U.S. COPYRIGHT OFFICE

SOFTWARE-ENABLED PRODUCTS STUDY

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WEDNESDAY, MAY 18, 2016

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The U.S. Copyright Office Software-Enabled Products Study met at 9:06 a.m., at the James Madison Memorial Building, West Dining Room, 101 Independence Avenue Southeast, Washington, D.C. 20540, when were present:

P-R-E-S-E-N-T

JONATHAN BAND, Owners' Rights Initiative
JOHN BERGMAYER, Public Knowledge
ERIK BERTIN, United States Copyright Office
SHAUN J. BOCKERT, Blank Rome LLP
MICHELLE CHOE, United States Copyright Office
SY DAMLE, United States Copyright Office
BEN GOLANT, Entertainment Software Association
ERIC HARBESON, Music Library Association
KEITH KUPFERSCHMID, Copyright Alliance
AARON LOWE, Auto Care Association
CHRIS MOHR, Software & Information Industry Association
AARON PERZANOWSKI, Case Western Reserve University School of Law
JOHN RILEY, United States Copyright Office
CATHERINE ROWLAND, United States Copyright Office
STEVE TEPP, Global Intellectual Property Center, U.S. Chamber of Commerce
CHRISTIAN TRONCOSO, BSA | The Software Alliance
JONATHAN ZUCK, ACT | The App Association

AGENDA

9:06 a.m.

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

MR. DAMLE: Okay. Why don't we just go ahead and get started? Our colleague can catch up. So, good morning, everyone. Welcome to the first of two roundtable hearings on the topic of copyright law as it relates to software-enabled consumer products. I'm Sy Damle. I'm Deputy General Counsel of the Copyright Office. And I'll let my colleagues introduce themselves.

MS. ROWLAND: I'm Catie Rowland. I'm Senior Advisor to the Register.

MR. RILEY: I'm John Riley, Attorney-Advisor.

MS. CHOE: I'm Michelle Choe, Ringer Fellow.

MR. DAMLE: So I'll just do a quick intro and then we can start with the first panel. So, in October, 2015, the Senate Judiciary Committee asked the Copyright Office to study copyright issues related to the spread of software in what it called everyday products.

In its letter, the Committee observed that

digital technologies have revolutionized our world and that copyrighted software is now essential to the operation of our refrigerators, our cars, our farm equipment, our wireless phones and virtually any other device you can think of.

While crediting our intellectual property laws for these developments, the Committee noted that questions are being asked about how consumers can lawfully use products that rely on software to function. The Committee directed us to undertake a comprehensive review of the role of copyright in this area, while acknowledging that many of these issues may relate to areas outside of copyright law.

But, so first of all, I'd like to thank the Committee for this assignment and for its recognition of the Office's longstanding interest and expertise in the intersection of copyright law and technology.

Second, I'd like to thank all of the groups and individuals that submitted written comments in response to our Notice of Inquiry. We've reviewed them all carefully and they were very helpful in identifying the issues before us. And third, I'd like

to thank all of you who agreed to participate in this roundtable to help us take a deeper dive into these issues.

So some of you are veterans of our roundtables. So you know how this works. But for the others, if you want to jump in on the conversation, just turn your table tent upright and we'll call on you, hopefully in some fair order. And just an explanation of the microphones, in order to speak, you have to press the button, the silver button, and the light will turn red when it's on.

Only four people at once can have their lights -- the microphones on. So after you're done talking, if you could just please turn your mic off, that would be great. And just a disclaimer that your remarks are being recorded and will be transcribed and made part of the public record and available on the Copyright Office website, and the panel obviously is being videotaped and the video will be made available as well.

So we've got four panels lined up today, three before lunch and one after lunch. And there'll

be an opportunity for observer comments at the end. And I hope we'll have a productive conversation today.

Our first panel is about a fairly general topic. It's the proper role of copyright in protecting software-enabled consumer products. And the goal of the panel is to explore overarching issues like the need for copyright protection in embedded software, whether software in everyday products can be distinguished from other types of software and the need for interoperability.

But before I start off with the question, we'd appreciate it if each of you could introduce yourself and explain your affiliation for the record. So, we'll start with you.

MR. BOCKERT: Hi. I'm Shaun Bockert, of Blank Rome, and I'm here representing Dorman Products, Inc., a supplier of new and remanufactured automotive parts.

MR. TRONCOSO: Hi. I'm Christian Troncoso. I'm here representing BSA | The Software Alliance.

MR. BERGMAYER: I'm John Bergmayer, and I'm here for Public Knowledge.

MR. GOLANT: Hi. Ben Golant, representing the Entertainment Software Association, which represents the computer and videogame industry.

MR. BAND: I'm Jonathan Band. I'm here on behalf of the Owners' Rights Initiative.

MR. KUPFERSCHMID: Keith Kupferschmid, the CEO of the Copyright Alliance. We represent 15,000 organizations and individuals who copyright is very, very important to.

MR. LOWE: Aaron Lowe. I'm with the Auto Care Association. We represent manufacturers, distributors, retailers and installers of automotive parts, independent of the vehicle manufacturers.

MR. TEPP: Steve Tepp, representing the Global Intellectual Property Center of the U.S. Chamber of Commerce.

MR. MOHR: Chris Mohr, Software and Information Industry Association.

MR. ZUCK: Johnathan Zuck, from ACT | The App Association.

MR. DAMLE: Great. Well, thanks very much. So to start things off, the Committee asked us to

examine the specific issue of copyright issues related to software in what they called everyday products. And we understand the Committee to have not asked us for a more comprehensive review of copyright in software generally.

So with that understanding, I think that raises a key issue here, which is whether there are problems in the marketplace that are specific to software-enabled consumer devices and, if so, whether those problems can be solved without affecting copyright protection for software more generally. So to sort of open off, if anyone wants to comment on that issue, just tip your table tent up. Mr. Band?

MR. BAND: So I think it's easy to distinguish software generally from software that is embedded in products. And I -- it should be possible to craft special rules for the software embedded in products without necessarily implicating software generally.

Where you're going to have definitional issues is like what does it mean to be embedded or sort of, a software-enabled product. I mean, that

becomes a bit of a definitional issue because sometimes you're talking about -- you might be talking about firmware or you might be -- where really it is fixed. But you also might be talking about programs where you -- devices where you have to download the programs or the user has to install the software in some way to make it work.

So that becomes a bit of a trickier issue. And then, the other issue that you need to decide is to sort of distinguish between everyday products or consumer products or other products. I'm not sure that's a helpful distinction I think in 2016 where there's really no difference between business uses, commercial -- consumer uses, private uses and it's not very helpful to try to make that distinction inevitably an artificial one.

MR. DAMLE: And in terms of problems that you see specifically with respect to -- I mean, sort of the premise of the question was whether there are problems that are specific to consumer devices or whether the problems are really about software writ large.

MR. BAND: Well, I would say that there are -- there are a specific set of issues that we know now. Certainly, and we'll be getting into it more in later panels. But the whole first-sale issue, the ability to transfer products, the kinds of things that we've talked about in our comments and I know some of the other people have talked about the ability to sell devices, repair devices and customize devices.

I mean, those kinds of things that are sort of unique to when you're -- when you have the software in the device, there are things that you want to do with the device that you don't really care about the software. I mean, the software just happens to be there.

MR. DAMLE: So I'm not sure exactly who was next. I think it was you, Mr. Troncoso. Yeah.

MR. TRONCOSO: I'd like to just pick up on both the points that Jonathan raised, both in regards to sort of the distinction between consumer devices or everyday devices and devices that are not every day and then on the embedded software issue. I think that we agree on the first point with I think the vast

majority of commenters that sort of distinguishing a device as an everyday device is not a particularly helpful designation because it's just a category that's going to be constantly evolving.

Technology, 10 years ago, we would never have imagined I think that the phones in our pockets now have the computing power that sort of exceeds that which NASA used to land people on the moon in the '60s. So I don't think that's a helpful classification.

And then, on the embedded software classification, we don't think that that's particularly useful either because, we've had embedded software for decades, but I think the problems that people are identifying that gave rise to this study relate to the newer products, right?

We're not talking about calculators or microwaves. We're talking about the newer classification of products that are sort of -- are internet-connected at all times, sort of the examples that came up a lot in folks' comments related to things like Nest. And the issue there is not sort of

the embedded software. It's that the software has a server sort of interaction and that the software is more of a service than sort of just mere embedded software.

So the issues that people are concerned about, and rightly so, relate to how people's relationships with these devices that involve a continuous sort of interaction with servers. So I think sort of trying to narrow the scope of this inquiry merely to embedded software I don't think is particularly helpful either.

MR. DAMLE: Well, so can I ask about -- so I mean, there's the one area where the law arguably draws this distinction -- draws a distinction is in the Computer Rental Amendments Act, where it says a computer program, which is embodied in a machine, which cannot be copied.

And if you look at the legislative history -- and we had a follow-on study -- what they were talking about were I think some of the examples that were in the Senate letter, which were automobiles, like those kinds of consumer devices. Calculators was

mentioned, which I think you mentioned as well.

Is that a viable distinction that we could use for, if we were hypothetically to try to draw a distinction for embedded software? Is your point that that distinction that's in the law now really doesn't work to solve any of the problems that anyone has identified?

MR. TRONCOSO: Well, I think my point is that I'm not really sure what problem specifically it is that we're trying to address. And sort of merely -- there's been a lot of -- sort of people have focused a lot on the issue of licensing of software and sort of -- a lot of the software that is embedded on our consumer devices now is transferred by means of -- by mechanism of a license as opposed to a sale.

That I think is probably a little bit different than what -- when microwaves first came onto the market in the '70s. So my point is that I think it's very hard to address these issues without disrupting the overall market for software writ large.

MR. DAMLE: A lot of people have their tents up and I'm not -- oh okay, Mr. Lowe?

MR. LOWE: So representing the automotive parts area, we've had a long history of experience in patent law with reverse engineering parts, remanufacturing parts.

But the issue of copyright has arisen in a much greater amount because of the fact the software is on almost all automotive parts now that have been built into the parts by the vehicle manufacturer, which we think current copyright law does provide the ability to do that. But the need for clarification, because there are a lot of issues when you're remanufacturing parts, where software needs to be used.

We need to -- we look at software more as an automotive part or function rather than the actual -- any creative thing. So, a windshield wiper might have software embedded into it. It's taking the place of a mechanical part that would have been on there before. So we look at the whole issue of software as being very close to being to an item that's mechanical and you could reverse engineer, copy and use again to put on a -- to make a copy of that part.

And I think there's a lot of concern in our industry because we're no longer -- the vehicle manufacturers seem to view this in a different light. And I think that's created a lot of maybe misconceptions and concerns in our industry and also has generated lawsuits in our industry of our manufacturers.

So we really think our industry needs a lot of clarification of some of these issues because they are creating problems for those that reverse engineer and build competitive parts and those who do service on vehicles.

MR. DAMLE: So you mentioned lawsuits and you also mentioned it in your written comments. Could you explain exactly what those lawsuits involve, whether they involve -- so I know that there's the *Autel* litigation going on, which really is not directly about the software. It's really about the -- I think it's a data compilation case basically. So could you just sort of explain what kind of litigation is going on?

MR. LOWE: Well, I can -- we have

representatives here that are involved in that. I can let them answer that question maybe more specifically. But they involve the use of software on an aftermarket part used on a car, whether they had the ability to -- because they needed to use software to integrate with that vehicle, they had to copy it to do that. And I think that's sort of more of the issue.

But I can -- we can let some -- another representative talk about that more specifically. But that's the concern of being able to use software to make sure it's interoperable with a vehicle part. And sometimes you have to copy it to make sure it does that.

MR. DAMLE: And is it your view -- I mean, you mentioned at the beginning that you thought the current copyright doctrine could kind of address those, but that you wanted clarification on that.

MR. LOWE: I think there needs to be more clarification as to how it relates to the aftermarket and replacement prats, reverse engineering and also servicing of vehicles too.

MS. ROWLAND: Can I ask if you have a

recommendation for this clarification?

MR. LOWE: I think we had it in our testimony that we submitted. I think just clarification about the use and I think we'll get into these issues a lot more closely when we delve deeper into it. But the ability to copy software, to use it as an -- if you're not copying -- if it's non-copyrightable, just a functional issue, interoperability, issues like that.

MR. DAMLE: Mr. Zuck? Okay, great.

MR. ZUCK: Thanks, and thanks for having me here for this discussion. I guess I just want to start by saying that as a former software developer and now a representative of software developers, software is the thing in a lot of ways.

And I think it's easy to forget that the huge strides in innovations in computing have come predominately in software and that if you look at something like a big sensor, like a radio array and you look at SETI, the only reason we're going to be able to filter the potential for extraterrestrial intelligence is because of software. Just imagine if

you had that functionality on C-SPAN. It would be a lot easier to watch.

So the innovations in CAT scans and a lot of machines come through software. And are regularly updated, regardless of what your definition is of embedded. It is a live and dynamic part of the software, and central to the incredible advances in software have been copyright protection. It's created incentives to invest, et cetera. And if you changed them, you will change those incentives, I think.

And so, you will change artificially the way that people implement their technology in order to find ways to get protection for what they're doing as opposed to actually creating more innovation in a space that's already highly innovative.

I represent app makers and increasingly apps are finding their way into devices, whether it's scales or cars or refrigerators, et cetera. And that innovation I think is going to be critical. And I think that making the distinction between everyday use, I agree, is a very specious one. There are very critical sensors are in things like Apple Watches and

Microsoft Band, et cetera and that's going to be something somebody uses every day. And yet, those are health-related.

So I think there's a real incentives problem and I think ultimately you're going to start to see a problem around liability too. I've guaranteed to protect somebody's data in a particular way and my software is going to be critical to doing that. I'm making assertions about the accuracy of a particular device and software is going to be critical to making those assertions real or not. These are issues of compatibility and fragmentation of underlying technology.

I'm an avid photographer and the firmware of my camera is constantly being updated for a compatibility with different lenses and things like that. And yet, there are efforts to hack camera firmware, to add functionality in parallel. And if you do those things, you sort of do them at your own risk because you're now out of the branch of the enhancements that are coming from the manufacturer for the different hardware that you want to use.

And so, then it raises questions about, "who do you call when your camera bricks up because you've fiddled with it?" And I think that all of that is important to keep in mind as context for the discussion.

Getting to specifics, I fail to see that there's been any real problem that's been identified here that's specific to software embedded in devices. It's all theoretical. It doesn't seem to be real. And I think that the copyright system has provided a set of kind of release valves already.

There's exceptions built into things like the DMCA, et cetera, that are specifically designed for interoperability and study, security, et cetera, that have been used effectively. And to the extent that there've been court cases around software being used and copyright being used sort of illegitimately, they've sort of fallen the way I think people believe the way they should have.

So it seems to me that it's a system that's working and there's no sign of a systemic problem, that instead there's a system that works and we ought

to be very cautious about changing it.

MR. DAMLE: Thank you, Mr. Zuck. I think we'll go down this line and then back. How about that? So, Mr. Golant?

MR. GOLANT: Thank you, and it's a pleasure being back here at the Copyright Office and being part of this conversation. I want to first echo what Christian and Jonathan have said. I agree with their assessments of the current environment. And I think the broad point I want to make is at first, do no harm to the copyright protection system for software under the Copyright Act. That should be the ultimate goal of this particular study.

And in terms of how do you differentiate, I think in terms of what ESA members care about, whether it be console manufacturers or handheld devices or even the new VR -- virtual reality units -- every piece of software has a function and you can't differentiate one kind of software versus another because they all interoperate. They all link together. They all make that device that makes all our consumers very, very happy.

So there can't be any line drawing because that would be regulatory chaos to say this kind of software is not protected or this kind of software should be treated differently. So the bottom line is whatever our members care about, and that is having an integrated unit that makes things go and makes the games go, that's how we'd like to maintain it. Just keep the protections under the Act for software the way they are.

MR. DAMLE: And what's your view of the line that's drawn in the Computer Rental Amendments Act? Is that -- I mean, obviously that's about a very specific issue. But there's both an exception for -- what they say -- computer program embodied in the machine that can't be copied and then there's a separate one actually for videogames that are also embodied and can't be copied, so --

MR. GOLANT: Right. No, I know exactly what you're talking about. But I can talk about that a little bit later. But right now I'll keep to the statements I just made.

