactly how that would work in terms of whether it  
26 could possibly be added to an existing plan or you

1       could contract for a plan for that.

2                   But, the important thing to keep in mind  
3       for us is we have no -- we have nothing to say about  
4       contract basically. What would -- the exemption  
5       we're asking for would not in any way impair the  
6       contract rights that a carrier might have.

7                   All we're asking is that if a consumer  
8       were to have the occasion or a recycler were to have  
9       the occasion of wanting to unlock these devices,  
10      they could do so without being in violation of the DMCA.

11                  MS. SMITH: So I think a question is we  
12      need to know it is possible to unlock it and go from  
13      one carrier to another. Because if it's not, it's  
14      not 1201 that is the cause of the -- use that is  
15      sought to be made if the exemption were granted.

16                  MR. WIENS: There's no -- I mean that the  
17      -- we're using standard cellular networks, so the  
18      only thing that limits it to one carrier or another  
19      is the baseband's lock on the -- on the cell  
20      carrier's signal.

21                  From a technical perspective, any  
22      cellular device that can talk on 3G can talk on  
23      anything as long as you're talking on, it's got the  
24      frequencies built in.

25                  It's going to be more limited by the  
26      frequencies, but there -- almost every carrier,



1       there are multiple carriers on any given frequency.

2                   MS. SALTMAN:  So you -- so you're saying  
3       essentially if you could unlock one of these devices  
4       from T-Mobile, say, and you have a cell -- cellular  
5       plan with AT&T, you'd be able to connect it to your  
6       cellular plan without sort of adding anything to  
7       your AT&T plan?

8                   MR. WIENS:  Whether AT&T would like  
9       you, but yes.

10                  MS. SALTMAN:  I mean, I guess that's  
11       sort of a question -- that's a question that we need  
12       some evidence on.

13                  MR. WIENS:  Right.  Well, so what we're  
14       seeing is all the cell carriers are excited about  
15       IoT, because it's more data that they can charge  
16       people for.

17                  So if you have a device that you want  
18       to connect to any carrier that's going to transmit  
19       data, they're happy to take your money to connect  
20       the device to it.

21                  So -- from a technical perspective,  
22       absolutely, anything that has cellular  
23       connectivity can be switched from one carrier to  
24       another.  If there's a baseband lock on it, you have  
25       to bypass that lock, and then you can.  Will another  
26       carrier welcome you?  Absolutely.

1 MS. SALTMAN: And --

2 MS. SMITH: Is --

3 MS. SALTMAN: Oh, go ahead.

4 MS. SMITH: I mean, can any of you tie  
5 that into the automobile, truck or train example?

6 MR. WIENS: Yeah. So where -- where  
7 we're seeing these GPS trackers happen, and  
8 everybody is excited about them, is the insurance  
9 companies are paying for it.

10 Because the insurance companies can get  
11 a device in your car and track your usage, then they  
12 can profile you. They can say you're a risky driver  
13 or you're not a risky driver.

14 So you see this with teen drivers a lot.  
15 You have a 16-year-old. They're going to give you  
16 a discount on your car insurance if you put a  
17 tracker, and it's phoning home on how hard they're  
18 braking.

19 But, you can imagine, your kid turns 18,  
20 you don't want that anymore, maybe you switch  
21 insurance carriers. Your new insurance carrier is  
22 using Verizon instead of AT&T.

23 They're going to charge you for another  
24 device. If you could switch the device that you  
25 have that you're not using anymore, to the new  
26 carrier, that would be beneficial.

1 MS. SMITH: Do you know if that has  
2 happened? Like is there a refusal to switch  
3 carriers in the example of the car tracker for  
4 insurance purposes?

5 MR. WIENS: I haven't seen that yet. I  
6 mean, this is a relatively new category, and these  
7 devices. I mean, it's only in the last, what, six  
8 months or a year that both T-Mobile and Verizon have  
9 been pushing these devices really hard.

10 So I think we're -- we're anticipating  
11 where the market's going to be going over the next  
12 year or two. But, the market moves so quickly that  
13 I can -- I can see a lot of, you're going to end  
14 up with hardware being abandoned.

15 It's kind of like your DSL modem. You  
16 know, you sign up for a -- for a plan with Charter  
17 and then you move and you want to use the same modem  
18 with Comcast, and they won't let you.

19 There's no -- nothing different about  
20 the modem, you just want to be able to switch it  
21 over.

22 MS. SMITH: Do you --

23 MR. CONNELLY: Like to , sorry, to --

24 MS. SMITH: No, it's fine.

25 MR. CONNELLY: -- Mr. Wiens' point  
26 about how fast this is moving. As we were preparing

1 our reply comment in January -- we're only talking  
2 three months ago -- T-Mobile launched what it bills  
3 as the first nationwide NB-IoT plan.

4 So this happening just three months ago,  
5 it's very, very difficult to come before the  
6 Copyright Office and say, here's a list of examples  
7 of consumers who've been in this position and  
8 haven't been able to switch carriers.

9 Our concern and the reason we believe  
10 it is very important that this exemption be granted  
11 now is that this is moving so incredibly fast that  
12 if people have to wait three years, it's going to  
13 stifle innovation.

14 We've seen studies suggesting that by  
15 2021, there'll be over 900 million things  
16 connecting to the IoT only using cellular  
17 technology. That's not including Bluetooth or WiFi  
18 or anything of this sort.

19 And there was an AT&T white paper  
20 actually that came out just last year, 2017,  
21 starting out by observing that virtually anything  
22 can be connected to the internet.

23 Well, if we take that seriously, and  
24 that's not on our say-so or ISRI's say-so, that's  
25 on AT&T's say-so, it doesn't seem reasonable that  
26 people of all these kinds of devices, virtually

1 anything, will have to wait every three years and  
2 separately come before the Copyright Office with  
3 their GPS trackers or their widget makers or  
4 whatever the case may be.

5 MS. SALTMAN: But it's different,  
6 right, because a lot of those things might connect  
7 to the internet, which might not involve the type  
8 of unlocking you're asking for here.

9 Like I was actually going to ask, are  
10 these sort of GPS tracking devices, can they connect  
11 via Bluetooth or via like a wireless internet or  
12 a network you create on your cell phone?

13 Is there a way to sort of like get around  
14 this issue without having to trigger the exemption?

15 MR. WIENS: They tend to be very simple  
16 devices that don't even have screens or buttons.  
17 You just put the SIM card in and plug it into your  
18 car.

19 So there -- and just from a cost  
20 perspective, they're not going to want to put a WiFi  
21 chip or a Bluetooth chip on these devices. So in  
22 terms of the car trackers, they'd only talk on the  
23 cellular network.