MR. DAMLE: Okay. Mr. Bergmayer?

MR. BERGMAYER: Yeah, thank you. I think underlying the use of the phrase everyday products is this notion that consumer products are different than, say, large-scale commercial, industrial, agricultural users and that consumers have particular expectations and rights and protections that might not apply to a factory buying a bunch of software-controlled CNC machinery or something.

And I think that's probably totally true. However, I don't think that copyright law is the right way to draw those distinctions between classes of users. You already have -- contract law already makes distinctions between sophisticated users and commercial users. I'm not an expert in this commercial law stuff. But I'm pretty sure UCC or something makes note of those particular classes.

And particularly, from a consumer group perspective, something that concerns me is the notion of using licenses to disclaim liability for defects in products just because they're software and you can be able to condition a software license on it, where you couldn't with other ordinary consumer products.

And I think consumer law already deals with things like that. A lot of states have rules which say that no matter how many times a manufacturer of a product tries to disclaim a warranty, it's ineffective. They have certain liabilities that are defined by law and there's no getting around them.

Yet those protections typically wouldn't apply to a sophisticated commercial buyer of industrial machinery. And I think that's a totally appropriate distinction to draw. And it's not really necessary for copyright law to even be a part of that discussion of how do you protect consumers versus how do you not protect consumers.

And my concern is the potential use of copyright law to try to whittle away some of those rights where software vendors typically disclaim all liability for any use whatsoever and they say that their product is not fit for any purpose and things like that, which maybe they might make sense in a pure software context, although I'm skeptical.

But in a typical consumer product standpoint where you have software that is controlling power

tools or a rice cooker, I'm very skeptical of things like that. But I don't think that it is copyright law that should really be part of the discussion in terms of those sorts of consumer protection.

MR. DAMLE: And is it your view that, to the extent that there are licenses that do that, that the state laws that you mentioned would apply to those types of licenses?

MR. BERGMAYER: I think it is unknown basically. I think questions like that would have to be litigated to the question of whether a disclaimer in a software license would have greater legal effect than a typical warranty disclaimer, which in some states might not have any legal effect.

I simply don't know and I think that we can either start thinking about these issues now or we can just wait for there to be decades of litigation in a piecemeal fashion that might vary state by state. And I think that's the direction we're heading towards right now.

MR. DAMLE: And is it your sense that Congress needs to do something to fix this or is this

something that -- like what is --

MR. BERGMAYER: Well, in our comments, our position is that if you simply reject certain interpretations of copyright law that I think are mistaken that have been adopted by some circuit courts, it's not necessary.

However, certainly I would welcome congressional clarification of any of the policy points that we've identified if it was at all feasible. But I think right now we're really not at this stage of proposing specific legislation, so much as identifying the fault lines.

MR. DAMLE: Okay. Thanks. And we can delve into some of the licensing issues you mentioned in the next panel.

MR. BERGMAYER: Sure.

MR. DAMLE: Mr. Bockert? Yeah.

MR. BOCKERT: So I guess to start, I'm sort of confused by this resistance to drawing lines because it seems like we do that all the time in the law. We do it in copyright law, we do it in patent law, and we do it in trademark law. And we're

relatively comfortable with that.

And one thing that's coming up -- and I don't think we dispute this -- is that maybe it's not the "embedded" line where we should draw the distinction, and maybe it's not the "everyday products" line where we should draw the distinction.

But I would posit that software that serves a primarily functional role in a product ought to be treated differently. And the reasoning there is, when you think about it in the context of patent, we have these things that serve functional roles and there are specific carve-outs, like the doctrine of repair and all sorts of exemptions from the rights' owner's exclusive rights.

And we think that several of those carve-outs and exemptions should also apply in the context of copyright.

MR. DAMLE: So when you say a primarily functional role, I mean all software at some level is functional. It's telling transistors to go to corner zero and so I'm wondering, I just want to dig into that a little more. Do you mean a mechanical role or

do --

MR. BOCKERT: Sure. It's a fair question. That's a perfect question. Aaron gave the example of windshield wipers, right? So at one time, you had a mechanism that decided how frequently a windshield wiper should swish. I'm sure there's a technical term for swishing, but I don't know it.

And that would be a device that would be covered by patent, right? And auto part makers could come in and they could figure out what's going on there and they could figure out what their rights were in order to replace it under patent law. But now, that mechanical unit has been replaced entirely with software. And so, now we've lost this aftermarket. And ultimately, it's consumers who are struggling.

And that's not to say that we don't respect copyright ownership and the strong incentives for coding and creating software. But it's to say that we also have competing incentives and ancillary markets that we should also consider when making the law.

MR. DAMLE: And is it your sense -- I mean, there's a lot of -- there's sort of established case

law about interoperability and I know we're going to talk about the fair use -- we have a fair use panel coming up third I think. But just in general, is your sense that the current case law about allowing things like reverse engineering and intermediate copies for reverse engineering and enabling interoperability, do you think that case law is sort of sufficient to give your clients comfort or is there more that needs to be done there?

MR. BOCKERT: No, I think we need more. And I don't think it's limited to interoperability. I think it would be replacement as well.

MR. DAMLE: Okay. Thank you. Mr. Kupferschmid?

MR. KUPFERSCHMID: Thank you. So actually last week I was in San Francisco for the 512 section roundtables. And it's interesting. If you look at the record and the description of all the problems that people are having with the DMCA notice-and-takedown process and you compare that to the record here, it's just night and day. I mean, there's very little, if any, evidence of a problem. If you look

through the examples and the written testimony, you'll see a lot of "mays" and "coulds" and "mights." But you don't really see the pure facts.

And to the extent there are pure facts and examples, I think many of them are -- don't have anything to do with the copyright law itself and have to do with other things. And I think there are other sessions where we'll delve into that more, although I'm happy to do that now as well.

So in terms of this line drawing for embedded software, that's one problem, in everyday consumer products, that's another problem. I think it's interesting that sort of the one person here that suggested that, no, we should not have a problem with any line drawing, then draws a line that encompasses every single piece of software out there by calling it just -- any software that has a functional role, which as you point out, is the definition of sort of all software.

So this line drawing is -- frankly is very difficult, if not impossible in this particular situation, both in terms of what embedded software

means and what it means to be in an everyday consumer product. And not only is it difficult, but it's not helpful. We already hear complaints from the public and users that copyright law is too complex.

And now, we're hearing suggestions that not only should we -- well, should we make the copyright law more complex by creating sort of a subcategory of software and treat that differently than other types of software, and then, we don't treat it differently in all types of situations, just when it's in everyday consumer products, whatever that means. So this is just a hornet's nest of trying to draw that dividing line, which I think is a real problem.

In terms of you've been asking this question of others, so I'm going to preempt you and just try to answer this myself, you mentioned the rental right limitation and whether that's a viable distinction in this particular instance.

But you also point out that Congress considered that issue when it codified this rental right limitation. It knew about the issue and decided to limit it to the rental right, not apply it across

the board. So I think that's significant, that Congress did consider this issue and decided to apply it in a particular fashion and in a particular manner.

And then, just lastly with regard to the licensing issues, I'll pass on those because I'm also on session, I think it's two, when we'll take those up. So there were a host of issues that were raised in that context. But I'll wait on that.

MR. DAMLE: Mr. Tepp?

MR. TEPP: Thanks very much. So one of the prior commenters made the statement that, with regard to certain products, the software just happens to be there. And I don't think I could disagree any more fundamentally with that statement.

Software is not just decoration. Software makes the products more efficient. They make it safer. This is why software has accounted for 15 percent of all U.S. labor productivity gains from 2004 to 2012. And I think what this points to is really the fundamental policy question that underlies the entire conversation today, which is, on the one hand, we have a vibrant software industry.

The United States unquestionably leads the world in this field. Three-point-two percent of our entire GDP is from the software industry. Exports of software and related services have grown by 9 to 10 percent every year since 2006. We have something in our system, and I think it's beyond any serious question that copyright law is an important part of that system, that has generated a vibrant, productive industry that has helped the entire country innovate and move forward into the modern era. So that's the one hand.

On the other hand, as several of my co-panelists have pointed out, the concerns that are being raised are often hypothetical. There's some anecdotes. Very little of it is traceable actually to copyright law as the problem. So thus put, I think it's fairly clear that there's a very high threshold for demonstrating any need for -- as we'll get to later in the day -- a fairly drastic remedy of preempting contract terms. And I don't think that threshold has been met.

I'll just -- coming back to the 117 rental

issue that's come up a few times, I'll just add to what Keith said a moment ago, with which I agree, that that amendment was actually designed to protect copyright in software. The rental of software was leading to piracy. People would rent the, back then, floppy disk, take it home, copy it and then return the rental, the object of the rental.

To the extent that at the time that amendment was passed, the ability to engage in that type of piracy in other types of objects, where you didn't have the floppy disk at your disposal, I think is a significant part of why Congress made that distinction. It was not a distinction designed to denigrate the protection of software in other areas, but to enhance its protection in areas where it was the most vulnerable to piracy.

It's an open question as to going forward whether piracy is becoming easier across the board. But I think it's important to remember that origin of that provision.

MR. DAMLE: Well, since you raised piracy, I mean, I guess one question is what is -- are there

concerns about piracy in these sort of -- in embedded software and in circumstances sort of where that exception to the consumer rental -- the Computer Rental Amendments Act applies, where you have a Nest thermostat which has software in it? Ordinarily, it'd be pretty hard to copy the software off of that device. So -- but you suggested maybe that's not the case anymore. So I don't know if you wanted to discuss that.

MR. TEPP: Well, I think we can all foresee that as it's easier and easier to have in ordinary consumers' hands the ability to access software that is embedded in a thermostat, I would posit, then piracy does I think become a greater concern.

MR. DAMLE: But piracy -- I mean, what would be the purpose of such piracy, if you don't -- I mean --

MR. TEPP: Well, if the software is the distinguishing characteristic of a product that gives it a competitive advantage and I wanted to compete in that marketplace, then I would benefit from pirating that software into a competing product, just one

example.

MR. DAMLE: So it's more competitive -- competitors, rather than sort of mass market piracy?

MR. TEPP: There's so much innovation in this space. I don't pretend to have the imagination necessary to envision every possible scenario.

The fundamental case I'm making is that the laws we have now have generated an incredibly successful industry, that Congress has duly considered where exceptions are necessary and appropriate and has codified those into the statute and that there is not evidence, not anywhere near enough evidence to suggest a drastic remedy that's proposed.

I don't -- you asked the question about piracy going forward. I was pointing out that that was Congress' motivation in the past, in the section 117 amendment. To the extent you're asking me going forward are there potentially piracy concerns, I don't want to rule them out, because I don't know. I can imagine a scenario where there could be.

MR. DAMLE: Okay. Thank you. Mr. Mohr, and then we'll go over I think to Mr. Bergmayer, then Mr.

Band, and then back to you, Mr. Zuck. Oh, sorry, and then we'll end up with you. Okay.

MR. MOHR: Thank you. A few -- just I'll try to be brief and not overly redundant. The first, I do think it's, from our perspective, important to look at this not from a framework of problems, but frankly a framework of overwhelming success. And that is namely that the application of copyright to software has been enormously successful in spurring innovation. And we've heard numbers and statistics about that and we have -- we've put some in our filing as well.

Not only has it been true for software generally, but you're also seeing an enormous amount of investment in the internet of things in terms of venture capital. And we've cited some of that stuff in our footnotes as well. And so, I guess when we hear about these things, we say, okay, well, what's the problem. And frankly, for us, there isn't one. And there isn't one for a couple of reasons.

The first is that the copyright law has enabled us to have both predictable and flexible

business models. That licensing model has worked very well. It's worked very well not only for our member software companies, but we also see it potentially working well in the internet of things.

As software in that space becomes more and more like a service and as consumers develop ongoing relationships and in some cases very specific relationships with their software providers for a variety of different kinds of data, it will make sense to maintain the integrity of those products, that the use of them be subject to particular terms. And there's no reason that people, if they don't want to be subject to those terms or if they don't want to offer material subject to those terms, create a different business model. There is nothing preventing them from doing that.

So we don't see any useful distinction or manageable distinction that can be drawn between software in consumer products and any other type of software. For us, that is a false premise.

The second thing, I know it's more in the licensing area, that I want to say, but I was confused

by something that one of our colleagues mentioned before about the difference between the application of commercial law to particular transactions and when things go wrong. And I don't think -- there is a big difference between licensing and product liability. Product liability is a tort and it's a tort under state law.

So if something causes a -- for example, a car to crash, the liability will be found in tort. It is not going to be governed by the terms of a license agreement because that's -- I mean, that comes out of the *Bloomfield Motors* case from the first year of law school. I think that's a very different type of analysis.

So trying to mix those kind of horribles together -- I mean, look, years ago, when we were dealing with the aftermath of *ProCD* and the world was going to collapse around us, we heard very similar claims about this. And it simply didn't happen.

But this is one of the -- this was one of the areas that was mentioned back then, and I think the point is equally applicable today, is that where

there would be product liability law that applied, in the absence of privity, there's nothing -- there isn't much that a software license can do to protect that.

MR. DAMLE: Okay. Thank you. Mr. Bergmayer, I think you were next.

MR. BERGMAYER: Sure. So something that just relates to the functionality discussion a little bit earlier, and I'll use the windshield wiper example that keeps coming up because I just recently replaced a windshield wiper in my car and it was a very complicated, mechanical contrivance. It was really difficult to get right. And I can imagine, yeah, it's replaced with a much simpler part that's just a microcontroller with some software connected to some motors.

And I think the question is I bought an aftermarket windshield wiper armature replacement thing. Could I buy a replacement microcontroller with different software written by someone else?

And I think when you have software that is of such a simple character, you end up with almost merger doctrine issues where if someone else re-

implemented software that did the exact same thing in terms of controlling the arms in a particular way, it very might well be the case that looking at the original software and someone's independently created software that does the same functions in terms of controlling motors, you might see substantial similarity. And yet, at a certain point, you have to have an idea-expression dichotomy issue because you can't copyright the only -- or the most efficient way to accomplish a task.

Similarly, if I -- in a new programming language – say, I'm the first person to come up with the most efficient way to implement a particular sorting algorithm, that might be very creative of me. But that's not subject to copyright because that is an idea-expression dichotomy question.

So I think there are existing copyright law doctrines that have been around for a really long time that at least when it comes to the very simple software that is just sort of replacing a mechanical part could already apply to at least prevent the use of copyright to limit competition by people making

other competing products. And I think that is just something that people need to keep in mind when considering these things.

MR. DAMLE: Thank you. Mr. Band?

MR. BAND: So some folks on the other side of the room have said repeatedly that there is no evidence. Now, simply saying that there is no evidence doesn't make all the evidence that's already been submitted in the record vanish. You have to actually look at what's in the record.

And so, we've had Mr. Lowe submit comments on behalf of thousands of auto repair folks who deal with this problem of replacement parts and exactly the kinds of things we're talking about here and the competition in the aftermarket and diagnostic software, all of these related issues. They deal with that problem every day.

I represent -- within the Owners' Rights Initiative are two trade associations representing computer resellers and independent repair providers. And they deal with this issue every single day. The Cisco frequently answered -- frequently asked

questions specifically talks about resale and restrictions that they place on resale of their servers because of the software. And they cite *Vernor v. Autodesk*. It's in their frequently asked questions. It's not an occasionally asked question. It's a frequently asked question, which indicates that people who want to buy these materials frequently ask that question. HP has the same thing in their frequently asked questions.

So this is -- and the issue of independent -- the issue of competition in the aftermarket has been an issue, an ongoing issue competitively in the computer industry from the beginning. And the independent software -- independent maintenance and repair, it's been a big issue from the beginning. And 117 was amended precisely to deal with that. I mean, it's a constant struggle.

Now, in the competitive struggle in Congress, typically the original equipment manufacturers have a lot more lobbying power than the independent repair folks. But that doesn't mean that the outcome that they are pushing for and have pushed

for is necessarily from a policy perspective the optimal outcome. I mean, the point is that, again, this is an issue.

Right now, we see it very much in the computer area and in the automotive area. And it's important for you all to be focusing on this now because very soon, it's going to be applying everywhere else.

MR. DAMLE: So if I could just defend Congress, since I have representatives from Congress sitting in the audience, I mean, they did -- just to push back on that point, they did -- after *MAI*, they did issue an amendment to section 117 to address that specifically out of concern for the independent repair -- to sort of facilitate independent repair, to deal with that particular issue.

And so, I think if there is evidence that there's that kind of -- that sort of problem happening today, I think -- I imagine we would be and Congress would be willing to examine that. But so that takes me to the next point, which is I think it's one thing to say that there are issues, and there obviously are

lots of difficult issues in copyright law and determining whether something is fair use or not is a difficult issue.

And so, I'm just wondering whether you have sort of specific examples of either threats of litigation or litigation or sort of areas where it's like clear that that's something that an independent repair person or someone who's making an aftermarket part or something they want to do is being prevented from doing because of current copyright law.

MR. BAND: Well, the folks within the ORI report that they are constantly being pushed around by the large computer manufacturers, that, more importantly, their customers are being told not to get the services and not to buy used replacement parts and so forth from my people.

And that's what inspired our group to work with Congressman Farenthold in support of YODA. I mean, that's -- that was a very specific bill that is responding to a specific problem that our members say that they encounter all the time. I don't think there's been a complaint filed that I'm aware of. But

it is a constant issue.

MR. DAMLE: And do you have -- so I mean, I looked at the -- I looked at the licenses that you cited and sort of looked up, for example, NetApp. And NetApp is an enterprise data storage company. Cisco, as far as I could tell, applies those sorts of restrictive license terms on its enterprise-level devices.

And I couldn't -- what I couldn't find from your submission was an example of sort of a consumer-level device or even a small business-level device where that had these sorts of issues. And I assumed that you would concede in the sort of business-to-business context there's much more sort of a balance of bargaining power.

And so, I think what one of our concerns is, again, to draw the distinction, I think that it's appropriate -- and the law does, as Mr. Bergmayer said, draws a distinction between enforcing contracts between sort of big -- between two businesses and between a business and a consumer where it's a click-through contract of adhesion, if you will, right?

So I think that -- so I'm just curious whether you have examples of sort of consumer-level devices that have that type of problem.

MR. BAND: Well, even when it says enterprise-level, I mean, there are different kinds of enterprises. You might have an enterprise of 20 people or 30 people. And so, they might have a server for that level of enterprise. But it's still not -- we're not talking about a 100,000-person company dealing with another 100,000-person company.

And again, we see this -- this is throughout the history of the computer industry. You have very unequal bargaining power. And you really can't bargain with Cisco or HP or NetApp, if you're a relatively -- even a small- to medium-sized business. And some of the products that the ORI members deal with are also like -- it could be equipment like this, like these speakers. And then, these microphones or telephones.

And so, you might have a small office or you might have 10 telephones or five telephones. And again, you have very little -- very unequal bargaining

strength between the small business and the equipment manufacturer.

MR. DAMLE: Mr. Bockert? Sorry.

MR. BOCKERT: My client, Dorman Products, is facing a very real lawsuit alleging copyright infringement. And they're having to defend that. So this isn't sort of theoretical and it's not hypothetical. It's very real. And I can't go into all of the details in the case and foreshadow defenses. But the idea is that this case --

MR. DAMLE: Sorry. Has a complaint been filed?

MR. BOCKERT: Yes, a complaint has been filed.

MR. DAMLE: Okay. I think we'd be interested in seeing it, if you have the docket cite. We'd be interested in seeing that.

MR. BOCKERT: I can send that up.

MR. DAMLE: Yeah. That'd be great.

MR. BOCKERT: Sure. So -- we obviously think we have very clear defenses that existing copyright law allows us to do what it is that we've

been doing. But we think that this could be clearer, specifically focusing on section 117, which everyone is talking about.

I have the utmost respect for the drafters in Congress, but it's very difficult to read section 117(c) to an auto mechanic and have him or her understand it in a clear way and how it applies to the business.

And so, when you have those difficulties, it creates chilling effects in innovation. And it's not only Dorman who experiences this. I get phone calls from several clients who are calling and saying, "hey, I have this idea, can I do this?" And I have to say, well, here are the limitations and here are the things that you have to consider under copyright.

And a lot of them walk away and don't end up creating whatever business it is that they had in mind. Keeping all of this in mind, a lot of people are talking about the success of the software industry. I don't think anyone would dispute that.

But I do think that there is some assumption there that the success of the software industry is

based entirely on the strength of its protections under copyright, when historically a lot of the software protections were based under patent law.

And patent law has very clear exceptions for things that you're allowed to do, like the doctrine of repair. We're positing that some of those exceptions should more clearly apply in the context of copyright law.

MR. DAMLE: Okay. We're running short on time. So I'm just going to run down this side and then we'll wrap up this panel. Mr. Kupferschmid?

MR. KUPFERSCHMID: So I'll be brief. I mean, just to throw it back in Jonathan's lap here I suppose a little bit is that he said just because you say the problems don't exist doesn't mean that they don't exist. Well, the opposite, just because you say there are problems doesn't mean there are problems. And especially -- and I do --

MR. BAND: I'll remember that the next time you guys submit that we need to change the Copyright Act.

MR. KUPFERSCHMID: Okay. I'll watch for

your tent to go up next time too. But anyway, so -- and the problems that -- or the issues that have been raised here, the concerns that have been raised here, a lot of them have very little, if anything, to do with copyright.

With deference to Mr. Bockert, is it -- Bockert -- I don't recall reading the case and I would also love to take a look at the case. But it seems like it has not been adjudicated yet. So the courts may come to the -- obviously to the right decision at the end of the day.

It is worth mentioning that there is at last one, probably many, different voluntary agreements having to do with sort of a right of repair, at least in the automotive industry. So it is worth mentioning that there are groups that can come together and address these issues outside of Congress or other places.

MR. DAMLE: Okay. Thank you. I'm not sure. Mr. Lowe, are you -- yeah, okay, Mr. Lowe and then Mr. Tepp.

MR. LOWE: No. I wanted to clarify. First

of all, the case is real and we're fully aware of the case that Mr. Bockert brought up. But there's every day when companies are looking at parts now, they're looking at software-enabled parts. Almost every day they have to make a decision whether to reverse engineer it, whether they can innovate with the development of that part. And every day, that decision is affected by copyright law.

So there are very real effects that are going on because of this field. And the need to clarify the right to repair in this software copyright area because whether -- we all say software copyright is fine, there are no problems -- well, this is an area in automotive, when you purchased a car, you own that car and you're able to modify it, to do work on that car, to repair it. And that's been a longstanding standard.

But now, with the software now implemented on almost every part and component on a car, that's now becoming more difficult and more questionable. And so, what we're looking for is more clarification in that area to make sure that you -- when you do want

to work on a part that there is a certain standard that we've gotten used to in the patent area is also applied in the copyright area.

MR. DAMLE: Mr. Tepp?

MR. TEPP: Thank you. So, the copyright law already has clear jurisprudence and codification by Congress of reverse engineering for purposes of interoperability. So, and the Chamber is certainly not here to take issue with that. And the Copyright Office has famously issued some 1201 rulings that are in furtherance of that goal. So I think that ought not be lost in question of replacement parts.

In terms of overall evidentiary issues, again, even the cases that have been brought up, you've -- the panel this morning has distinguished from copyright law. Respectfully, a frequently asked question is perhaps not a scientific designation of how often an issue may arise.

To the extent that the concern is, oh my gosh, we have to think about copyright law when we do our business -- well, yes. People have legal property rights that ought not be infringed, particularly when

there are means available under the statute to engage in repair, to engage in reverse engineering.

And none of this justifies, as we'll get to later in the discussion, I suppose, this notion of wholesale preemption of contract terms, which is anathema to the free market system that copyright is designed to work within.

And just coming back finally to the piracy question you asked earlier, the one point that occurred to me that I should have made is that there is a clear and present issue with piracy, particularly in the area where the device that's run by software is the device that helps perform and display other forms of copyrighted works, whether they be music, movies, whatnot. Absolutely, in that context, you have the capacity for piracy of either the software and/or the works that the device is designed to perform.

MR. DAMLE: Mr. Zuck?

MR. ZUCK: Thanks. I'm not a lawyer and so probably the least interested in reading the complaint. But as a software developer, what I've seen historically is there's always been a kind of

tension between intellectual property and commoditization. And that tension's been interesting in a lot of ways, that the argument is made that eventual commoditization actually leads to innovation at some level, now that the thing you were protecting you don't have any more and you now have to re-innovate, et cetera.

Well, there's also historical precedent that's sort of like -- commoditization too soon can undermine investment in innovation. But I think the key thing here, and this will come up over and over again, is that we should never confuse the two. Commoditization is not innovation. And very often, innovation is happening here. Commoditization is happening elsewhere.

And so, to look at commoditization as an innate good or specifically as innovation I think is a frightening characteristic for it because it's that innovation that I think we need to make sure we're protecting and that copyright was put in place to protect and be very cautious of things that sort of institutionalizes commoditization too early in a

product cycle.

MR. DAMLE: Okay. Thank you. Mr. Troncoso, do you want to have the last word?

MR. TRONCOSO: Thank you. I think one of the important questions that Chairman Grassley and Senator Leahy asked in their letter that prompted this study is for this -- for you guys to look into what provisions of the Copyright Act sort of apply and how they apply now in this era where there's ubiquitous software in our devices.

And one of the things we've heard repeatedly here on this panel is that there seems to be some misunderstanding, at least among some folks, about how existing safeguards in the Copyright Act might actually be there and might be able to resolve some of the problems and some of the tensions that we're experiencing. So I think it would be helpful for you guys in this study to talk about that, talk about how -- I know that 1201 is sort of a four-letter word in this panel -- we're not supposed to talk about it -- but how the triennial rulemaking is there to sort of provide sort of a release on the tensions that might

build on sort of right to repair-like issues and also how fair use, cases like *Connectix* and *Sega v. Accolade* apply to permit reverse engineering for purposes of interoperability.

MR. DAMLE: So do you think it's appropriate for the public to look at our 1201 rulemakings as guidance with respect to questions about 117, fair use, that sort of thing?

MR. TRONCOSO: I'm not sure -- I'm not sure if I'd be prepared to go there. But --

MR. DAMLE: Okay, just curious. All right. Well, that wraps up our first panel. Thanks very much. What we'll do is we'll take a -- if we can take a 10-minute break, that would get us back -- right back on schedule. So we'll be back here at 10:15 for session two. Thanks.

(Whereupon, the foregoing went off the record at 10:07 a.m., and went back on the record at 10:18 a.m.)

MR. DAMLE: So we're having some feedback here.

MS. CHOE: Hi, everyone. Welcome back. So

we're going to move on to the second panel, which is on ownership and contractual issues. The goal of this panel is to explore the state of contract law vis-à-vis software-enabled everyday products and how contracts such as end-user license agreements impact investment in and the dissemination and use of everyday products, including whether any legislative action is necessary.

So before we start, we should first introduce the new member to our section.

MR. BERTIN: Good morning. I'm Erik Bertin. I'm the Deputy Director for Registration here at the Copyright Office.

MS. CHOE: And we should also have the new members on the panel introduce themselves and their affiliations. So if we could start with you, Mr. Perzanowski?

MR. PERZANOWSKI: Yeah. My name is Aaron Perzanowski. I'm a professor of law at Case Western Reserve University in Cleveland, Ohio. I've been thinking and writing about issues concerning consumer ownership of digital goods for a long time.

MS. CHOE: And Mr. Harbeson?

MR. HARBESON: I'm Eric Harbeson, from the Music Library Association.

MS. CHOE: Okay, great. Thank you. So after reading the comments we've received in this area, we've identified two areas of particular interest. First, what are the legal or practical rationales for employing end-user license agreements or other types of agreements in the context of software-enabled consumer products?

And second, are such agreements having any practical effect in the marketplace in terms of limiting the availability of exceptions and limitations under the Copyright Act. So if anyone would like to start addressing one or both of those issues, that'd be great. So Mr. Bergmayer?

MR. BERGMAYER: Yeah. So I think one of the issues with software in particular is that where it goes beyond contract law is that if the seller of a software product or a software-enabled product is in some way saying that you never -- the buyer never actually owns the copy, that doesn't just affect the

relationship between the seller and the buyer.

It has downstream effects because the first-sale doctrine then never kicks in and people who are not privy to the sales contract between the seller and the buyer would also be infringing copyright for later distribution. So I think that is one of the particularly dangerous areas with the notion that a seller of a software product can reserve ownership.

And also, I think you'll see in a lot of the comments, there was agreement that the law doesn't need to change. But different people have a different idea of what the law means. When I say the law doesn't need to change, I think that these parallel doctrines that have come up, where software vendors uniquely among all copyright holders have the ability to sell you something and say that they didn't really sell it to you, that has no basis in a statute. It defies common sense and legal logic.

And yet, we've allowed it to grow up and the software industry to sort of arrange its business models around this legal concept where, in other areas, plenty of other sellers of copyrighted products

have tried to do the exact same thing and they've been smacked down by the courts.

The foundational first-sale case is about the attempt to withhold rights, resale rights from customers. The people who have given people sample music have tried to say, well, you can't resell this because you don't really own it and courts have taken the very commonsense view that if you're transferring a physical item to someone for keeps, that means they own it and just sort of boilerplate language, any sales agreement between a seller and a buyer can't really change that basic economic reality.

And it -- this is the issue that sort of got me involved in this area. I first started looking about this stuff in the *Vernor* case, which I think came out the wrong way. And I think if we just revisit these doctrines, which are judge-made and have no basis in the statute, we can undo a lot of the real and potential consumer harm.

MR. DAMLE: So can I ask -- I mean, so when I reread *Vernor*, I mean, *Vernor* is based on an older case from 1977 called *Wise*, which didn't involve

software. It involved motion picture prints. And what the court basically said there was -- I mean, it reached -- it sort of reversed the convictions, I think, in that case on other grounds.

But it did say that -- the court discussed sort of VIP prints of motion pictures, like *Sting* and *Funny Girl* and said that those could be licensed. And so, so I'm just wondering what you say about -- I mean, just to your point that this is something that's unique to software, I'm just wondering whether you could sort of address why it's a reasoning.

MR. BERGMAYER: Sure. There absolutely can be situations where I sort of transfer physical custody of a physical item to a buyer or another person where they don't really own it. But I think there have to be facts that support that. It can't just be a routine, like I just sort of add it to every single thing that I sell.

There has to be some sort of verifiable requirement that they destroy it after use or that they return it. Or there has to be some sort of reality to that. It can't just be something that any

time anyone buys a consumer product -- the example that I pulled out in our comments, but I could have found it in probably any product, is the Nest thermostat license, which simultaneously says that you, the buyer, don't really own this.

You don't own the copy of the software, which is a physical thing because copies are always material objects. But it also describes you as the buyer and it's just contradictory. And it's just put there as a matter of course in all software that is sold to consumers.

And I think that's the problem, not that there might be exceptional circumstances where if you're giving it back or if you're just really renting it or it's in a unique market that has particular characteristics like film prints. But I think it is the universalization of this -- what should be an exceptional circumstance -- that's the problem.

MR. DAMLE: So just a couple of points that I'm just curious about. So I mean, in *Vernor*, there was -- as I recall, there was a requirement that the purchaser destroy the copies when they -- the original

copies when they purchased the upgrades. So there was -- the court did mention that sort of restriction, which seems to me similar to what was at issue in --

MR. BERGMAYER: Yeah. But at the same time, you can't just say that you're required, but there's no actual enforcement. I mean, as far as I know, if you just say that just adding a requirement of destruction to a contract is enough to get you into that special circumstance, then people would just add that every time and it won't really be enforced. I think the point is that there has to be an economic reality that controls whether or not a sale has taken place, not merely words.

MR. DAMLE: So just a follow-up question, I wonder if you -- so what the -- what the software folks say is that, well, if we can't license it, then things like academic versions of software become unviable, where you sell someone a $149 copy of Microsoft Word, with the understanding that they're not going to use it for commercial purposes. If you don't have some sort of license that enforces that --

MR. BERGMAYER: Two things --

MR. DAMLE: Right.

MR. BERGMAYER: So two things. You can still have a contract, just the contract only applies to the person who entered into the contract and it doesn't apply to all potential downstream users. So if you do sell something to someone at a discount and then they're just up and reselling it into the general market, you can use contract law to go after them. But I think it would be inappropriate to go five owners down the line and start using copyright against people who have no idea, never entered into that contract.