24 MS. SALTMAN: Okay.

25 MR. SCHER: And I'll just add, I don't  
26 think that there is any evidence or reason to believe

1 any of the reasons that the Register has  
2 acknowledged that voluntary unlocking from  
3 carriers might not be accessible to consumers, that  
4 there is any reason why that analysis would change  
5 for these GPS trackers.

6 MS. SMITH: Well, that was based on an  
7 in-extensive record, so I think we're also looking  
8 to see some examples that there is a competitor to  
9 T-Mobile, for example.

10 MR. SCHER: Well, in terms of the GPS  
11 trackers, we put in multiple devices that go in cars,  
12 and we provided you the evidence about child  
13 trackers, although we acknowledge that those are  
14 wearable devices to demonstrate that parents have  
15 an interest in changing their carriers for things  
16 that are focused on child safety like these car  
17 trackers.

18 So we don't have specific examples that  
19 demonstrate to you, here's somebody who wanted to  
20 change their Verizon Hum, and they were unable to.

21 But, there's little reason to think that  
22 the voluntary carrier unlocking would be sufficient  
23 especially now that we just have the recently  
24 announced DOJ investigation suggesting that  
25 there's collusion between some major carriers in  
26 terms of trying to make it harder to unlock from

1 carriers.

2 MR. WIENS: I don't know if you saw that  
3 story. That story came out on Friday that the FTC  
4 has launched an investigation into the -- the eSIM  
5 development process that's -- that's being --  
6 that's happening through the GDSM Association.

7 And the FTC is accusing AT&T and Verizon  
8 and maybe some of the other carriers of colluding  
9 and preventing competition in the marketplace.

10 So this has actually got the  
11 manufacturers that we suspect are behind this FTC  
12 complaint saying, hey, in the technical process of  
13 developing eSIM, which is just a virtualized  
14 software SIM card, that they're seeing  
15 anti-competitive practices.

16 MS. SMITH: Is that related to whether  
17 or not they would allow unlocking to go from one  
18 carrier or another? Because I had thought that  
19 there was sort of some voluntary cooperation to  
20 promote that, at least in the smartphone market.

21 MR. WIENS: Yeah. No this is very  
22 specifically solely related to the ability to move  
23 from one carrier to another. So the development of  
24 the eSIM, we're moving from a physical SIM card to  
25 a virtual SIM card.

26 The carriers want to continue to be

1 allowed the same kind of locks that they have now  
2 and clearly there's been disagreement in the eSIM  
3 development process over how that will go.

4 MS. SMITH: So are you considering eSIM  
5 a TPM or is eSIM a separate sort of obstacle to get  
6 by?

7 MR. WIENS: I would consider the TPM to  
8 be at the baseband layer, and the SIM card or the  
9 eSIM to be underneath that.

10 MS. SMITH: So if the eSIM would prevent  
11 unlocking, does that help you or hurt this exemption  
12 if you're also stopped by that?

13 MR. WIENS: I would think that this  
14 exemption would cover unlocking the baseband,  
15 whether the baseband was identifying the cell  
16 carrier via a SIM card or an eSIM.

17 So my -- my interpretation of how it  
18 would work is that this would sit over the top of  
19 whatever kind of TPM there is.

20 MS. SMITH: I guess what I'm getting at  
21 is we've said one thing we're looking at is whether  
22 the prohibition on circumvention is causing, has  
23 a causal relationship to the adverse effect. And  
24 if the eSIM is separately preventing unlocking,  
25 that may not be the case.

26 MR. WIENS: I don't think it would be



1 separate. I think it would just be another way of  
2 implementing it.

3 MR. SCHER: I also gather that's new  
4 technology --

5 MR. WIENS: It's relatively new, but  
6 you have, I mean, Google's new phones have -- have  
7 eSIM. I'm not -- I haven't dived into enough of the  
8 detail of how eSIM is built, but my guess is that  
9 a circumvention of an eSIM TPM would be the same  
10 as a circumvention of a SIM TPM.

11 I mean it's -- it's -- the TPM is on the  
12 baseband, and the SIM is just what's telling the  
13 baseband what signals to be looking for.

14 MR. CONNELLY: I just want to clarify,  
15 I didn't raise that to suggest that there is eSIM  
16 in the GPS trackers. I was just providing that as  
17 updated evidence that voluntary carrier unlocking  
18 might be insufficient aside from the previous  
19 reasons that we've written about in our past  
20 submissions, such as it being a very complex process  
21 and that major carriers have escape hatches where  
22 they might not unlock your phone even if you meet  
23 all of the necessary requirements.

24 MS. SALTMAN: Do you have -- is there  
25 evidence in the record of that happening?

26 MR. SCHER: So that was from our 2015

1 submissions where we dove more into that issue where  
2 we explained why voluntary carrier unlocking was  
3 not necessarily sufficient in terms of used phones.  
4 So we didn't like re-go through all of that analysis  
5 in our 2018 submissions.

6 MS. SALTMAN: Yes, and --

7 MR. SCHER: But, I can point you to the  
8 specific pages where we made those arguments.

9 MS. SALTMAN: Well, and the Register  
10 declined to grant the exemption you were asking for  
11 --

12 MR. SCHER: No, in 2015 --

13 MS. SALTMAN: -- with respect to all  
14 devices.

15 MR. SCHER: Well, in 2015, we were  
16 focused explicitly on used phones.

17 MS. SALTMAN: Okay.

18 MR. SCHER: And the Register also  
19 acknowledged that consumers may have trouble taking  
20 advantage of voluntary carrier unlocking policies  
21 because of the conditions imposed by certain  
22 wireless carriers. That was on page 165.

23 MS. SMITH: So I just have one more  
24 question on the eSIM since it's new to me. We can  
25 go to some of the other categories. But, are you  
26 saying if you circumvent the TPM that is protecting

1 an eSIM, you will be able to successfully unlock  
2 a device?

3 MR. WIENS: Yes.

4 MS. SMITH: Yes. Okay, thank you.

5 MS. SALTMAN: So relatedly, and this  
6 might be just a short question, but the tracking  
7 devices in trucks and trains, do those operate the  
8 same way that the car devices do?

9 MS. SMITH: I want to ask one thing  
10 talking about OnStar as well would be helpful,  
11 because I think the GPS tracker that you --

12 MR. WIENS: Right.

13 MS. SMITH: -- connect to your car is  
14 separate from OnStar, so your initial comments  
15 raised where you talked about OnStar and then the  
16 reply talks about the trackers.