And second, yes, there are certain business models that might be easier for sellers if they have certain legal rights. But that doesn't -- that's not a slam-dunk argument that those rights should exist. And in fact, in other areas like books and textbooks, we do have special academic editions or pricing. And it seems to work just fine.

There is no concept that when you buy a textbook, you don't really own it. And in fact, I think anyone who used to be a student thinks it's

great that you can buy a used textbook or sell your textbook when you're done with it. And I just don't see why we need special software-specific doctrines except when they are specifically confided by statute, or this notion that you don't own a thing that you bought does not come from the statute. That is entirely a judge-made doctrine.

MS. CHOE: Well, why don't we move on to Mr. Band?

MR. BAND: Thank you. So for ORI, where this -- the relationship of contract to this issue is most obvious is the first-sale doctrine, which applies to owners of copies. And so, if you have software embedded in a device and the software is just licensed but not sold, then the first-sale doctrine arguably does not apply to that piece of software. And so, you can't transfer the software when you're transferring the rest of the good.

And so, that makes it difficult to sell the product in a secondary market. And so, that's really where we see that issue. And as John said the economic realities of the transaction are that when

you buy the device, you're buying the copy of the software in it. You're not expected to return it.

And it seems obvious that if you're able to keep the device for its useful life, let's say if it's 10 years, but let's say, then if you want to, after five years, sell it to someone else who could benefit from the other five years, then you should be able to do so.

And so -- but when you have a contract -- when you have this contractual proscription, not only do you have the problem that that could be breaching the contract, but on top of that, you're not able to take advantage of the first-sale doctrine. So figuring out the license piece is -- or this contractual piece is critical to allowing the alienability of this -- of this piece of personal property.

And then, just secondarily, we had talked in the last session a lot about -- people had talked about reverse engineering and interoperability and how that isn't -- how the copyright law is so clear on that. And we'll talk a little more about that in the

next session. But I just wanted to point out that almost every piece of software that's distributed, whether just as on a standalone basis or if it's in a device, the license agreement almost always contains a prohibition on reverse engineering for any purpose.

So, it's all well and good that the jurisprudence says that it might not be a copyright infringement. But if you have this -- these pervasive license agreements that prohibit you from engaging in that activity, obviously there's a tension. Now, the question gets into the second question, what has been the real impact on that.

With respect to these restrictions on reverse engineering, the licensing restrictions, there has been litigation. There was the *Bowers v. Baystate* case and one of the issues there was is the -- is the license prohibition on reverse engineering, is it preempted and, the truth is -- in that case, two judges say not preempted, one judge said, yes, it is preempted.

I think that that's one of those really complicated areas that I would hope this study would

start delving into about this relationship of when are contract terms preempted by the Copyright Act and start to think about that and look at that more.

But I think that that is an issue that when you counsel clients, you have to talk about. You say, well, there's this argument, there's that argument and do what you need to do. And I have a feeling that a lot of -- there are some people who do go ahead and reverse engineer and sort of hope that it's in the event that there's litigation that it will be found to be preempted.

And I imagine there are other people who are more risk-averse and are not reverse engineering because they don't want to take that risk.

MR. DAMLE: Sorry. Is it your understanding that a violation of such a contract term against reverse engineering would be -- would be just a breach of contract or would that be -- is that somehow tied to copyright infringement?

MR. BAND: Well, I think there's case law that would suggest that it could be both. I mean, if it seemed to be -- if it's a valid restriction and

you're -- I think there is case law that would suggest that it would be not only -- it would be breach of contract and a copyright violation -- a copyright infringement.

MR. DAMLE: Sorry, even if it were otherwise fair use? I mean, if the reverse engineering were deemed to be fair use, it would still be infringement?

MR. BAND: Right. I could -- again, the argument would be because you're going against -- you don't have the -- you might have the copyright -- you would have had the copyright right but because you have -- you agreed not to do it. I'm not -- I think it would be an issue to be determined. But I think that certainly there would be some who would argue that that would be an infringement as well.

MS. CHOE: Sort of taking a step back from the legal issues and getting into the specifics, in terms of these licenses, how prevalent are they? How often do they have sort of restrictive language about reverse engineering or restrictive language that sort of is specific to copyright?

MR. BAND: I would say that -- obviously I

haven't done a complete survey. But I would be shocked if the vast majority of programs that are distributed, whether by -- I would be surprised if they didn't have those restrictions.

Certainly every license that I have seen, every software license that I have seen includes a prohibition on reverse engineering. It is -- as John was saying, this is boilerplate. You just automatically include it. I'm sure all of Mr. Zuck's members when they distribute -- or the vast majority -- when they distribute their apps, I mean, it's just -- it's part of the template. You prohibit people from reverse engineering.

MS. CHOE: Well, just as sort of a data point, not to bring up the four-letter word, but in the 1201 rulemaking proceeding, we had a finding that for ECUs and automobiles that there were no licenses associated with those at the time.

So it would be very helpful for us to have sort of specific examples of industries or specific contracts themselves that are attached to these products and sort of the restrictive covenants that

are in those agreements.

MR. BAND: Well, so I know -- I can't speak for the automotive industry because I'm not as familiar with that. I certainly know in the computer area, almost whenever you're buying -- certainly whenever you're acquiring the device -- the computer, and then certainly whenever you're -- all those licenses that you're always clicking on whenever you're -- any update you get, you're clicking on a license.

Of course, I never bother reading that, just like none of us ever read any of those licenses that we're clicking on our agreement to. But I would be surprised if all of those software licenses did not include a prohibition on reverse engineering.

MS. CHOE: I'd like to open that question to everyone, just to get a sense of -- because we understand that these exist in the general software context.

But to sort of narrow the inquiry into software-enabled consumer products and how prevalent this is in that context would be incredibly helpful.

So Mr. Kupferschmid?

MR. KUPFERSCHMID: Yeah. I mean, I debated whether to respond, simply because I don't have any data. I don't have any information in terms of how prevalent reverse engineering prohibitions are in embedded software licenses as opposed to other types of software licenses, and not to mention the difficulty that we talked about in the first session about making that distinction between software and embedded software.

But I actually will not disagree with Mr. Band in terms of the fact that reverse engineering prohibitions, you do find them in many, many -- if not virtually all software licenses. And there's a reason for that, which is most people don't care about reverse engineering. When you get a mass market, software -- included and embedded software, how many people want to go ahead and reverse engineer the software in their toaster or their thermostat, as the example that was used before, or something like that?

It allows software companies to go ahead and, with a certain level of comfort, be able to

include their software in those products. So there are significant benefits, not only to the software companies, not only to the hardware manufacturers, but most importantly, there are benefits to most consumers.

MS. CHOE: So along those lines, what are the benefits and the drawbacks of having these license agreements attached to the products then -- both in the copyright context and outside of the copyright context.

MR. KUPFERSCHMID: So you're talking about beyond just reverse engineering now in terms of the value of these licenses. I mean, I think it's important to note that the software license will be -- is one component -- if we're talking about embedded software -- in the larger scheme of things in terms of the hardware itself.

And if you look at a lot of these software licenses, for instance, we talked about transfer and prohibition on transfer, most of them actually do allow transfer. They may have certain conditions attached to those transfers. And a lot of those have

to do with consumer protections, perhaps, more than anything.

I think it was interesting that the gentleman from Public Knowledge and I think maybe Jonathan as well, maybe, talked about the fact that there's value in -- or having to return the product or having to destroy the product. And I thought it was really, really interesting the fact that the gentleman from Public Knowledge talked about his big issue was that there was no actual enforcement of that.

And, oh my gosh, I mean Public Knowledge, I understand represents consumers. But now it's encouraging software companies to go knocking on consumers' doors and say, did you destroy that. And I don't think that's anything anybody wants to do, certainly not consumers and not the software industry.

So in terms of having to return the software to prove that it's a license makes very little practical sense and it's just a burden on consumers and frankly a burden on the software owners. Also, having to destroy it also comes with its difficulties as well in terms of, do you have to prove that it was

destroyed or something like that.

And when you're talking about a lot of these software products, at the pace that technology is moving, do you really need to destroy that software to prove that this is a license? At some point very, very soon, that software is going to be obsolete anyway and have to be updated. I mean, we talked a little bit about how quickly software is updated and how quickly technology moves.

So why do we need these sort of artificial -- to include these artificial requirements to show that something is licensed? I do think the *Vernor* test is the good test, is an accurate test of when something -- when the software license should be enforced under the copyright law and when it shouldn't.

MR. DAMLE: So can I ask you the question I asked -- I think it was Mr. Band -- which was if someone violates a ban on reverse engineering, if that reverse engineering would otherwise be fair use, is that just a violation of the contract or is that a violation -- is that a copyright infringement?

MR. KUPFERSCHMID: Yeah. So I would have a hard time believing that would be a copyright infringement when you have a court saying this is fair use. I mean, I don't see how that's possible. I don't know that we've had any litigation in that area. But so I'd take a slightly -- or maybe totally different view than Mr. Band on that particular issue.

MR. DAMLE: Well, I assume that's an answer that would make Mr. Band happy.

MR. KUPFERSCHMID: See, we're advocating for each other. That was a joke, for the record.

MS. CHOE: Well, why don't we move around the room, since we have a lot of tent cards up? So we'll move on with Mr. Harbeson.

MR. HARBESON: I do want to speak. I just want to make sure that I'm going to be going back to the top level question, so make sure that we're -- I want to thank the Office for letting me come here to speak because I am representing the Music Library Association, which you might not expect to see at a hearing called software-enabled computer products.

And we're here because we believe that the -

- notwithstanding its name, the study is bigger than software-enabled consumer products and is -- so I'd like to invite the room to take -- to go up a level of abstraction and think of this in terms of the broader way in which we are allowing contracts to affect -- allowing non-negotiable end-user license agreements especially to create a parallel system of copyright without the limitations and exceptions that are built in.

And you've already been discussing this a fair amount. I want to raise our issue, which is that in many cases, there are -- there is music and especially sound recordings, which have for years and years and years, libraries have been collecting this music on disc and then tape and then tape and then disc again. And we've lent it and we've done -- we've taken care of it. We've preserved it. We've done all of the things that libraries do.

Along comes the digital distribution services such as iTunes and Amazon, then you have the Spotifys of the world and in some cases, we have found that music distributors are deciding only to

distribute their music -- their sound recordings especially -- through these services. I'm actually just talking about sound recordings, not musical works -- only looking to distribute their sound recordings through these services.

Now, in a case where they are also distributed on a physical medium that we can purchase, that's not a problem. We can buy them. We can distribute them the way that we always have. But when they're only distributed through these digital distribution services and that's the only way the public can have access to these sound recordings, that creates a big problem for libraries. And this has been on the verge of a trend. It's not quite there yet. It is not, however, a parade of horribles. It's actually in the record we have a -- on the record, a link in our comments, we have a link to a list of works that we've collected that are being distributed this way.

In particular, I'd like to put on -- to discuss one that we discussed in our comments, which is the case of a Grammy award-winning sound recording

of Gustavo Dudamel and the Los Angeles Philharmonic. We've raised this in Copyright Office proceedings before. This is a Grammy award-winning sound recording produced by Deutsche Grammophon in which a couple of our members spent a lot of grant money trying to track down a license for this.

It was only being distributed by iTunes and the iTunes software license makes it impossible for libraries to enter into the agreement because it's for end users only and libraries are not end users. Furthermore, even if we could enter into the agreement, it doesn't let us do anything with it.

So my colleagues at the University of Washington spent a lot of time tracking down someone who could give us -- give them a license. They went to iTunes and iTunes said you have to talk to Deutsche Grammophon. Deutsche Grammophon said you have to talk to I think Universal.

And finally, after a large train of -- a lot of work, they finally tracked down -- I think it was -- yes, it was Universal Music Group, which -- and I quote, the article that my colleagues published, they,

"agreed to license the material under the following conditions: that no more than 25 percent of the album's content could be licensed and the license would be valid for no more than two years. Furthermore, a $250 processing fee would be charged in addition to the unspecified licensing fee that would have been more than the processing fee."

So now, we're over $500 for a two-year license for not even the entire work for a Grammy Award-winning sound recording and for a work that the public could purchase for $10 on Amazon.

Libraries do important work. We cannot allow this -- these kinds of licenses to circumvent the good work that libraries do. Right now, the problem is only in music libraries, that we know of, with sound recordings. But there are numerous companies that are putting out digital works. And who knows when they'll stop making CDs or DVDs? I keep hearing about the forthcoming death of the CD.

So we are advocating for a very narrow exception to the law that would allow those -- the provisions of non-negotiable licenses to be -- to not

be enforceable only in the event that they are -- that there is no other means for a library to acquire it and we can talk about that later. Thank you.

MR. BERTIN: Thank you, Mr. Harbeson. I'd like to ask a broader question and maybe this speaks to the issues that you've raised or others may want to jump in. And that's the question of privity of contracts.

I mean, if you're taking a license for the software that's embedded in the product that you've purchased, what impact, if any, does that have on the downstream users, as Mr. Band raised earlier? Are they bound by these licensing agreements? Do they run with the product itself or is this an issue of contract, as Mr. Bergmayer suggested that there's a distinction between licensing and contract, which I'm not quite sure I see the difference there.

MR. BERGMAYER: Yeah, to answer that question, I think it's pretty simple. A license is just permission to do something you otherwise don't have the legal right to do. And conditions can be put on that. But it's simply unilateral. There's no need

for there to be a meeting of the minds or consideration on both sides or anything like that. Whereas a contract is a contract like you learn about in law school.

I think in software, typically you have one agreement, which is both -- just to answer sort of your questions, I think the failure to distinguish between a license and a contract and the allowance in the software context uniquely of sellers to reserve ownership rights of physical goods that they sell leads to issues like the court in *MDY* ended up saying, okay, well, we don't want to say that any single tiny minor violation of a contractual term automatically leads to copyright infringement in the case of software because in the case of software, if you don't own it, you need a license to operate it. And you simply need a license to use the product in its ordinary course.

And the court really saw the consequences of that would be pretty bad. So they said, okay, well, you actually have to look at it and you have to determine is this a covenant on a license or is it a

contractual condition and you have to sort of piece together and like dissect the document to figure out the difference. And I think that is a sort of very difficult task, which you could avoid if you'd simply get rid of the underlying problem of the reservation of ownership because in the normal course of action, for example, if I'm a movie theater and I violate the contract that allows me to publicly perform a movie and then I publicly perform it anyway, the idea that that kind of contractual violation could give rise to a copyright infringement is not a problem. It only becomes a problem when you need a license simply to use something in its ordinary course of operation, which by all sorts of common sense you thought you owned.

So I'm not sure if I'm sort of getting at the distinction that I see between a license. But I think that the failure to properly distinguish and understand what a license is versus what a contract is including by federal appellate courts has led us to this very difficult legal situation where it is very difficult to tell where -- what consumer rights are

and whether or not -- and which particular provisions might run with the chattel, as it were.

MS. CHOE: So what would be your solution to that issue? Would it be sort of clarifying that regardless of these licenses, that, for example, in the context of section 109 or section 117 that the consumer would be considered an owner in those contexts at least?

MR. BERGMAYER: Yes, I think that is the solution. For the most part, consumers who buy physical items, whether it's media or consumer products, I think they typically own those products. Routinely, judges and the common law have historically always said things like, oh, this isn't really a sale. It's a thousand-year lease. Like that doesn't work.

Like it doesn't matter that the two parties agree among themselves and they're sophisticated parties that negotiate and sort of write it down on a piece of paper. It's not true. You can't make something that is false true just by writing it down. And you can't take something that is a sale and label it a not-sale and then have all sorts of legal

consequences that affect people, including people who are never even privy to that original agreement.

MR. RILEY: Is there a distinction though between the types of contracts that attempt to expand what we think of as copyright rights and those that are short of that? When we talk about a type of contract that says that you can't sell a book for less than a dollar forever; that would be expanding your traditional rights, right?

But some of these other licenses that we talk about are short of the full term of copyright, for example? You could use a work -- let's say it's a downloaded textbook on your Kindle for the term of your semester -- is there a distinction there?

MR. BERGMAYER: Well, I think the reason we keep talking about this in the copyright context is because of the RAM copy doctrine, which says that if you're not the owner, you need a license to use the product. And that's not true in any other context. Even if I don't own a book, even if I sold it, simply reading it does not constitute an infringement.