17 MS. SALTMAN: Yes, right. Well, so  
18 okay, let's handle OnStar first. So --

19 MR. WIENS: Maybe, can we do that  
20 second?

21 MS. SALTMAN: Sure.

22 MR. WIENS: Because that one's more  
23 complicated.

24 MS. SALTMAN: Okay.

25 MR. WIENS: Sorry.

26 MS. SALTMAN: No, no that's okay.

1 Let's do trains and trucks first.

2 MS. SMITH: We're going to get to crops,  
3 seed and soil monitors.

4 MS. SALTMAN: Yes. Can't give that up.

5 MR. CONNELLY: I was waiting for that.

6 MS. SALTMAN: All right.

7 MR. WIENS: So you guys want to take  
8 that?

9 MR. CONNELLY: So trains and trucks? I  
10 don't believe we have much information on record  
11 about trains and trucks. We would simply include  
12 those as a couple of examples of the broad utility  
13 that the IoT does have.

14 And to the extent that those  
15 technologies do connect to wireless  
16 telecommunications network, that's really what we  
17 kept returning to as our touchstone is that we want  
18 a cabin not according to trucks and trains out, cars  
19 in, some arbitrary classification, but trackers  
20 that do connect to telecommunication networks.

21 MR. WIENS: I think the category of  
22 product you're looking at there is a fleet  
23 management system, where you have a moving truck  
24 company. They have 200 trucks.

25 And they want to put trackers or I mean,  
26 all of the long-haul trucks use this where they

1 actually have remote speed limiters so that their  
2 drivers can't go past 65 miles an hour on the  
3 freeway. Those are all I think in this category of  
4 device.

5 MS. SMITH: And those are built into the  
6 vehicles?

7 MR. WIENS: Those are after-market  
8 devices that are added on. Generally, they're  
9 after-market.

10 MS. SALTMAN: And is there a need to  
11 switch the carrier for those types of devices?

12 MR. WIENS: I put them in the same  
13 category as, let's say you bought 200 of these for  
14 your semi-truck fleet and then you want to switch  
15 software companies and want to keep your hardware.

16 You can see how maybe the new company  
17 has an arrangement with a different carrier. It's  
18 hypothetical. I don't have a specific fleet  
19 management friend.

20 MS. SMITH: Okay. Is it clear that the  
21 fleet management company in this hypothetical  
22 situation has purchased the built-in cellular  
23 modems --

24 MR. WIENS: I --

25 MS. SMITH: -- that he leased?

26 MR. WIENS: Yes, good question. I'm

1 familiar with, I think, both models where sometimes  
2 it's just provided as part of the monthly service  
3 that you're paying, and they bundle the hardware  
4 and the cellular connectivity all as one. And then  
5 others where there's a device that you're buying.

6 MS. SALTMAN: All right. So let's move  
7 on to the OnStar systems. I just want to clarify  
8 again, is this an add-on product, because I know  
9 some cars do have like integrated OnStar systems.  
10 Are you asking with respect to those as well?

11 MR. WIENS: Yes. I mean, we're talking  
12 anything with a cellular device.

13 MR. CONNELLY: That's correct. I would  
14 include automobiles. We really don't see why it  
15 should be a violation of the DMCA if all that's being  
16 done is unlocking to switch carriers.

17 We're not talking about anything else,  
18 any other tampering or jailbreaking or hacking,  
19 only unlocking to switch carriers.

20 MS. SALTMAN: But, to be able to unlock  
21 to switch carriers for an integrated OnStar system,  
22 would you have to circumvent sort of like the car?

23 Because, you know, like cars have many  
24 layers of software now. Would you have to sort of  
25 circumvent some of the other layers of the car's  
26 software to get to what you need to do to unlock

1 to connect to the carrier?

2 MR. WIENS: Potentially.

3 MS. SALTMAN: Okay. And, I mean, by  
4 unlocking those systems, could you potentially have  
5 access to the car's entertainment system?

6 MR. WIENS: It's interesting if you  
7 think about all the things that a car wants to talk  
8 to us, I think there's a connection for it. It wants  
9 to talk for the purposes of an OnStar-type like  
10 driver assist. It wants to talk for the purpose of  
11 providing a WiFi hotspot potentially for  
12 downloading new maps.

13 And so the vehicle manufacturers, the  
14 way it has worked out is instead of having three  
15 or four separate cellular modems in the car, they  
16 have one. And that one almost always lives in the  
17 telematics and the entertainment module.

18 MS. SALTMAN: Okay. So it sounds like  
19 it's possible or likely that you would have to unlock  
20 the telematics and entertainment system module to  
21 unlock to switch carriers for the OnStar system?

22 MR. WIENS: That's possible.

23 MS. SALTMAN: And, I mean, you know,  
24 we'll talk about this more on Wednesday in the Repair  
25 section, but in that exemption, you know, there's  
26 been a lot of evidence regarding whether or not

1 unlocking those systems both exposes creative  
2 content to infringement and also could create  
3 security concerns.

4 MR. WIENS: Right.

5 MS. SALTMAN: So can you speak to that?

6 MR. WIENS: Yes, well, I would say let's  
7 focus on specifically what we want to accomplish,  
8 which is, you know, you have a car that is locked.  
9 Let's say it's got a WiFi hotspot, and it's locked  
10 to a carrier.

11 Should consumers be able to bypass the  
12 TPM to do that? I would say, yes. Now, is it  
13 possible or can it be possible for car manufacturers  
14 to design these things in such a way that you can  
15 bypass that lock without bypassing the other locks?  
16 I would think, absolutely.

17 So if there is a side effect that there  
18 is a security challenge or that there's another lock  
19 you have to bypass to get to it, that's a result  
20 of the vehicle manufacturer's decision designing  
21 the product.

22 MS. SMITH: So when you're the owner of  
23 a car that has OnStar, do you have to pay your carrier  
24 AT&T, Verizon, whomever to use OnStar?

25 MR. WIENS: You pay GM for the OnStar  
26 service and then GM is paying the carrier. For a



1 hotspot, which almost all new cars these days have  
2 WiFi hotspots built into them, you're paying the  
3 carrier.

4 And you may not have options on which  
5 carrier that your car is talking to depending on  
6 how, so for example, I just rented a car. I pay  
7 ungodly amounts of money every month for cellular  
8 service, including for various devices.

9 I rent a car. It's got a WiFi hotspot.  
10 WiFi hotspot doesn't work. There's no way for me  
11 to get that WiFi hotspot. Even though I've got a  
12 SIM card that I could put in there, there's no way  
13 for me to get the WiFi hotspot in my rental car  
14 working.

15 And this is true across almost every car  
16 that's being rented in the U.S. is that they have  
17 WiFi hotspots that are not functioning.

18 MS. SALTMAN: And why does it not work?

19 MR. WIENS: Because I have a different,  
20 I don't have a way of putting my SIM card from a  
21 different carrier than whatever carrier that car  
22 is locked to.