But in the case of software, if you're not

the owner of the physical item, the material object, the copy, you need a license. And therefore, all sorts of crazy conditions can be put on that license and simply infringing any one of them could lead to an instance of copyright infringement. And it's a very software-specific notion that comes out of this concept that simply to use a product in its ordinary course of operation somehow triggers copyright. And that's true uniquely in software and I think that's why this is a software-specific problem.

I'm not going to say that there can't be other problems with overbroad contracts or licenses. But, I'm just really focused on this concept of ownership and RAM copies leading to minor infractions, perhaps leading to copyright infringement in the case that's unique to software.

MS. CHOE: Well, we should get some more thoughts --

MR. BERGMAYER: Yes.

MS. CHOE: -- on these issues. So let's move on to Mr. Mohr.

MR. DAMLE: Turn on your --

MR. MOHR: Sorry. I have several points that look nothing like what I was originally going to say. A couple of things. I mean, first of all, I think there's been a fair amount of healthy candor that the complaints going on here are far broader than what this examination is supposed to be about, which is embedded software. And these are complaints about licensing generally.

I've seen reflected a greater degree of certainty than I have about whether a particular restriction will trigger infringement liability because there are covenants and conditions. And covenants trigger contractual liability and conditions will trigger infringement liability.

And so, and then, in that context, even if the infringement -- even if there's an alleged infringement, I honestly don't know the answer as to whether an affirmative defense in that particular situation might excuse that infringement and then lead only to a contract liability. I don't know. I don't know the answer of the top of my head.

But I think that's the way that -- that's

one way that the courts could resolve this. The second thing that I confess some confusion to is knowing when a sale and a license occurs. The problem is that there seems to be some belief that there's a unified field theory of software licensing and that every -- it's true, most pieces of software are licensed. But there are situations when they're not and the courts have done a good job at sorting that out. Different facts, different results, different types of media with particular commercial customs, different results.

That seems to have worked reasonably well. And so, now, they are -- friends have problems with the existence of licensing generally, and that's fine. But there's no -- but it's a big jump to say from there that, okay, well, embedded software is a special problem that needs these special rules. It doesn't, and I think that's -- I'm not sure that Congress necessarily agrees with that premise, and certainly the courts haven't.

And then, finally, there were two little things about ownership that I wanted to mention. The

first has to do with unforeseen consequences. I mean, I think one of the reasons that open-source software works is that because the license restrictions run with the copy. And so, if someone becomes an owner of a particular copy, they're no longer bound by the license restrictions. So at that point, how does the community survive? What's the incentive for the open-source community to survive?

And the second thing that struck me, again, in sort of making it out that, oh, there's this software bogeyman, I'm not sure that's right either because -- and an example of that is 512. There's all kinds of works now that are reproduced in RAM. That's not unique to software. And that may be a problem that our friends have with the copyright law generally.

But again, that protection of content on computer networks is, frankly, essential to many of my and other folks' and members' well-being. And that's not a -- that is not a particular provision in the law that we're inclined to reexamine, or application rather.

MS. ROWLAND: I had a follow-up question for you.

MR. MOHR: Yeah.

MS. ROWLAND: We're really trying to limit this to the scope of consumer products and embedded software, which, as we heard from the first panel, is apparently very difficult, if possible at all, to draw. But a lot of this discussion is really way beyond that kind of situation.

And in *Vernor* and *Krause*, they both dealt with the software itself. So you're selling -- there was a license for the actual software versus a sale. And I wonder what the opinions would be or the kind of legal analysis could be based on something else. Like you buy the refrigerator. It has some sort of software to make the ice cubes come out or whatnot. When you buy the refrigerator, you're not signing a license or anything. It's just kind of coming through. And what the different analysis might be.

MR. MOHR: I think in that context, I mean, the analysis would be kind of -- I would expect it to be context-specific. So in other words, all of those

decisions would be made against a backdrop of sales of goods that have occurred for decades.

And so, I agree. I think slapping a label on a refrigerator saying this refrigerator is licensed, I'm not sure that would -- I'm not sure that would work. But that's not what's really happening.

I mean, when that refrigerator contains essentially a functioning computer and that computer starts -- results in a continuing relationship with the software provider, for example, over, I don't know, what you had in -- what the UPC codes are that you put in your refrigerator and now it know what you've been eating, how often you're eating, whether or not you're on your diet plan, all of this other kind of personal information.

That's an appropriate, very appropriate situation for a license agreement. That is also a way that the manufacturer maintains the integrity of its product, by kind of setting the terms under which that relationship occurs. They're entitled to do that. And if consumers don't like that relationship, there is no -- they can go and buy a different refrigerator.

That's why we don't see this as a -- we don't -- as a group, we generally don't see a problem here. It seems to be working okay.

MS. CHOE: Mr. Zuck?

MR. ZUCK: Thanks. You do come around past what you originally thought you were going to say. But the discussion evolves. But I think that, again, taking a kind of step back, there's the entire history of the software industry that comes into play when looking at some of the standard practices that we see. Like prohibitions on reverse engineering and you have to remember that that's a legacy of tremendous amounts of software piracy and people just trying to empower themselves in any way possible to try and stem the flow of that.

I also think that it's a little bit specious to say that a copy, a digital copy of something is really the same thing as a physical object. And where this really bears itself out is that enterprises, for example, have one copy of a piece of software and can buy multiple licenses for its use. There's different keys, et cetera, that I put in to make use of the

software. So it's a little bit like you're allowed to make as many copies of this encrypted book as you want to. But what I'm going to sell you is the key that allows you to decrypt which letters to read to read the book or something like that, right?

And so, I think there is a distinction that has allowed for very dynamic business in terms of business models, whether the example you brought up in terms of educational pricing, enterprise pricing, et cetera. There's different support plans. There's also a history of support for software that's very different than it is for physical products and there's reputational things to consider as well.

I mean, we have a member, Drinkmate, that actually made an overt attempt to have an open license for people to create different versions of the implementation software on what was essentially a personal breathalyzer device, right? And what they found over time is that they weren't able to maintain a standard of quality among these sort of publicly provided versions of the software for devices and they suffered a reputational harm as a result and had to --

and were only enabled to because of it being a license, to bring that back in-house and make sure that only their software was associated with those devices so that they could recuperate from that reputational harm that they suffered.

So I mean, I think there's a lot that's unique about software. I think as we move forward into the internet of things and embedded software in devices, you're going to see more experimentation in business models. And some of the legacy practices will start to fall away because some of the legacy dangers will fall away at the same time. But I think all of that is going to happen much more quickly, in a much more dynamic fashion than any kind of legislative effort would happen.

So again, as we said in the last panel, I think that the existing mechanisms that are in place, both in terms of contract law and copyright exceptions, provide a more fluid and a better place to deal with these issues than some kind of legislative solution.

MS. CHOE: Mr. Perzanowski, I think you --

and then we'll go to Mr. Bockert.

MR. PERZANOWSKI: So there are a couple of distinctions that I think are useful to draw that I think at some points in our discussion have been confused. So first, I think we need to distinguish between licensing software and licensing copies of software and those are two very different things.

I also think we have to distinguish between questions of interpreting and enforcing contracts on the one hand and what I think should be the crucial question for this discussion, which is how we determine whether a transfer of ownership has occurred when it comes to particular copies of software, right?

And one place I think it makes sense to look is the statute itself. Unfortunately, maybe for better or maybe for worse, the Copyright Act does not define ownership in the context of consumers. It doesn't define transfers of ownership.

But there is language that's useful in this interpretative question and that language is in 106(3) itself, right? 106(3) defines the kinds of distributions that copyright law recognizes when it

comes to particular copies. And it divides the universe into two kinds of distributions. There are sales and other transfers of ownership on the one hand and there is rental, lease and lending on the other.

So every transfer of a copy, every distribution of a copy is either a transfer of ownership or it's a rental, a lease or a lending. That's really clear from the statute. So the question is if someone wants to license a copy, which one is it? And I think if you look at it from that perspective, it's actually a much easier question to answer.

The idea of a licensed copy is really a myth, right? That's not a real thing. It's not a transaction form that the Copyright Act recognizes. You might say that there are certain kinds of leases or rentals or lendings that you want to use the label license to characterize. But there's no such thing as a licensed copy. The software industry has been pretty successful in convincing some courts that that's a real thing --

MR. DAMLE: But how would you -- sorry. How

would you explain *Wise* then, where they essentially had perpetual possession of the movie -- the film prints, but under restrictions. And the courts --

MR. PERZANOWSKI: You're talking about *Wise*?

MR. DAMLE: Yeah, *Wise*.

MR. PERZANOWSKI: So we could characterize -- we could look at the facts of *Wise* and say that that is -- that that is a lease, that that is a lending, that there are certain restrictions, right? So what is it that separates a transfer of ownership from one of these other kinds of more temporary time-limited transactions? And it might be an ongoing obligation to pay. It might be that there is some sort of durational limit, right? At some point, you've got to give the thing back. That fits I think reasonably well into the common understanding of leasing or rental, right?

It's not a transfer of ownership if, when the thing is given to you, it is made explicitly clear that at a certain point you have to return the item, you have to destroy the item. That's not a transfer of ownership, right? Ownership entails perpetual

possession, no ongoing obligation to pay. When those two factors are present, what you have is a transfer of ownership, right?

MR. DAMLE: So is it your position that both *Vernor* and *Krause* are incorrect? Not the decision, that the reasoning of both of those cases is incorrect?

MR. PERZANOWSKI: I'm happy to say that the reasoning in *Vernor* is incorrect. I think the reasoning in *Krause* is less clear than it should be, although I am --

MR. DAMLE: But *Krause* acknowledged that there could be -- I mean, it didn't find a license in that case. But it acknowledged that there could be licenses.

MR. PERZANOWSKI: Yeah, that's right. Yeah. I think the conceptual framework that courts used to answer this question is confused.

A couple of other points here. One of the questions that came up is what's the value of a license that purports to deny a transfer of ownership to a consumer? And there's a lot of value there.

It's value that I think we should question from an overall social utility standpoint, right? It's about restricting resale. It's about controlling aftermarket products. It is about controlling the market for services. It might be about price discrimination, and we can have a debate about the merits of price discrimination.

There are other means other than denying consumers the right to own the things they've purchased to achieve price discrimination. I think it's worth pointing out that the Supreme Court was really clear in *Kirtsaeng* that price discrimination is not among the rights that copyright holders get to enjoy by virtue of their copyright. So if we're thinking --

MR. DAMLE: But you would acknowledge there are -- I mean, this is sort of like basic economics, right? I mean, there are consumer benefits to allowing for price discrimination.

MR. PERZANOWSKI: There certainly can be. But I would not say that price discrimination is necessary overall to the benefit of consumers. There

are certain circumstances where price discrimination is in fact very useful for consumers. But denying consumers ownership and imposing ongoing copyright obligations is not the only way to price discriminate. There are lots of industries that price discriminate that don't use copyright law whatsoever.

And I think we've seen in the wake of *Kirtsaeng* that price discrimination in the market for academic textbook continues. There are other ways of achieving that goal. One way of achieving that goal is to not sell products to people, right? Don't engage in transactions that look like sales. Engage in transactions that look like subscriptions, that look like rentals. My students have the option to get their case books in law school on a rental model, right, or on an ongoing subscription model. That at least is an honest way of engaging with consumers.

You're not characterizing a transaction as a sale when in fact you don't believe that it's a sale. Those kinds of transactions carry with them expectations that consumers think they're getting a certain set of rights when they buy a product, right?

When you go and you buy that new refrigerator, you think you own it. You don't think you're entering into an ongoing relationship with a service provider, right? That's what you do with your cable company. I won't say more about what people think of their cable companies.

But when you buy a refrigerator, you think you own it. You think you have a certain set of rights. I just -- I have a study that was just published last Friday that looks at this question in the context of digital media, that looks at the buy-now button used prominently by Amazon and Apple and finds that consumers believe they have the right to engage in resale with digital media that they buy now, to lend that digital media to others, to give it away, to leave it in their will, right?

So when you set up a transaction, when you present it to consumers in the context of a sale, they have expectations about what they're getting. And the fact that some license agreement, that no one in their right mind would invest the time to read -- includes terms to the contrary does not change those consumer

expectations, right?

So this isn't to say that we can't allow for flexible business models that give software companies the kinds of -- the kinds of protections that they think they need. You can look at what Adobe has done with its Creative Suite over the last few years. You can't buy it anymore. You can pay Adobe $50 a month for the rest of your life if you're a creative professional to use their software.

And in a lot of ways, I think that was a really smart decision on their part, right? It avoids the problems that they saw with resale. It allows them a more predictable revenue stream. It allows them to deliver product updates to consumers in a more effective way. And it's a really honest transaction. You know what you're getting from the outset.

MR. DAMLE: So is this a problem that's going to diminish as we go forward because, as we move more and more into kind of cloud-based services, the sort of -- the sort of problems that you've identified are kind of problems of the moment. But we have Office 365. There's all sorts of other ways in which

we're now -- software is moving now into like cloud-based subscription models.

MR. PERZANOWSKI: So in some ways --

MR. DAMLE: And the reason why I'm asking that is because, if we're looking ahead, if we're solving yesterday's problem, it doesn't make very much sense.

MR. BERTIN: I'm sorry. Can I just add one point on top of that? I mean, the Adobe example you cite is a good one. But sort of the logic behind your argument is that the physicality of the Adobe product is gone. There is no longer a CD that you're purchasing. You're simply downloading the product, as opposed to your refrigerator, which is physical in every sense of the word and it's going to be with you for a long time. So is there a distinction there?

MR. PERZANOWSKI: Yeah. Well, I think in the Adobe example, you're not buying anything, right, that transaction is absolutely on the rental, lease or lending side of this divide in section 106(3). So I don't think there's any good argument that the consumer owns anything. They're paying for a service.

In terms of whether this is yesterday's problem or tomorrow's problem, in some ways, I think for markets for pure software products, we are going to see a move in this direction towards cloud-based services.

The area where I think we need to be focusing, as I think we are here today, is what happens when we see software embedded in everyday products that consumers use every day, right? There, there is necessarily a kind of physical embodiment of the work and of the product.

And so, in those circumstances, I don't think you can escape these questions, right, because the nature of the product embeds that kind of physicality. And unless we start to see -- which I'm doubtful about -- unless we start to see a really explicit shift to now you don't buy your home appliances, you lease your home appliances, we're going to have to face this question of who owns the software that makes that product work, right?

The software is just as important to the functioning of your car or your new smart refrigerator or your smart TV as any of the physical components.

So to tell consumers, sure, you own the plastic and you own the chips and you own the display, but the thing that actually makes the thing work, the thing that actually makes the thing valuable, someone else controls that. That puts consumers in a really precarious situation, right?

Think about -- I missed the beginning of the first panel. So I'm sure someone has already mentioned Revolv. But look at what happened with that device. Consumers went out. They bought this device for $300, this home automation hub. They thought they owned it. They thought they got to use it as long as they wanted, until one day they got a message that said, oh, that thing you bought, that's a brick, right? It's useless now, because they don't own and they don't control the software that makes it operate. That puts consumers in a really precarious position.

So you know, I'm worried about a future where consumers have this illusion of ongoing personal property rights that they have enjoyed for centuries. But what's really going on and what they will learn only when it is too late is that they really have no

control over the objects that surround them and that they rely on.

MS. CHOE: So first, I'm going to announce that we're extending the panel since there are some really good thoughts being discussed. But going sort of towards what you've been talking about, how has -- and this is for you and everyone else -- how has this played out in the market?

I think you mentioned -- I don't know if this is actual data, but the possibility of the refrigerator and that if consumers aren't happy with the restrictions that come with that refrigerator, that they can just buy a refrigerator from a different seller. And in the comments, there is the example of the Keurig device, where people were upset with the restrictions set forth by Keurig and they decided for PR reasons to move forward in a different direction.

So I'm really curious how the market plays out in this sphere.

MR. PERZANOWSKI: I think the short answer is it's too early to tell. This is all developing as we speak. There have been instances where consumers

were up in arms enough about a particular restriction that they could -- that they could effectively move the needle in terms of how a company responds. There have been other examples where that hasn't been the case.

Frankly, the big problem is these restrictions do not become clear to consumers until they are faced with a device that doesn't behave as they expect it to, right? So you know, the Revolv is I think the clearest and most recent example of that. It's not the only one. The comment that I submitted includes a long list of consumer devices where these kinds of problems have presented themselves.