23 There's literally a SIM card inside that  
24 you can pop the engine and stick your SIM card in.

25 MS. SALTMAN: Go ahead.

26 MR. RILEY: I was going to say, maybe a

1 rental car is not the best example.

2 MR. WIENS: Potentially, because I  
3 don't own that, yes. So you imagine I buy a car.  
4 It's locked to Verizon and then I want to sell it  
5 to somebody in Canada or I want to go and work in  
6 Canada for a couple of months.

7 There's no Verizon in Canada. I'd have  
8 to unlock it and move it to Rogers. So it's  
9 changing, the value of the device, same thing as  
10 all the arguments about the value of cell phones  
11 in the after-market, the value of vehicles in the  
12 after-market is going to be dependent on whether  
13 the cellular connectivity can be changed from one  
14 carrier to another.

15 MR. RILEY: Actually, I had a question  
16 about that. Before you mentioned that the  
17 difference between being able to switch SIM cards  
18 or not is the difference between a device being  
19 usable and it being recyclable as scrap.

20 But, there's an example in other  
21 proponent's reply comments where it talks about a  
22 price differentiation between you get more money  
23 if you can put it on a different network.

24 Which one is more accurate? Is it this  
25 one saying that if you can't switch networks, the  
26 device is going to be scrap? Or is it there are

1 different networks and you get different prices  
2 when you recycle them? Which one is kind of a better  
3 example?

4 MR. SCHER: Well, I think it depends on  
5 the situation. Like the example that I'm moving to  
6 Canada, that's a device that wouldn't be usable in  
7 Canada, but --

8 MR. RILEY: I'm talking about the  
9 recycling context, though.

10 MR. WIENS: The recyclers have a kind of  
11 economic threshold that the device has to be over.  
12 So let's say that a Sprint device is going to work  
13 25 percent less than an AT&T device.

14 If that 25 percent is now below the  
15 threshold of what it costs them in labor to process  
16 the device, that's why it would move into the scrap  
17 pile compared to resale.

18 MR. RILEY: I appreciate that. I  
19 wonder if we could get any response from the  
20 recycling proponents.

21 MR. SCHER: No, that's accurate. We  
22 provided one example where a sale for T-Mobile  
23 phones couldn't go through because it was locked  
24 to a T-Mobile device.

25 MR. RILEY: And it wouldn't go through  
26 at a price or it wouldn't go through at all?

1           MR. SCHER:    It was not profitable  
2           enough for the recycler, so he had to decline the  
3           deal, and those devices were then not resold as far  
4           as we know.

5           MR. CONNELLY:   Right, that's my  
6           understanding as well.  So I think what Mr. Wiens  
7           has just told you is entirely consistent with what  
8           we said, and that example is on our page 1.

9                        It's Joe Clayton of ARCOA.  And there  
10           just wasn't enough money in the deal for him, that  
11           the whole deal fell through.  So my understanding  
12           is what happens when there's not enough money in  
13           it for a recycler, it's then scrap.  So I think we're  
14           telling you two sides of the same thing.

15           MR. RILEY:  And, I think you understand  
16           the nature of my question about what the adverse  
17           effect is, and it's different if you can't use it  
18           at all in a recycling setting versus if you can't  
19           sell it for the price you want.

20           MR. CONNELLY:  Well, perhaps I'm just  
21           not quite following, because in the recycling  
22           setting, if the recycler can't get an adequate price  
23           to let him turn a profit, then the recycler can't  
24           do anything with the phones at all.

25           MR. RILEY:  And you're saying that for  
26           these other devices that would be a common problem?

1                   MR. CONNELLY: Right. That would be or  
2                   that will certainly become one in the next two years  
3                   as we're heading rapidly toward 900 million plus  
4                   connected devices by the time the next triennial  
5                   is convened.

6                   MR. RILEY: Okay, thank you.

7                   MS. SALTMAN: One more question about  
8                   OnStar. Mr. Wiens, you said that the contract that  
9                   provides connectivity to an OnStar device is  
10                  probably between GM and a carrier.

11                  So by unlocking, you're cutting GM out  
12                  of the equation? So if you were unlocking your  
13                  OnStar device, you would no longer pay GM for that  
14                  service, you'd be paying another wireless carrier  
15                  directly? Is that how it works?

16                  MR. WIENS: Right. Or someone like  
17                  AAA. AAA would like to compete with GM on OnStar,  
18                  and they'd like to replace the OnStar button with  
19                  a AAA button.

20                  And then you'd be paying AAA and then  
21                  whichever cellular carrier that AAA negotiated  
22                  with.

23                  MS. SMITH: Sorry, how would they  
24                  replace the button?

25                  MR. WIENS: Well, they'd just make, I  
26                  mean, so that would be -- this probably has more

1 to do with what we'll talk about Wednesday, but the  
2 idea is, I mean, you've got this telematics feed.  
3 We're very quickly going to break outside today's  
4 discussion.

5 The telematics feed is piped to GM and  
6 then they're providing it to their network of  
7 service centers and in the case of the OnStar button  
8 specifically because that's a service-related  
9 function then that would be piping it to AAA and  
10 their roadside assistance.

11 MS. SMITH: And so your testimony is  
12 that if I buy a car where the car's WiFi requires  
13 me to have a subscription to AT&T, but my, you know,  
14 phone or home subscription, I use Verizon, I can't  
15 switch it to Verizon without unlocking it?

16 MR. WIENS: Right.

17 MR. RILEY: I mean, I guess kind of the  
18 question is, is this really going to be useful for  
19 OnStar, because OnStar is a little bit of a different  
20 example in that it's a service, right?

21 MR. WIENS: Yes.

22 MR. RILEY: OnStar is a service?

23 MR. WIENS: Yes. I would focus on the  
24 WiFi hotspot. I think that's more relevant to this  
25 exemption and what you would want to be, I mean,  
26 almost every car has WiFi hotspots and then you can

1 tack on to your data connection.

2 And you can imagine the consumer would  
3 want to have one wireless bill, not two and then  
4 one could be with whatever their existing carrier  
5 is, not whatever the contract, whatever the --

6 MS. SALTMAN: And does that work that  
7 same as OnStar, where so like if you buy a GM car,  
8 you pay GM for the connectivity of the WiFi?

9 MR. WIENS: No, in that case, you're  
10 paying the carrier directly.

11 MS. SALTMAN: Okay. So --

12 MR. WIENS: I think.

13 MS. SALTMAN: I mean, why would you need  
14 to circumvent to switch carriers in that case?

15 MR. WIENS: Some of them are locked to,  
16 so you know, GM says, hey, you buy our car and you  
17 can have wireless service through Verizon. It's  
18 like if you buy an iPad that's locked to Verizon  
19 --

20 MS. SALTMAN: I see.

21 MR. WIENS: -- it's the same deal. You  
22 buy the iPad from Apple, it's locked to Verizon.  
23 You pay Verizon by the month. If you can unlock it,  
24 then you can use it on AT&T, but it came locked.

25 MS. SALTMAN: I see.

26 MS. SMITH: So you described the TPMs as

1       like locks upon locks upon locks, where is the lock  
2       for the WiFi in the car, where does that sit?

3               MR. WIENS: It's the same. It's at that  
4       baseband processor level. It's the same lock.

5               MS. SMITH: So if you unlock it, sorry,  
6       does that get to the telematic system, does that  
7       get to OnStar or is that something --

8               MR. WIENS: Well, this comes down to the  
9       design of the vehicle and the design of the systems,  
10      so it's going to depend on which input into the  
11      system that you're talking about.

12              MS. SMITH: Is there --

13              MR. WIENS: The hope would be that you  
14      could narrowly just unlock the baseband and not  
15      touch the rest of the vehicle, because I'm an  
16      engineer. I just want to move my car from one  
17      carrier to another.

18              MS. SMITH: Right.

19              MR. WIENS: So I prefer it not to impact  
20      the rest of those locks.

21              MS. SALTMAN: Do you have any sort of  
22      concrete examples of cars where it's possible to  
23      do that?

24              MR. WIENS: I don't.

25              MS. SALTMAN: Okay. Regarding sort of  
26      the Internet of Things, which we've sort of touched



1 on a little bit, how many of these devices, I know  
2 there like countless devices and we don't have time  
3 today to go through every single one of them, but  
4 how many of them only connect to cellular data and  
5 don't connect to WiFi, like that, you know, your  
6 average consumer uses? Can you give me just sort  
7 of like a sense of the landscape?

8 MR. CONNELLY: Sure. So as of 2015,  
9 there were 265 million devices connected to the IoT  
10 by cellular technology only, not including  
11 Bluetooth, WiFi, whatever.

12 And that number I cited earlier, 910  
13 million by 2021, that likewise is analysts'  
14 projection of devices that will connect by cellular  
15 technology.

16 MS. SALTMAN: And can you give me some  
17 examples of devices that we haven't talked about  
18 yet today?

19 MR. CONNELLY: Devices that we haven't  
20 talked about today? I know a lot of them might be  
21 industrial IoT. It's hard for me to talk specific  
22 devices, but manufacturing devices is one thing.

23 And just the other examples we listed.  
24 You could imagine even something like bridges and  
25 tunnels. I don't want to speculate too much, but  
26 these are all things that anytime someone or a

1 corporation or municipality, whatever, might want  
2 to monitor what's going on with a particular device  
3 or particular place, whatever, those are potential  
4 applications for the IoT.

5 MS. SALTMAN: Mr. Wiens, do you have  
6 anything to add?

7 MR. WIENS: Yes. Traffic lights  
8 oftentimes have cellular, so they can phone home  
9 if they're having a fault. I have a friend that is  
10 building a -- he does telemetry on natural gas  
11 pipelines.

12 And they found that the cellular  
13 connectivity was too expensive and so they're  
14 building an alternative mesh network for getting  
15 the telemetry out.

16 So the cost and the availability of IoT  
17 data is significant. There are cell carriers like,  
18 Ting is a virtual MVNO cell carrier, where they sell  
19 SIM cards. It's Ting, T-I-N-G.

20 They resell the data from I'm not sure  
21 which of the main carriers, and they're only  
22 targeting IoT devices. And so you can go and you  
23 can get a SIM card from them effectively for free  
24 and then you just pay by the megabyte for how much  
25 information that you use.

26 And their entire business model is

1       predicated on a wide spectrum of these devices  
2       coming out. I mean, yes, we can talk about more  
3       examples and in three months, there will be more  
4       examples. We're at the base level of a power locker  
5       here.

6                   MS. SMITH: We hear you. There are a  
7       lot of things in the Internet of Things for sure.  
8       We're not contesting that. But, in these examples  
9       that you've talked about bridges, natural gas  
10      pipelines or traffic lights, who owns them?

11                   MR. WIENS: Well, in the case of a  
12      natural gas pipeline, it would be the natural gas  
13      company or the Halliburton that's doing the  
14      installation.

15                   MS. SMITH: Well, then they're probably  
16      not wanting you to unlock them, are they? It's the  
17      lessee who would.

18                   MR. WIENS: I mean, it comes down to  
19      flexibility. So maybe when you buy them initially  
20      they're locked. I don't know, I mean it's always  
21      --

22                   MS. SMITH: Maybe they're very large  
23      and expensive complicated transactions.

24                   MR. WIENS: Right, right. Are they  
25      going to come locked or is it going to be unlocked?  
26      I don't know. That depends on the decision that the

1 manufacturer makes at the time.

2 You can imagine that they want to  
3 bundle. A typical business model is to do what GM  
4 is doing with OnStar and to bundle the cellular  
5 connectivity with a service that they're providing.

6 And then, in order to be able to move  
7 from one service to another, you'd like to, but now  
8 you've got this cellular TPM that's locking you into  
9 that service kind of inadvertently.

10 MS. SALTMAN: Okay. But, it doesn't  
11 sound like we have any evidence of this actually  
12 happening, the exemption impacting one of these  
13 sort of like large manufacturers or oil pipeline.

14 MR. WIENS: I don't have an example of  
15 that.

16 MR. CONNELLY: I don't have one at hand.  
17 I think it really is just too early in the  
18 development of this technology. So we may be in a  
19 situation we might contend now is too early, three  
20 years might be too late just because this is moving  
21 so incredibly quickly. That's our client's  
22 concern.

23 MS. SALTMAN: With respect to sort of  
24 more consumer devices, which I think we had sort  
25 of, it seemed like we were more focused on those  
26 in part in your comment, do you have any examples

1 of consumer devices that individuals would want to  
2 unlock to switch carriers through Internet of  
3 Things devices?

4 MR. WIENS: Home security systems are  
5 the most frequently used ones that I would think  
6 of.

7 MS. SALTMAN: Okay.

8 MR. WIENS: And commercial security  
9 systems.

10 MS. SMITH: And you said Nest, you gave  
11 Nest as an example or maybe this is --

12 MR. WIENS: Yes, I don't know if Nest,  
13 does Nest have a cellular-connected, yes, their  
14 new --

15 MS. SMITH: I mean --

16 MR. WIENS: Yes, they do, because their  
17 new security system --

18 MR. SCHER: T-Mobile is the exclusive  
19 cellular backup of the Nest.

20 MR. WIENS: Okay.

21 MR. CONNELLY: All right. So that's  
22 one example of the cellular provider locking down  
23 an IoT device, as in we're the exclusive backup  
24 provider. This only came out in January, though,  
25 so there's just not much available out there being  
26 that it's only been three months since they've been

1 doing this for this particular example.