So I'm not willing today to say that the market is going to be capable for solving these problems. I think in some instances it will and in many, it won't.

MS. CHOE: So why don't we move on to Mr. Bockert?

MR. BOCKERT: So I think --

MR. DAMLE: If you'd just turn on your microphone?

MR. BOCKERT: Sorry. So the refrigerator example is a good one. And you confront a variation of the problem or this issue in almost every merger and acquisition, where you have a buyer going in and saying I want all your refrigerators in this facility.

And in the back of your mind, you're like, well, each of these refrigerators has software in it so that when you press a button, it shoots out ice, right? And you go to the seller and you say, I'd love to see the license that covers the software that shoots out the ice in your refrigerators. And the seller, of course, says: "I either had it and I lost it, or it doesn't exist at all." They just don't know.

And then, as a buyer, you have to ask the question, am I allowed to acquire this? Is the owner of that software going to hold me up -- hold up the transaction, perhaps have a special transaction fee just to allow it to go through? And you know, in refrigerators, it may be an easy example because it's small amounts of money. But the larger the products get, we can start adding up a lot more money.

And I think the idea is we already have concepts, especially imported from patent law, like the doctrine of exhaustion, where we can say, maybe in certain cases with software, when it's embedded in a consumer product and it acts in a certain way in that consumer product, the doctrine of exhaustion can apply. We can say, "look, this is what it's doing in that refrigerator. Therefore, the sale can go on; it runs with the good."

MS. CHOE: Why don't we move back this way? Mr. Zuck?

MR. ZUCK: Sure, and I know we're running a little bit long. I guess again I get back to the notion that there's a lot of dynamism sort of in the marketplace. And so, if you look at TiVo as another example, they were practically giving away hardware that was in conjunction with software as a service that allowed for programming and storage of content.

And so embedded in that business model was sort of like basically subsidizing the hardware with what was a software license. And again, I think that you're going to potentially see things like that with

refrigerators, that there's a service or you connect it to Weight Watchers or something like that associated with your refrigerator and its monitoring capabilities.

And I can't foresee what all of these business models are going to be. But I can imagine them. And I think to some extent, we're going to have to rely on requirements for notice and things like that to take the place of trying to jigger the law around it. And again, I come back to that being the fundamental question you're asking is whether or not there is some fundamental change to be made to copyright law to accommodate what is an incredibly dynamic market with an incredibly dynamic business model.

And as I said, as the risks associated with piracy change, as the needs for consumers change, I think the market will evolve in such a way that it'll address these things. I mean, the number of people that are really affected by the license agreement in a refrigerator and their inability to sell it, at least to date, is nonexistent, right?

People have been selling devices in cars to each other that have software embedded in them for the most part. And so, again, until we really have an identifiable problem, I think we shouldn't be looking ahead to the solution, because we'll get it wrong.

MS. CHOE: And Mr. Mohr?

MR. MOHR: Two responses, I guess two hopefully pretty quick points. Right, well, so the first has to do with the idea of licensing copies on which the entire open-source software industry is based. A wise man once said, and I think it was John Band, that if all the courts come out against you, you've got to entertain the possibility that you're wrong.

And in this particular instance, I mean, that's the way all of the cases have come out. That's the legal reality we live in. That's the reality that's worked quite well. Again, it's the model that open-source depends on and a lot of our other members depend on to make money.

The second thing I would suggest is to be careful, very careful when you analyze these issues

about getting confused between issues of consumer protection and issues of copyright law. So it is true that if you, in certain circumstances, in a specific transactional context, that the presence of a buy-now button could convey an impression that is dismissive or deceptive and it is also true the same can be said of many things, for example. Campaign commercials.

It does not follow from that that there is any in the copyright system whatsoever. And I think it's important to draw that line between a particular practice and a particular context. And this is one of the things that the PTO is going to look at because this came up in the context of their study and some kind of inherent problem with licensing itself. I think these are two very different inquiries. That's it.

MS. CHOE: Mr. Harbeson?

MR. HARBESON: I want to go back to the refrigerator and point out that, yes, the consumer can go find a different refrigerator if she has a problem with the licensing. But she still needs the refrigerator. And if all of the refrigerators can

carry some kind of unacceptable license, she's out of luck.

Now, to use that to once again beg the room's indulgence, in the case of a sound recording of a musical work, it's the only sound recording. It's a monopoly. This is why this is related to copyright. If you're the only -- if you have the exclusive right to that particular sound recording and my library needs that particular sound recording, there is no other way I can get it. That's where the consumer protections fail. There is no way for the library to serve this material.

And another thing that I've heard brought up -- it may have been in an earlier panel, and I'm sorry if it was -- but the idea that software licenses are -- well, the software products are updated so fast and their lifespan is so short that they really aren't -- they aren't a long-term problem. But with sound recordings, which last hopefully hundreds of years -- in some cases, they lasted more than a hundred anyway -- a license that doesn't have an expiration will become a problem for a very long time.

And so, again, I really would like to encourage everyone to think about this as a problem that's much bigger than simple software-enabled consumer products. The folks that I represent are not -- do not have a problem with licensing per se. the idea of an iTunes model, providing licensed copies, begging your pardon, to consumers directly for 99 cents and having all of those terms and conditions is not actually our problem.

The problem is when libraries specifically are excluded from that process and are unable to include culturally extremely significant works in our collections and those works die out as soon as the service dies out.

MR. DAMLE: Okay. Thank you.

MR. LOWE: So I want to address the issue of whether you can go out and buy another product. When you purchase a vehicle, you're spending $30,000, $40,000 for that car. The information that's available to you about the repair of that car, the licensing is not entirely apparent to you until you have to actually go through it. And then, you find

you're now subject to the fact that you don't own that vehicle.

The licensing hasn't really occurred in the motor vehicle area. But I mean, it's part of the 1201 discussions that car companies raised the fact that when you purchased a car, you were -- the owner was licensing that software and didn't necessarily own that software that was on that vehicle. That created a huge firestorm in itself and within our industry and with consumers.

And I think that cars are around for multiple years. What happens to those cars? They change hands. Parts are taken off those cars with software on them and then they're remanufactured by individual companies that then what happens to that software? Can we reuse that software on that remanufactured part? Because the part itself needs to have that software to operate. Those are all questions that I think are -- that I think need to be answered as well.

But I don't believe that you can simply say that you're going to just buy a -- if you buy a Ford

and you don't like the whole deal, you can go out and buy a Chrysler next time because simply you're pretty much stuck with that car for a while and the servicing of that vehicle.

MS. CHOE: Do you feel like the market in that area hasn't addressed those issues? I recall there being some press on some of the car companies considering those issues and those concerns and coming to I believe it was a memorandum of understanding when it comes to, you know --

MR. LOWE: Yeah. We came to a memorandum of understanding on the right to repair, which meant that all the information tools and software supposed to be available to a repair shop to be able to repair that car. But that doesn't necessarily cover the part itself.

MS. CHOE: Mr. Kupferschmid?

MR. KUPFERSCHMID: Thank you, and I guess maybe we can talk about a different product there than refrigerators so close to lunchtime. I don't know about you. I'm getting a little hungry. To address a few points of Professor Perzanowski -- if I'm

pronouncing that right -- discussed, he had some -- took some issue with the *Vernor* case, but at the same point talked about how you distinguish lending from a sale and the fact that lending -- and I'm pretty sure this is a quote -- there are certain limitations.

If you look at the *Vernor* case, it sets part -- there's a three-pronged test and that includes that the license includes limitations on transfer, but also limitations on use. And that would sort of seem to satisfy that requirement. It was also raised about the question are we trying to solve yesterday's problems and I could not agree more with that.

For some reason, we have this fascination, love affair with destruction and return of the product and hitting the buy-now or buy button and people are -- consumers are confused about that. I think it depends on the consumers. I think if you were to have my 17-year-old son sitting here instead of me, I think he'd say there's no confusion whatsoever because he's grown up in an environment that's very different.

If you look at -- I mean, and this issue is not specific to copyright either. If you hit the buy

button when you're buying a seat on an airplane, but I don't think anybody thinks that they're actually buying that seat. And so, I think that terminology has just been used because it's easier for consumers to understand.

We talk about sort of these long EULAs and long licenses and it's so difficult for consumers to understand. The idea is everyone's trying to make it easier for consumers. And if you have these long descriptions within the button, I think that would certainly make it more difficult.

And then, just a last thing I'd just reiterate which was already said, to the extent that the software licenses embedded in software -- because remember, that's what we're talking about here -- are being misused or abused, the market is and will be self-correcting. In our comments, we mention the Keurig example, okay? And that applies here.

If you're engaging -- if a software or a hardware manufacturer is engaging in sort of anti-consumer behavior, they're not going to be around very long. And if the manufacturer is dealing with a

software company and that software company is trying to enforce their license in a way that the manufacturer isn't -- and device manufacturer isn't particularly pleased with, well then that relationship is not going to last very long either.

So there are -- in terms of the market and relationships, there are self-correcting mechanisms in there if in fact these problems were to continue to occur or occur going into the future.

MS. CHOE: Mr. Band?

MR. BAND: So a lot of people have raised the issue of sort of that there's this continuing relationship, that you're really not getting software as a product, but it's software as a service. And that certainly might be true with respect to some of the software in the devices that we're talking about.

I mean, it could very well be that in your computer there is one piece of software that is communicating to the central server somewhere in the sky and telling them that you are eating too much.

But I think there's going to be a lot of other software in the refrigerator and certainly a lot

of other software in the car and all of these parts that Mr. Lowe has been talking about that communicate with one another, where they're not interacting with -- that they're just interacting with other parts of the car. And you'll have the software that's interacting with other parts of the refrigerator.

And I think it's important to sort of try to keep these issues -- keep those separate because I agree that if there is an ongoing relationship, that poses different issues. Now, part of it -- there's a related issue, like are you paying for the ongoing relationship. Certainly if you're paying the subscription fee every month, that's one thing.

If there's sort of a paid-up license at the beginning, where it's understood that you're -- for the life of the refrigerator, it will always be communicating with the cloud, that might be a different situation. And maybe in that case the person who bought the refrigerator has a different bundle of rights.

But it certainly seems to me that if we're talking about sort of software that is -- where there

is no ongoing relationship -- I mean, that seems to me to be a much easier case to say, okay, let's figure out how to deal with that situation. In other words, there's a bit of a spectrum here, a spectrum of relationship. There could be situations where there's absolutely none. There could be a situation where there's a very tight relationship with the ongoing subscription.

And then, you have situations in the middle where there might be some sort of ongoing relationship and it's all paid up. And those are three very different situations that I think could be --

MR. DAMLE: So do you think -- I mean, to me, that suggests that then we should be very careful about trying to establish rules in this area and maybe it's something that we should let courts sort out on a case-by-case basis. I mean, do you disagree with that?

MR. BAND: Yes, because I think it is possible to come up with rules. Certainly where there is no ongoing relationship whatsoever, I think that's a very easy case, and we could come up with rules

today. And in fact, to some extent, that's what YODA tries to do that. It tried to be very careful. And one of the things that -- in conversation with Congressman Farenthold's office that came up was exactly this. Well, what about -- what about the updates, right?

And so, there were some folks who said, well, if you -- and again, we were only dealing with -- the contemplation is only when you have a paid-up license, when it's all -- you pay once up front. No ongoing payments. And so, should you be -- when you sell it to the -- when the device is sold to the second person, what do they get in terms of -- in terms of the software going forward?

And there were some folks who were very interested in saying, well, you should be able to get whatever the first person -- whatever the first purchaser would have gotten if it had stayed in that person's possession. So to the extent that there would have been ongoing updates, then, the second purchaser should be able to get everything that the first purchaser had bought -- would have gotten.

But actually, those -- the ultimate conclusion -- again, not necessarily that our members would have wanted -- was that, no, you only get bug fixes and security patches. You don't get the new releases. So that you're -- that there's -- you are -- even though you would have paid up front and if it had stayed with the first person, they would have gotten any new release, the idea is that because the sense was that there is this ongoing relationship and it's sort of different, that you don't get all -- you don't get the full bundle, you get less. But the point is that these are lines that Congress is perfectly capable of drawing.

MR. DAMLE: That line seems particularly -- that seems like a very -- a very difficult line to apply in practice. If I'm a software company, oftentimes I'm bundling bug fixes with new releases. So I'm adding new features and I'm adding bug fixes and sometimes they're sort of integrated.

MR. BAND: Well, so if the Copyright Office wants to recommend that it should just be -- you should get everything the first purchaser wanted and

that you should get all of the new releases, that would be great.

MR. DAMLE: I mean, but that again goes back to the question of whether there's like a practical concern here. I mean, I'm just looking on eBay to see if I can buy a used Nest thermostat, and you can.

And I'm not -- so going again to the fact that this is about consumer products, if there's not a problem -- a demonstrated problem in the marketplace, I'm not sure, just looking at it from Congress' perspective, that they particularly would be interested in trying to jump into this kind of thorny issue.

So again, just to reiterate, to the extent that we have specific examples of this occurring in the context of consumer devices, not in the context of sort of business-to-business-type transactions, I think that would be something we'd be very interested in finding out about.

MS. CHOE: Mr. Bergmayer?

MR. BERGMAYER: Okay. Just for the record, open-source software is not dependent on licensing

copies. It's dependent on licensing intellectual property rights that the licenses otherwise would not have and placing conditions on those rights, which is totally legit.

So for example, the GPL grants to the licensee the right to make reproductions or the right to make derivative works. Licensees don't otherwise have those rights. So putting conditions on those is fine and I don't have an objection to that. Those licensees do not depend on saying that the ultimate user does not own a copy of the software in question. And I think that is a very important distinction.

Second, I think, let's say for the sake of argument that I own this iPhone. When I install an app on it, I think I own a copy of that app. A copy is defined in the statute as a material thing. The only material thing I see is the iPhone. Therefore, I necessarily own a copy. I don't think there are negative consequences of that for the software developer.

What does it mean? It means that I can operate the software without needing a specific

license by virtue of the essential step test, the essential step doctrine, which says that I'm entitled to make RAM copies that are necessary to use physical items that I own. I don't think that's bad for software developers. And it might mean that first-sale applies.

But as a practical matter, in today's technological environment, what am I going to do? Sell my entire phone, including my iTunes account? That's really not going to happen. I think it could happen if I were to sell my iPhone, including my iTunes store account that it's tied to. I think I should be allowed to do that and I think that's where first-sale would kick in.

But as a practical matter, first-sale doesn't entitle me to make arbitrary numbers of new copies and resell them. It doesn't entitle me to engage in piracy in any respect. In fact, the main thing that saying that I owned a copy of software that I bought, even in the case of an Adobe Creative Cloud situation, is simply to say that simply by virtue of owning it, I don't need a license just to use it.

It doesn't grant any new rights. It doesn't necessarily even entitle me to software updates in the future. And I don't think that is bad for the -- for software developers and I have a hard time seeing why there is such resistance to this concept, which is grounded in the plain text of the statute that, one, copies are material items and, two, if I own the material item, I own the copy.

I don't -- I have very much difficulty in seeing the resistance to that, except for the fact that by saying that you don't own the copy, that brings up the RAM copies doctrine and it allows you to put all kinds of restrictions and sort of gin up copyright violations for what otherwise would be routine contract violations. So those are my two final points.

MR. DAMLE: So again, is it your position -- I mean, I'll ask you the same question I asked Mr. Perzanowski before. Is it your view that both -- in a sense, both *Krause* and *Vernor* had it wrong when they suggested that there could be licenses for software?

MR. BERGMAYER: In the case that I don't own

software, it's because I don't own the material item. So when you're saying that I don't own the film, that means I don't own the film stock. There's no third way. There's IP rights and there's material copies. There's no like ethereal copy that is somehow apart from the material object and has nothing to do with the traditional 106 rights.

MR. DAMLE: Yeah. No, I understand that point. But both *Krause* and *Vernor* proceeded from the assumption that there could be licenses in copies. And they reached different results at the end of the day, looking at the facts. But I think they both had that same basic understanding.

MR. BERGMAYER: So I think to use the helpful terminology, in any of those cases, if you're saying that I've licensed a copy, what you're saying is that the material object is something that I don't really own because I'm just borrowing it or something. And that's fine and that's not unique to software.

MR. DAMLE: All right. Thank you.

MS. CHOE: We'll conclude with Mr. Perzanowski.