2 MR. RILEY: And, I don't have Nest, so  
3 this is more like a device that is not paired with  
4 a service. Is that right? It's less like OnStar  
5 and more like -- I know that Nest is a wireless --

6 MR. WIENS: Yes, so this is --

7 MR. RILEY: -- temperature control.

8 MR. WIENS: It's a security system, so  
9 it is paired with a service, because the service  
10 is the security monitoring. So when they say Nest  
11 backup, that's the like, we're going to call the  
12 police if your security system goes off. And so  
13 usually that's a monthly service that you're paying  
14 for.

15 MS. SMITH: Is this T-Mobile service  
16 something if I was interested in buying that I would,  
17 you know, have my subscription through Nest and then  
18 I would separately pay T-Mobile for the backup  
19 service? Is that your understanding of how it's  
20 operated?

21 MR. CONNELLY: That's my  
22 understanding, yes. And just to be more clarifying  
23 of something I said earlier, we're talking about  
24 the Nest Secure, so you're probably familiar with  
25 the Nest as a smart thermostat.

26 This is the security system. So the

1 Nest Secure is the Nest branded security system.  
2 That's why T-Mobile is claiming to be the exclusive  
3 backup rider for it.

4 I believe you would pay T-Mobile  
5 separately and that's just based on my own review  
6 of T-Mobile's website. Not having signed up, I  
7 can't promise you that for certain. But that's sure  
8 how it looked to me.

9 MS. SALTMAN: So as we talk about all  
10 these different kinds of devices, you know, one  
11 concern that the Register had in the last rulemaking  
12 was that there just wasn't a sufficient evidentiary  
13 record for so many of these types of devices.

14 And, I think that could be an issue in  
15 this record as well just because there are so many  
16 devices that are sort of encompassed in the idea  
17 of the Internet of Things.

18 So one thing we were thinking about is  
19 are there categories of devices or are there  
20 qualitative descriptions of devices that we could  
21 grant an exemption for that would address, you know,  
22 sort of like the most common issues?

23 I mean, and so one potential category  
24 of devices would be portable devices. Do you think  
25 that that would, I mean, does that meaningfully  
26 expand the scope of the exemption to address the

1 types of devices you're concerned about?

2 MR. CONNELLY: I believe it would, yes.

3 And the reason I say that is just because one thing  
4 we've thought a lot about were concerns that the  
5 NTIA raised during the 2015 rulemaking that the line  
6 distinguishing a mobile phone from other devices  
7 is increasingly disappearing.

8 And as the NTIA said, it really doesn't  
9 make a lot of sense for the size of the screen or  
10 the form of a device to be determinant when I can  
11 surf the internet on my phone, and I can make a call  
12 on my laptop, why are we distinguishing as a matter  
13 of the DMCA?

14 So our ask was wireless devices  
15 connecting to a telecommunications network. If as  
16 you suggested, it was portable wireless devices  
17 that connect to a mobile telecommunications  
18 network, I think that would be a great step in the  
19 right direction and would make a lot more sense.

20 As for having all these different kinds  
21 of devices, you know, what's a phone, what's a  
22 tablet, what's a laptop, that they all kind of blend  
23 together.

24 MS. SMITH: But, are laptops locked,  
25 because phones and tablets are already permitted?

26 MR. CONNELLY: Right. Phones and



1 tablets are already permitted. I'm not certain if  
2 they are --

3 MS. SMITH: Right.

4 MR. WIENS: There's definitely 4G  
5 laptops. I don't know if --

6 MS. SMITH: I think we concluded they  
7 were not in 2015, so I don't know if something has  
8 changed.

9 MR. WIENS: Yes, I know of 4G laptops.  
10 I haven't looked to see if there are locks on them.

11 MS. SMITH: Okay. I mean, because I  
12 would sort of push back, Mr. Connelly. One reason  
13 that the Copyright Office has chosen to distinguish  
14 is they've said that there could be an effect on  
15 the fourth factor under the fair use analysis,  
16 whether there's an effect in the market for the  
17 copyrighted works.

18 And that may vary depending upon device  
19 to device. And there's really no treatment of that  
20 in the written comments, which are pretty thin.

21 So it would be helpful if you could  
22 address that, because that's something the  
23 Copyright Office has suggested might affect the  
24 analysis of whether these uses are likely to be  
25 non-infringing and why we've looked to specific  
26 examples, you know, and concluded that many are

1       likely to be non-infringing. But that is why we  
2       have looked at specific examples in the past.

3               MR. CONNELLY: Well, we do not believe  
4       that the analysis would differ based on the type  
5       of device. And the reason we say that is due to the  
6       nature of the copyrighted work as you say in the  
7       fourth factor.

8               The copyrighted work at issue here is  
9       the code that is involved in the locking on these  
10      TPMs. I'm not even sure what the market for that  
11      code or the market for a TPM looks like.

12              So if we're talking about the market for  
13      a phone or for a laptop or for a tractor, that's  
14      not the copyrighted work itself. So we believe the  
15      fourth factor does favor granting this exemption  
16      just because I haven't seen anyone come forward and  
17      say that the reason this exemption should not be  
18      granted is because of the effect on the market for  
19      the copyrighted TPM.

20              That's just not what's at issue. It's  
21      business models of phones and laptops and farming  
22      devices, which is not the purpose of copyright law  
23      to govern.

24              MR. WIENS: One thing that might  
25      simplify this is to think about the actual  
26      copyrighted work that we're talking about, which

1 is the baseband software that Qualcomm wrote that's  
2 on this.

3 But, it's the same licensing fee, it's  
4 the same product. It doesn't matter if it's in a  
5 tractor or a natural gas plant or in a cell phone  
6 or in a car. It's the same chip.

7 And it's probably the same Broadcom part  
8 number and the same licensing fees, the same amount  
9 of money that Broadcom got paid. And you don't see  
10 Qualcomm here saying, we oppose, you know,  
11 unlocking our devices in specific situations. They  
12 got paid, they're happy. They're going to get paid  
13 a lot more over the next three years.

14 MS. SALTMAN: So are there any other  
15 sort of qualitative categories or descriptions that  
16 you think you presented evidence, you know, enough  
17 evidence on to support an exemption both with  
18 respect to the fair use factors and also the adverse  
19 effects of the current exemption?

20 MR. CONNELLY: I think portable devices  
21 was a great suggestion. I cannot think off the top  
22 of my head of any other ways I would craft that,  
23 but if the Copyright Office is inclined to grant  
24 a broader than existing but now when we've asked  
25 for exemption, we would certainly love the  
26 opportunity to maybe submit language if that would

1 be a possibility trying to cabin this  
2 appropriately.