MR. PERZANOWSKI: I'll try to be really brief. So I want to come back to the point that Chris made, which I think is really important. And I agree that for the most part, these kind of false advertising concerns that I've raised are legally distinct from the kinds of questions that we're trying to answer here.

There is one way that I think they're relevant and it comes back to a point I think you made earlier, which is that one of the reasons that the software cases seem to come out differently from the other kinds of license versus sale questions with other types of media is that maybe we think there's something different about business practices, about the history and about consumer expectations in software markets.

I'm not entirely convinced of that argument. If that's true though, it cuts both ways, right? If consumers are used to licenses when it comes to standalone software, they're not used to licenses when it comes to refrigerators, right? So we should think about that line of reasoning not only in terms of how

it applies looking backward, but in terms of how it applies looking forward into areas where consumers have no expectation whatsoever of licensing and where there is no history of a practice of licensing.

To come back to Keith's point, the great thing about doing empirical research is you don't have to suppose or imagine. You get like answers to questions. And it turns out that young white men are in fact more confused than anyone about what the buy-now button means.

And it turns out that providing a bullet-pointed short notice significantly reduces the degree to which consumers misunderstand their rights. The paper's up on SSRN, if anybody's interested. I'd recommend you read it because I do think there's value from having real evidence and not just imagining the way the world might be.

MS. CHOE: Great. So we're going to take a 15-minute break.

MS. ROWLAND: I think maybe we should shorten it a little bit.

MS. CHOE: Oh maybe we should -- yeah.

MS. ROWLAND: What time is it now? Maybe we should just take a 10-minute -- actually, maybe nine so we'll be back at 11:50.

(Whereupon, the foregoing went off the record at 11:41 a.m., and went back on the record at 11:50 a.m.)

MS. ROWLAND: This next panel is going to be on fair use. And I think it's going to be a little abbreviated due to the length of the earlier panel. But originally, it was supposed to be in the next panel, but we realized it was such a large issue, we wanted to separate it out. So I think it should work fine this way.

Fair use is obviously a very important defense in copyright law. And we've seen it raised in a lot of different contexts with computer software. And in this panel, we really want to narrow it to everyday products and embedded software. But obviously, that is informed by fair use law overall.

So I want to open the panel with a broad question about is fair use functioning well in connection with these types of products and software.

Does anyone have any views on that? Okay, Mr. Harbeson?

MR. HARBESON: I am also one of the non-lawyers on this panel, and so, someone feel free to correct me if I'm wrong. But as I'm understanding it, to the extent that the licenses are restricting uses, fair use isn't relevant until you clear the contract violation.

So for example, to again take my completely out of software world example, if I wanted to use Mr. Dudamel's recording of his work in a way that constitutes a fair use, perhaps I would not be subject -- I would not be able -- I would not have a copyright violation perhaps. I don't -- that's my sense, is that I wouldn't perhaps have a copyright violation. But I would still be in violation of the contract, even if it's a non-infringing use.

So we would love for fair use to apply. If fair use did apply in the context of end-user license agreements in general, I think that would be great. But I'm not sure if it even does. So please someone correct me if I'm wrong.

MS. ROWLAND: Mr. Zuck?

MR. ZUCK: I'll reiterate that I'm not a lawyer. So I won't be able to correct you on that, although I would -- it's a weird echo -- I think that it generally does apply in those contexts or that it has. And I guess the interesting phenomenon that I've found as a photographer and filmmaker is that fair use has come to mean to the common man: I'm not trying to make money from this, and therefore it's fair use.

And so, there is some misconception though I think about fair use out in the broader populace for sure. But I think the cases with which I'm aware of embedded software like Landmark and things like that, I think that the courts have ruled in a way that is generally considered to be the correct way on this issue, even though those cases were raised as extreme uses of copyright.

It seemed like the specific exemptions that were laid out in the DMCA, which is a little bit of legislative fair use in some respects, have been effective. So it's certainly my contention that fair use, to the limited degree we have data at this point

about its use in embedded devices, has been effective.

MS. ROWLAND: Mr. Band?

MR. BAND: So, we'll know whether fair use is effective in this area more in, I don't know, a few weeks when the jury reaches its decision in the *Oracle v. Google* case, because even though that's not dealing specifically with software-enabled products.

I mean, it's talking about the Android and the APIs there. And I guess Oracle is only seeking $8.8 billion of damages. So hopefully the jury will reach the right decision and find that it is a fair use.

But of course, in my view, it shouldn't have even gotten to the jury. I mean, I think the district court got it right that the issues, the elements of the APIs used by Google were not protected by copyright in the first place.

I think the Federal Circuit made a horrible mess and a lot of what the Federal Circuit -- both its holding, but even worse its dicta causes -- will cause enormous problems down the road for people who want to make interoperable devices by basically saying that

interoperability is not -- has nothing to do with protectability, means that you're always going to be pushed into the fair use analysis if other courts agree with the Federal Circuit, which hopefully they won't.

I think it was a terribly -- a terrible -- I mean, I'm talking like someone else. It's a huge, huge, huge problem caused by the Solicitor General by urging the -- by advising the Supreme Court not to take cert. The Supreme Court should have taken cert. in that case and it's unfortunate that the Solicitor General basically said that the Federal Circuit decision was okay.

And I think that hopefully the next time this comes up, the solicitor general is more forward looking and makes sure to the extent that this does come up before the courts, that the U.S. government takes the right position.

MS. ROWLAND: And Mr. Bergmayer?

MR. BERGMAYER: Yeah. So you know, take everything I said before. There's a lot of issues where I think you shouldn't have to resort to fair use

to adjudicate certain problems. So then let's say I lose those battles legally.

So then, what happens? And it's like, yes, well, I hope that fair use is sort of a fallback doctrine and can step in to protect consumer rights in certain circumstances. That aside though, I do think that fair use in software is extremely important for just a number of respects.

I'll just name one, which is security research. I think part of the embedded software debate is the internet of things debate, where every device is attached to the internet and is subject to being hacked.

I think probably everyone here is familiar with the baby monitors which have been hacked and people can remotely watch your baby over the internet because of devices that ship with terrible default security settings, where incidentally the sellers of those devices disclaim liability via a software license.

There is a doorbell incident where just last week it turns out that a smart doorbell system was

accidentally giving people -- showing people the wrong house. That was a server-side error.

But nevertheless, I think in the case of software, we really do need to sort of have a robust understanding that security researchers through whatever copyright doctrine, including fair use, are entitled to inspect software, to ensure that it is not putting people at risk.

And I'll just name another software-related copyright issue where I think fair use has some role to play, which is just the notion of as the tools that people use for creation become increasingly sophisticated -- for example, with computer animation where you're provided models and then people just sort of use the models as if they are puppets.

Sometimes this is called machinima where people are using essentially videogame characters to act out plays and then record them. You have a very tough question of who is the author. I think it's pretty clear that if I write a sonnet on a piece of paper, the pen and the paper companies don't have an authorship claim in my work.

But as software tools that people use become increasingly sophisticated, they sometimes claim to have an IP interest, an actual authorship interest in anything that you create using that software tool. I think that is a troubling trend and it's not something that I don't think we can resolve today. But I think fair use, at least at the margins, will be necessary to resolve issues like that.

MS. ROWLAND: Mr. Bockert?

MR. BOCKERT: I think Mr. Bergmayer's absolutely right in the idea that fair use is a defensive last resort. And I'm thinking of all the times that clients call , and if your explanation to them is that they're not infringing someone's copyright because this qualifies under fair use, then they ask the question: can we rely on that? And the answer is almost always: maybe, and it's going to be an expensive fight if it comes to it.

And so, I think the idea would be we can have fair use, sure. But I think we need specific exemptions and clear guidance like how the first-sale doctrine applies in this context. I was talking

earlier about the doctrine of repair and the doctrine of exhaustion in patent law. And things like that would more clearly show us what is considered a non-infringing use of software in these sorts of products.

And then, on a separate side, at least in consumer products, a copyright infringement claim under 106 is almost always paired with a claim under 1201. And I know we're not supposed to be really talking about 1201 very much here, but it's hard to talk about how copyright impacts software-enabled consumer products without addressing it.

And the fair use point is a good one -- is a good place to bring it up because fair use clearly helps you out under 106. But it doesn't clearly provide a defense under section 1201. And I think that's mostly because of the circuit split on whether you need a nexus to infringement on the anti-circumvention claims. And so, with a lack of clarity there, we could probably consider those issues in the context of --

MR. DAMLE: Right. But we do have a 1201 rulemaking where we address -- at some level, we

address fair use issues. We address issues under 117 in the course of getting to adopting exemptions. And particularly in the auto context, we recently adopted -- the Librarian recently adopted exemptions allowing vehicle repair. So I mean, is that a problem that can be solved through the rulemaking process, the exemption process?

MR. BOCKERT: Well, I think those would be separate discussions and I think that that's why whatever is resolved here is dependent on what's resolved there. I know we're trying to keep the concepts separate and distinct, but I think that they should influence each other.

MR. DAMLE: But so, but I mean, to go -- to focus on sort of the fair use point, I mean, to the extent that we -- to the extent that the Copyright Office and the Librarian opine on fair use issues in the course of granting or denying exemptions, is that something that you feel like you can sort of take to clients to say here's what the Copyright Office thinks about these issues in the fair use context?

MR. BOCKERT: I think it's difficult to take

without some qualification. You know, we look at the section 1201 ruling, rule 21 that's dealing exactly in the automotive industry, and it does say things -- like it says something along the lines of "these uses may be fair uses under 107 or it may be a non-infringing use under section 117."

And sure, that's something that's good to go to a client and say there may be some support here, in this rule in a totally different context. But how you import that to 106 -- this is very clearly something under 107 that you can build your business on? I think that's a different question.

MS. ROWLAND: Mr. Lowe?

MR. LOWE: So I want to build on Mr. Bergmayer's point of the importance of being able to research software and that -- I mean, look at the Volkswagen case, where if you couldn't go into that software and understand where the problem was, you never would have discovered that there was a major issue with the way Volkswagen had configured its software.

Our industry goes into parts all the time

and -- OE parts and deconstructs them and finds where there are problems, defects, issues with the original part, correct them. And when the part is sold as an aftermarket part, it has now a corrected issue on it and is safer or more environmentally responsible than the car -- the part that came from the vehicle manufacturer.

So it's a really important part of the fair use doctrine.

MS. ROWLAND: And so, are you happy with the way the courts are treating fair use with reverse engineering of software to repair things and whatnot -- and just repairs?

MR. LOWE: Yeah, and I think that that has to be -- it has to be clear that that is available to be done.

MS. ROWLAND: How would you suggest that being clarified? With legislation? Like with what sort of changes?

MR. LOWE: Oh, no. I'm not sure legislation would be necessary. But I'm also not a lawyer so -- I think this whole table -- this side of the table is

shortchanged on lawyers.

MS. ROWLAND: Oh, Mr. Kupferschmid is a lawyer over there.

MR. BERTIN: That's not necessarily a bad thing.

MS. ROWLAND: Mr. Perzanowski? Oh, I'm sorry. Mr. Harbeson?

MR. HARBESON: So I want to clarify something I said earlier and just to make sure that I was not saying that I didn't think that fair use applied. I think that the problem is not that fair use doesn't apply, and I've been hearing a lot of examples of things that I think are easily -- and the courts to the extent that I've been following software, have applied fair use.

The problem with -- as I understand it, with fair use and software-enabled consumer products and any software is that you have to find yourself within the scope of title 17 before you can use fair use. At least that's my understanding.

The conventional knowledge anyway is that a contract will override those. And so, I still kind of

see the problem with fair use. My feeling was that the reason that fair use is being talked about here is because of the conflict between what is fair use once you're within the scope of title 17 versus what software licenses tell you is not okay.

And so, can you actually apply fair use when the license that you signed is not? And if fair use is a defense against a breach of contract, then I can go home because I can tell -- I could tell my membership that we can rely on fair use. But I don't think that we can.

And so, we would be very happy if we could rely on fair use to make the works that we're trying to get access to available.

MR. BERTIN: So I mean, the premise, I guess, is that you have essentially been required or you have agreed to fair use by contract. Is that what you're saying?

MR. HARBESON: Well, right. Even -- let's pretend for a moment that libraries could enter into the agreements that I'm talking about, which are not unlike the software licenses. There's very similar

language in iTunes that you'll find in software. And I actually -- I read these software agreements a lot. So I've seen a lot of similarity.

Once you agree to that license, you're waiving the right to do things that fair use would permit you to do. And the same thing is true with 109, which we'll get to later. But so I think a lot of the problem is in that conflict between what would -- what would clearly be a fair use and then what you're agreeing to by a non-negotiable contract not to be allowed to do.

So again, we would be very, very happy to argue fair use for the things we want to do. I think that many of the examples that were brought up, it would be a very easy case. But I'm not even sure we can get to a fair use question until we resolve this problem with not even being subject to title 17.

Our proposal is for a quasi-copyright provision within the copyright law which is -- I mean, there's precedent for in chapters 11 and 14 that would give us a very narrow exclusion from the copyright -- from the contract in the case where something is not

made available.

Something similar could be drafted for software. But I really think that as long as we're talking about fair use and not talking about the contracts, we're missing the point.

MS. ROWLAND: I'm sorry. I realize that other people have their cards up. But I wanted to see if Mr. Kupferschmid or Mr. Zuck had any thoughts on that from -- about the intersection of contract law and fair use and how they work together or do not.

MR. ZUCK: Well, I guess there's two levels to that question, one that's innately legal, but I'm probably unqualified to answer, and another that's more practical. And the first thing that struck me when listening to you is that I'm not completely sure of the intersection between library use and fair use, right?

It's a little bit of a different kind of use than at least the things that I'm familiar with in the context of fair use. But I also think as a practical matter that there have been many license agreements that have been violated and that have been -- that the

basis for the enforcement of that contract was in fact copyright and that therefore the license was obviated in favor of fair use.

So I feel like fair use has taken precedence more so than not over contract of license provisions as far as I can tell, as a practical matter. Now whether or not that's innately the case, I don't know the answer.

Maybe I'm under-informed, but I feel like the provisions of law that have to do with library-type functions are different than the ones that have to do with fair use, that have to do with making use of a particular copyrighted work. And so, maybe I'm just confused about that and I apologize if I am.

MR. KUPFERSCHMID: So I think it seems like at least in this discussion we've gotten a little far afield from the discussion about embedded software in everyday consumer products.

And so, and to a more general discussion of fair use or whether APIs are protectable or who's the author of machina and a whole bunch of other things. And a lot of these issues do come down to, and I think

probably will be discussed in more detail in the 1201 study I think because that's I think where fair use probably comes in -- is more at play, as evidenced by your questions about the triennial rulemaking and what have you.

Mr. Harbeson mentioned the fact that, whether fair use is a defense against contract, I don't think that's what we were talking about on the first panel. I don't know if that's what he was referring to or not. But we were talking about whether if a court held there to be fair use. But your contract said that you could not engage in fair use, whether that would be a copyright infringement, which is different -- which is a different question. So I think we just needed to clarify that.

MS. ROWLAND: Thank you. And I think Mr. Perzanowski?

MR. PERZANOWSKI: So I just wanted to note the ways in which I think this discussion about fair use is related to the discussion we had on the last panel, right? So fair use and this question of ownership are sometimes intertwined in interesting

ways. And you can look back at some fair uses cases where I think you can see this really clearly.

I think the most clear example is the *Galoob* case. In the *Galoob* case, the court talks in really explicit terms about ownership. It discusses the single recovery theory that undergirds exhaustion. And it talks about the right to modify a product that a consumer owns once it has been sold.

There are other cases where I think you can see this same kind of focus on the question of ownership at work in the fair use analysis itself.

I think if you compare the rationales and outcomes in *Sega v. Accolade* and *Atari v. Nintendo*, ownership is also at work in the background there. And I've written about this at some length. And I think part of the reason you see ownership considerations kind of sneaking into the fair use analysis -- sneaking in isn't the right word.

I don't think it's inappropriate for courts to consider additional factors beyond the four statutory factors. But we don't expect to see ownership come up in that context. And I think it's

because courts have been uncomfortable relying purely on the kind of exhaustion doctrines in 109 and 117 for the reasons that we were talking about before. So there's an interplay between these two sets of questions.