3 MS. SALTMAN: Do you think an exemption  
4 that included, or do you think the fact that a  
5 consumer contracts with a carrier for the coverage  
6 is sort of like a characteristic that would  
7 qualitatively describe a meaningful category of  
8 devices?

9 So not devices where you're paying GM  
10 or something, but where you're actually contracting  
11 with a carrier to get the coverage for the device?

12 MR. CONNELLY: I don't think so. That  
13 to me just feels like it's too reliant on contract  
14 law, which is really not. What we, I think, want  
15 to see an exemption that focuses more on the devices  
16 themselves or on the technologies that devices use.

17 I would have to think more about it.  
18 But, yes, I'm not sure, can I even maybe pay some  
19 of these services, prepaid or month-to-month?  
20 Would those not be covered by a contract? Those  
21 would be the sorts of concerns I would have.

22 MR. WIENS: If I'm a recycler, I'm  
23 getting products that I wouldn't know necessarily  
24 what kind of arrangement was set up ahead of time.  
25 I just know I've got a device that has a SIM card  
26 in it, and I want to be able to swap that out and

1 sell it to Canada.

2 MS. SMITH: I guess maybe we can find a  
3 different example, but I'm back on the OnStar  
4 example where you're not having a contract or a  
5 relationship with the carrier directly. You're  
6 doing it through an intermediary, in that case, GM.

7 Say you successfully unlock it, and you  
8 switch something to a different carrier. Are you  
9 then able to still receive the OnStar services that  
10 you're no longer paying for?

11 MR. WIENS: I don't know enough about  
12 the technical implementation of OnStar to answer  
13 that. I would think being an internet guy, I build  
14 internet services in the cars and IP address on the  
15 internet, that it ought to be able to talk to any  
16 network out there.

17 OnStar was kind of an early technology,  
18 and it may have some like funky proprietary way that  
19 they integrated that, but let's say there was some  
20 new kind of clean room we were building that today  
21 or it was Tesla, for example, the way that they do  
22 their telematics, I would think it wouldn't matter  
23 what cellular connection it was talking over.

24 MS. SMITH: So in that case, it seems  
25 like before you've had to pay money to someone who  
26 is providing you a different service than the

1       Broadcom lock. Right? They're providing you  
2       whatever you get with OnStar, some of which might  
3       be copyrightable works and now you're no longer  
4       paying for it, because you've switched to a  
5       different server and sort of cut them out. Is that  
6       right?

7                   MR. WIENS: Sure.

8                   MR. CHENEY: This has all been very  
9       fascinating. I want to go back to the portable that  
10      we talked about earlier. Portable is currently in  
11      the exemption. Right?

12                   So I think I'm the exemption that was  
13      talked about. Possibility there. I want to probe  
14      a little bit more on that because if you just do  
15      portable devices, does that exclude the car that  
16      we're talking about now?

17                   The OnStar-type device, does that  
18      exclude that? But, it includes the mobile hotspot.  
19      And it sounds like that's integrated, which is not  
20      necessarily mobile or a portable device. Right?

21                   MR. CONNELLY: That's an excellent  
22      question.

23                   MR. CHENEY: We drove in the car here.  
24      We were moving it.

25                   MR. CONNELLY: I would think cars are  
26      portable.

1 MS. SMITH: Maybe we covered this in  
2 2015.

3 MR. CHENEY: We did cover this in 2015.

4 MS. SMITH: A car is portable, but it's  
5 not in that way.

6 MR. CHENEY: Right. So I think that was  
7 an important point that we made in 2015, right, in  
8 this discussion was the definition of portable  
9 becomes very important here, right?

10 So there's four categories currently  
11 listed. Right? And a lot of what you're talking  
12 about here seems to be if you come down and just  
13 say, C, which is portable mobile connectivity  
14 devices, such as mobile hotspots, removal wireless  
15 broadband modems and similar devices.

16 That seems to me to be pretty broad here.  
17 So I'm not convinced entirely that some of the things  
18 you're listing aren't already included in that  
19 broad category as it's already listed.

20 So you're talking about farm  
21 implemented equipment. Right? Those are portable  
22 devices that are put in the fields to measure  
23 whatever out there, right, the soil content or rain  
24 or whatever it might be.

25 Those seem to be portable mobile  
26 connectivity devices, such as, which allows a lot

1 of other things, and similar devices. Would that  
2 not be included in the current exemption?

3 MR. WIENS: I'm sorry, is the  
4 definition of car being portable being like a human  
5 cannot lift it?

6 MR. CHENEY: I think generally that's  
7 what we talked about last time, right, that you can't  
8 carry it in your pocket. But, a lot of these  
9 portable devices that are in the fields --

10 MR. WIENS: But, those implements are  
11 not necessarily a 1,000 pound machine that you  
12 attach to a tractor.

13 MR. CHENEY: That is the --

14 MR. WIENS: Some farm implements or the  
15 tractor itself has a cellular connection on it.

16 MR. CHENEY: So in those cases, those  
17 would be excluded if they're attached to the tractor  
18 or they're not a third-party device attached to the  
19 tractor.

20 And I think that's part of why I wanted  
21 to probe a little bit, because we talked about modems  
22 or other things, or not modems, but GPS devices,  
23 a lot of those are third-party devices that you  
24 connect. Right?

25 MR. WIENS: Right.

26 MR. CHENEY: Those seem to fit into that



1 portable category and that seem to be within the  
2 current exemption now.

3 MR. WIENS: I mean, there's a need to  
4 unlock far more devices than that. So an example,  
5 there's a company called Farmobile, and they make  
6 an attachment that plugs into the tractor that has  
7 a cellular modem in it that pulls that data off the  
8 tractor and sends it to the cloud so the farmer can  
9 have the data on his iPad.

10 They're effectively bypassing the  
11 cellular lock that's on the tractor, because the  
12 tractor already has a cellular modem. It's already  
13 providing all that data to John Deere, just like  
14 OnStar is providing it to GM.

15 The only way that they were able to get  
16 around it was basically to add another cellular  
17 modem to the tractor that they can control.

18 MS. SMITH: Do you think that activity  
19 is already permitted by the current exemption for  
20 vehicles?

21 MR. WIENS: It depends on how specific  
22 your definition of TPM is in that. Does that  
23 include the cellular lock on the vehicle?

24 MS. SMITH: I mean, I just think it may  
25 be already permitted.

26 MR. CHENEY: I think if you read the two

1 together, right, and these aren't intended to be  
2 exclusive. Right?

3 MR. WIENS: Right.

4 MR. CHENEY: If you say that you're  
5 allowed to do the TPM for the cellular lock and then  
6 you're allowed to do it for the repair of the  
7 automobile, perhaps there's a way that those are  
8 working together already without having this  
9 additional level.

10 MR. WIENS: This one can be performed by  
11 third parties and the other one cannot? Is that  
12 true?

13 MR. CHENEY: That may be a difference.

14 MR. WIENS: I mean, it's really all  
15 about can the farmer's mechanic do it for him, right?

16 MR. CHENEY: So this one includes in the  
17 current language, undertaken by the owner of any  
18 device or by another person at the direction of the  
19 owner, right, which seems to me --

20 MR. WIENS: On this one, but not on the  
21 existing tractor.

22 MR. CHENEY: On the existing tractor  
23 one I think that's right. That's one of the  
24 proposed changes there.

25 MS. SMITH: We'll get to that  
26 Wednesday.

1                   MR. CHENEY: Yes. So I don't think  
2 these are meant to be completely exclusive. In  
3 other words, if they can work together, why not?  
4 Right?

5                   MR. WIENS: Sure. But then I would  
6 encourage drafting this in such a way that it would  
7 include the tractor.

8                   MR. CHENEY: So you would include more  
9 than just portable devices?

10                  MR. WIENS: I would, yes.

11                  MS. SMITH: So what --

12                  MR. CHENEY: Is there a definition for  
13 something like that that we could do? I'm sorry  
14 talking about --

15                  MR. WIENS: Well, I'd go to the language  
16 that they suggested in their filing.

17                  MR. CHENEY: It should be all wireless  
18 devices.

19                  MS. SALTMAN: But, is there language  
20 that you think if we didn't feel we had the record  
21 to make that change, is there a language that you  
22 would suggest that would encompass the kind of farm  
23 or agricultural devices that you're talking about?

24                  MR. SCHER: I don't think we have  
25 specific language picked out for the specific  
26 examples that we offered. Of course, we are using

1       these as examples of IoT devices that demonstrate  
2       that we need it for all devices.

3               We would like the exemption to be  
4       expanded to as many devices as possible, so we are  
5       just seeking the most expansive language  
6       reasonable.

7               MR. CHENEY:   And I appreciate that.  
8       Sometimes it's hard in these cases where you come  
9       in and say, all IoT devices. The imagination is  
10      amazing here. Right? There's a lot of things that  
11      are available.

12              So that makes it hard to figure out  
13      what's in this category. Right? So a lot of your  
14      uses seem to be industrial- or farm-related uses.  
15      Would that be a way to define this category that  
16      would be satisfactory?

17              So you think about half of your  
18      categories all fit in to something like that,  
19      industrial or farm type uses. Would that be  
20      something that would be satisfactory here?

21              MR. CONNELLY:  I think that could be one  
22      of the categories we'd like to see. We'd also be  
23      very interested in a category such as consumer  
24      electronics. I think probably that's even more so  
25      important to our client than the industrial uses.

26              But, it is very difficult to think of

1       how to draft this to catch what we want to catch.  
2       And I sense the Copyright Office is not buying our  
3       suggestion of using the technology, the  
4       telecommunications network, using that as the  
5       cabining principle.

6                 But, if we don't use that then do we say,  
7       consumer electronics and industrial IoT devices and  
8       agricultural IoT devices. We think that would be  
9       great.

10                It's just very difficult and that's with  
11       this expanding so quickly, it's just almost  
12       impossible to think of not only all the devices out  
13       there today, but all the devices that will be there  
14       in two years eleven months ----- a rough job.

15                MS. SMITH: Can you speak on this  
16       agricultural example, which, you know, I appreciate  
17       you're here, Mr. Wiens, but this was not in ISRI's  
18       papers.

19                This is the first we're hearing of it,  
20       right, where you say is locking something to go to  
21       an iPad, and you'd like to divert it to have an,  
22       I guess, after-market competitor.

23                Is it taking data, is it taking  
24       copyrighted material? What is being unlocked or  
25       what is being used after there is unlocking?

26                MR. WIENS: Sure. So this is wireless

1 telemetry, so we talk about telematics on  
2 Wednesday. This is data coming off of the vehicle.

3 In the case of an agricultural  
4 implement, it is actual data that's relative to how  
5 the farm or how the machinery is operating on the  
6 field.

7 So for example, if you have the RPM of  
8 a tractor over time on a field, that can give you  
9 information you need to calculate soil density.  
10 And that soil density is very helpful for planning  
11 planting seed and pesticide spraying and all kinds  
12 of other things.

13 So that information is available to  
14 farmers in John Deere's online portal, and you have  
15 to pay a monthly fee on top of your purchase of the  
16 tractor for access to their online portal.

17 There's a huge amount of innovation that  
18 people would like to perform on top of that in  
19 addition to what John Deere has done, but they are  
20 a locked Apple-style ecosystem.

21 And so that's where Farmobile comes in,  
22 creates an alternative ecosystem and pipes all of  
23 that data that's coming live off the tractor.

24 I was talking with a farmer, who was  
25 using the system, and he was looking at it, and it  
26 was actually feeding real-time data of the amount

1 of grain that was in the hopper.

2 And he was looking at it. The number  
3 wasn't going up, and he knew his son was out in the  
4 field collecting grain, and the amount of grain that  
5 was in the hopper wasn't going up.

6 And he thought, something is broken with  
7 the sensor, went out in the field. It turns out the  
8 son had left the gate open on the back of the hopper,  
9 and all the grain was just spilling out onto the  
10 field.

11 That's an example of like very useful  
12 real-time information that it was the kind of  
13 innovation that Deere didn't provide, but that  
14 Farmobile was able to.

15 MS. SMITH: So I think that's useful,  
16 but that is also probably a sign that we're veering  
17 too much into the --

18 MR. WIENS: Sure.

19 MS. SMITH: -- automobile/vehicle, you  
20 know, so we should maybe conclude this one, and we'll  
21 look forward to picking that part up again on  
22 Wednesday.

23 MR. WIENS: If I could leave one final  
24 thought, it would be we're trying to provide  
25 evidence of all these different areas, but we're  
26 not seeing harm that is caused by people bypassing

1       this particular lock.

2                   I would argue that this is a lock that  
3       in the benefit to society is almost best that it's  
4       always bypassed.  So if you're thinking about where  
5       should the burden of proof fall, let's look at where  
6       is the signs of societal damage that has been caused  
7       by people unlocking cell phones or cellular modems?

8                   MS. SMITH:  All right.  Anything else?  
9       No?  All right.  Thank you very much for all of your  
10      comments.

11                   (Whereupon, the above-entitled matter  
12      went off the record at 5:44 p.m.)

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