I wanted to come back to a point that John made earlier about security testing. About a decade ago, I represented academic security researchers who were working on the Sony BMG rootkit scandal that I'm sure many of you remember. And I can say firsthand how worries about copyright infringement liability influence the decision to undertake research, the pace at which that research is executed and decisions about when and how that research is disclosed to the public.

So I think it's crucial that we have some greater degree of clarity, not only for individual consumers, but people who are doing research on consumer products because frankly, fair use is not providing lawyers with the kind of certainty that they need to communicate to clients in order to make sure that this really important work happens.

MR. DAMLE: So I'm sorry to keep mentioning

1201 -- I know there's another study about that -- but I mean, just going back, it's sort of a version of a question I asked Mr. Bockert, which is, in the last rulemaking, we adopted an exemption for security research. And to sort of refine the question, the premise of us granting that exemption is that the activities covered by the exemption are in some way non-infringing.

And so, so there is some, at least, guidance from the Copyright Office and from the Library about what activities it considers to be non-infringing at some level. And so, I'm just curious why researchers couldn't rely on that assessment.

MR. PERZANOWSKI: I would not be comfortable going into court and litigation and saying the Copyright Office said this was a fair use. I don't think that's going to get you very far, right? That is not a sufficient basis for drawing the conclusion that a particular use is fair.

And I don't think that those -- from what I recall from the rulemakings, we don't get crystal clear statements that these are in fact fair uses,

right? In fact, we get understandably and I think with good reason, cautious statements about how we should interpret these kinds of behaviors.

The other thing that I would say about the rulemaking -- and I participated in that process back in the 2006 rulemaking and we got an exemption for -- a very narrow exemption for security research related to DRM on music CDs that created risks for security. And talking about looking at the problems of yesterday, by the time we got that exemption through, it served no function, right? It didn't do anything at that point.

So the rulemaking process is necessarily a backward-looking process. And I can understand why I think the Copyright Office has been understandably demanding in terms of the evidentiary record that it requires in terms of a showing of concrete harm before an exemption is issued.

But in many cases, especially when we're talking about software, right, which we know is this fast-moving industry where things change quickly, the rulemakings have not resulted in the kind of forward-

looking clarity that I think is often necessary.

MS. ROWLAND: I would like to ask a follow-up question about that and your discussion of fair use and the uncertainty. I don't think that that is really unique to software. So the whole point of fair use is to be flexible and it's fact-specific so it can address each case on its merits. So if the whole problem is uncertainty, what would you suggest? Because is fair use not going to be sufficient in your opinion or --

MR. PERZANOWSKI: Yeah. So I think the way that you address that uncertainty is by fixing the problems that we talked about in the prior panel. So again, fair use is going to be kind of the defense of last resort in these kinds of cases.

If the standard for what counts as ownership is clarified and people can rely on 117, for example, I think that addresses many, although not all of the circumstances where we might otherwise be telling clients to focus their efforts on fair use.

MS. ROWLAND: Thank you. Mr. Band?

MR. BAND: So I just want to build on what

Mr. Harbeson was saying in bringing it back to interoperability and fair use in the context of software-enabled products. So as we had talked about in an earlier panel, many license -- software license agreements do have a prohibition on reverse engineering. And then, the question is, is that prohibition enforceable or is it preempted or is it somehow seen as a contract of adhesion and not enforceable for that reason or what.

But the point is, is that there are certainly in the computer industry -- you typically see these contract restrictions. Now, it could very well be that so far in the automotive industry that hasn't been a problem, and so it hasn't been sort of therefore -- like a problem in the 1201 rulemaking context in this last triennial cycle. But it certainly isn't -- I could certainly imagine it and I don't want to give the automotive industry any ideas. I mean, the car manufacturers any ideas. I'm sure they've thought about this.

But it could very well be that, maybe in the near future, when you're signing that stack of papers

when you're buying the car, and there's a lot of papers that you're just routinely signing, that it could very well be that there will be in that stack of papers some software license agreement that then will cause all the problems that we haven't seen yet.

Right now, so now, it's a fair use problem. Can you engage in the reverse engineering necessary to make the replacement part? But I could see in the very near future that it will also be a license problem, not just a fair use problem.

And so, again, I think the opportunity of the study here is to sort of get ahead of the curve and see what's coming down the road and say, well okay, how do we make sure, because you're -- certainly in the automotive -- we're talking about a huge aftermarket in the automotive industry.

And then, if you include agriculture and yachts and everything else, you're talking -- I mean, the aftermarket generally is an enormous area and as more software is included, this -- whether it's fair use or a contractual restriction on reverse engineering, this problem is going to be -- only going

to get bigger, not smaller.

MS. ROWLAND: Thank you. Mr. Bockert?

MR. BOCKERT: So I take it, where this is going is: is fair use enough? Does that resolve all of the concerns that we have talked about in our first two panels, and probably will talk about in the fourth one? And I think the answer has to be no.

We want to clarify that certain things qualify as non-infringing uses and we don't want to rely on just advising clients that this is probably a fair use and then pointing to very fact-specific cases that are probably distinguishable in some ways from the ones at hand. So I think the answer is no, fair use is not enough.

MS. ROWLAND: I find that kind of interesting because earlier Mr. Lowe was saying that he was happy with the way fair use was going with the repair and the reverse engineering. I wonder if you had any other thoughts.

MR. LOWE: Well, I mean, this is the big issue that Mr. Band brought up is that we're moving down a road where we're -- the situations are

changing. And what I said was that I wasn't clear as a lawyer that we're satisfied with -- we were satisfied with that per se but I think the issue that was brought up by Mr. Bockert is true, that we need to resolve all these issues before we get to fair use and that we brought up in the last panel.

MS. ROWLAND: Thank you. Mr. Zuck?

MR. ZUCK: Yes, two things. One, just again, just a matter of fact, I think the DMCA is at least a step in the direction of having decided things in a very direct way legislatively, that you're not just reliant on looking at fact-specific cases describing fair use.

There are specific practices in the DMCA that are outlined as being okay and non-infringing uses. So it seems to me that there's already something in place that's had good effect. The other question, again taking a step back from this, is that --

MR. DAMLE: I'm sorry. So you're --

MR. ZUCK: Oh, sorry.

MR. DAMLE: -- you're talking specifically

about the reverse engineering? Like the permanent exemptions? Is that what you're talking about? Like as being sort of guidance about what's --

MR. ZUCK: That's right. There's 10, I think, exemptions in there that educational purposes, for interoperability, security is one, et cetera. Those things are built into the DMCA from the get-go legislatively. And so, it doesn't -- you're not reliant just on fair use as a judicial precedent. Okay?

So the other issue that -- I don't know the best way to put this. But there's a kind of presumption that if I have some new idea, it should be okay and it's bad that the answer might be no. And I guess I don't mean to be the Grinch in the room, but as the copyright holder, I'm okay with the default answer being no. I think it should be the exception and not the rule that if some new use is fair use.

And so, I think that we need to take a step back and that we have a decision like the *Dr. Seuss* decision that it in many ways speaks to this notion that you're using my copyrighted characters to create

some new work that I have some downstream implication to their use.

There's a huge market for 3D models that are used in films and things like that that you license under different licensing terms for different types of commercial and non-commercial use.

It's not as mystical as it's being portrayed. What's mystical is I think I've come up with some creative, new way to get around the way that this has been interpreted in the past. You, Mr. Lawyer, do you feel like you could defend this, and the answer is I don't know. I think that 99 percent of the time, the answer is far more clear and that the answer is in fact no and I'm comfortable with that.

And I don't think we should necessarily shy away from the fact that the de facto answer is that the copyright holder should have the last say and not my new creative use for someone else's work.

MS. ROWLAND: Mr. Bergmayer?

MR. BERGMAYER: Yeah. So there's even among people who are broadly aligned with me on copyright issues, there's sometimes disagreement about fair use

versus clear safe harbors because the challenge is if you list out a bunch of clear safe harbors, then the fear would be, well, people will always confine their behavior just to those safe harbors or a judge might find a behavior that falls just outside a safe harbor as more likely to not be a fair use.

However, I think just as a practical matter, I think it's pretty clear that certain kinds of behavior ought to just be considered very clearly to be non-infringing either through an extremely clear and universally applicable fair use precedent or through a statutory safe harbor or otherwise. And sort of even with the downside that it might sort of cause people to shift their behavior slightly to conform with the safe harbor, I think the upside will probably be good.

That being said, I also think in the embedded software context in particular, there's other doctrines which already exist which often get short shrift. I brought up in an earlier panel functionality. I think some embedded software, the functionality or idea expression might make it not

copyrightable, or at least you wouldn't be able to challenge someone who makes another piece of software doing the same thing because there's no other way to do it.

MR. DAMLE: So, sorry. You're talking about like merger and scènes à faire.

MR. BERGMAYER: Merger doctrine, yes.

MR. DAMLE: Yeah.

MR. BERGMAYER: Exactly. I think in some of the most extreme cases of very simple software and a microcontroller that's just doing a physical function, I think those doctrines, which often don't get any discussion at all in like artistic works' cases might actually be very important. I think de minimis use, that's a doctrine which almost -- which almost never gets litigated. But I think that also might be applicable in some circumstances. So that's it.

MR. BERTIN: So you said that there were some uses or activities that you feel should be considered to be fair use across the board categorically. Are there any in particular with respect to software in embedded devices that come to

mind?

MR. BERGMAYER: Well, the example was brought up before of security research, which typically comes up in the anti-circumvention circumstance as opposed to the infringement context. I think that is a very clear example where security research ought to categorically be non-infringing. I think you can do it with a statute. You can do it with a very clear precedent that just makes broad, sweeping statements that like anyone can rely on because they're crystal clear.

But I think we need to have that result and we need to not just sort of have it just be a very fact-specific endeavor as to whether or not security research is okay now but not in this circumstance, things of that nature. I haven't prepared an exhaustive list of things that I thought ought to be categorical fair uses. I'm sure I could come up with a very long list if you asked me to.

MR. DAMLE: I mean the precedent point is an interesting one, right, because precedent requires there to be someone who litigates. And if there's

sort of just a general understanding that security research, for instance, is fair use, you're not going to get that precedent.

But at the same time, it's going to be clear enough just based on industry practice that it is because lots of people do it and no one sues. So is that -- I mean, is the absence of like that kind of litigation sufficient?

MR. BERGMAYER: In our very litigious society, I have trouble with the idea that there is a theoretical legal right out there that someone could use to sue someone that they object to for commercial reasons, but we don't have to worry about it because no one's ever used it before. I mean, all these things are not problems until they are. So --

MR. DAMLE: But there is a lot --

MR. BERGMAYER: -- as long as there is a legal overhang, even if there's not litigation, there might not be litigation because people are avoiding engaging in the behavior that could lead to litigation.

So I simply don't think that the absence of

litigation is evidence that there's not a problem, because it could still be affecting people's behavior. But I think you might better be talking to people who actually interact with clients on a more direct basis than I do to get a better answer to that question.

MR. DAMLE: I mean, but to take the security research example specifically, I guess -- I guess you could argue that there's sort of marginally less security research than if we had a clear precedent. But there is security research that goes on now.

I mean, we had people testify in the 1201 hearings -- again, sorry to mention 1201 -- about the research they did on automobiles, right? Charlie Miller came to testify about that. And if Chrysler wanted to sue, they could have. And they didn't. And I think at least that gives you like one data point in the absence, sort of in terms of --

MR. BERGMAYER: I believe there were threats of litigation in the recent -- in the Jeep case, where the researchers demonstrated vulnerabilities of remotely turning off a car that was on the road. And those went away because there was such public

attention to that issue. And often, security researchers are the kind of people who might welcome being -- it's a type that engages in that behavior.

But I don't think we should rely on the sort of bravery and bravado of security researchers who are willing to sort of stand up to the man on a continual basis. I think these things just ought to be accepted parts of society that simply don't carry legal risk at all because they are so important.

MR. PERZANOWSKI: If I can just add to that briefly and specifically in the academic context, while security researchers themselves might be willing to take risks, university general counsels are not known for being big risk takers. And their willingness to back researchers who are engaging in work that might draw litigation is rather limited.

And so, you see that influence not only the choice of specific research projects to undertake, but the long-term trajectory of people's career. What kind of work are they going to do? What kind of researcher are they going to be? And institutions -- academic institutions have a long memory for threats

of litigation that they've received and that other institutions have received. They share that information. And I do think you have seen a change not only in the quantity but also the nature of research that goes on in that space.

MS. ROWLAND: Okay. We've got a couple more people. I think Mr. Kupferschmid was next.

MR. KUPFERSCHMID: Yeah. Excuse me. I'll be brief. I mean, it sounds like Mr. Bergmayer was suggesting keeping the preamble we have in 107 and getting rid of the factors. Maybe I misunderstood what he was saying, in terms of just creating an exemption for security research. So I apologize if I misunderstood what you were saying.

But I think certainly whenever you talk about fair use, it's very, very context-specific, fact-specific. And we have to be very, very cautious if we move in any particular direction in that area. I know that at the Copyright Alliance, we represent all sorts of different copyright owners and different types of copyright disciplines. And they all rely on fair use. And it's important to have a balanced fair

use doctrine that takes into account all the stakeholders' interests.

In particular, with regard to embedded software, I don't know that those issues are any different and I think that's why it's led to a discussion here that's gone on well beyond embedded software and focused primarily on things like 1201 and ownership and copyrightability and things like that because I don't think there's anything specific with regard to the fair use doctrine, either pro or con, that's specific to the embedded software in consumer products.

MS. ROWLAND: Mr. Harbeson?

MR. HARBESON: So I apologize. I'm still trying to figure out why we're talking about specific uses when really, as has been said, the fair use doctrine is always going to end up being applied by the courts anyway. I will say though that a lot of the conversations that we're having are familiar to me in the library context. So I think it might be worth considering ways in which this has been discussed before.

When you're talking about potential safe harbors, things that are automatically acceptable, you can look at section 108, which gives libraries specific things that we can do.

It is also hopelessly out of date. And not only is it hopelessly out of date, but the library community, for the most part, is not advocating bringing it up to date because to bring it up to date is, first of all, to start getting at the problem of risking creating a ceiling rather than a floor, even though, as in *Georgia State* and in *HathiTrust*, they specifically said, no, it's not -- it is a floor.

But the problem with creating these safe harbors is in the details of the wording. I have not found Congress' ability to create succinct legislation optimism producing. So I think that one should be careful with the safe harbor idea.

Also in the de minimis doctrine, which was brought up, I would caution that if you look at *Bridgeport Music*, the court said two notes might be de minimis, but there isn't much of a de minimis doctrine in sound recordings.

So, and then finally, I'm really worried about -- since everyone else has had a pass on 1201, I'll take my pass right now and talk about 1201(c), which is another case, a precedent for what my principal concern is.

It's another example of where you can't quite get to fair use because you have to cross that fence that is 1201 first. Once you're on the other side of the fence, you can claim fair use. But you still have violated the law by crossing that fence into fair use territory.

So call it 1201, call it licensing, it's that fence that is really going to be the problem here. And I know I've been beating perhaps a dead horse, but I really think that that's a really important horse to get rid of. So thank you.

MS. ROWLAND: Thank you. Mr. Band?

MR. BAND: So I'll agree here with Mr. Zuck. I think that section 1201(f), in particular the interoperability exception in the DMCA articulated a very strong policy in favor of interoperability. And in the report language that went along with it, it

cited *Sega v. Accolade* and the importance of interoperability in the software industry and how it promotes competition. All that was, in my view, very clear.

I think also in the various recommendations the Register has made in the 1201 context, they've also sometimes used that language that there was a strong federal policy in favor of interoperability. Now, to some extent, it's hard to find those references because it's buried in a 300-page recommendation.

MR. DAMLE: We're just trying to be thorough.

MR. BAND: Right, no. No, but -- and I would very much hope that coming out of this study is again a re-articulation, but in an easier way to find, this very strong, clear federal policy in favor of interoperability.

But where it relates specifically to this issue is it does matter what is the theory under which you have this policy. Is the theory a fair use theory or is it, as John has been referring to merger or

method of operation? I mean, this does get back to the *Google v. Oracle* case.

If you were to say, okay, we're going to put -- I think the better rule is that it is -- these elements necessary for interoperability are under 102(b) not protectable, that you don't need to get to fair use. And I think that that's the -- certainly the Ninth Circuit case law gets you in that direction.

But to the extent that the Copyright Office isn't comfortable saying that and it says, okay, this is a 102 -- it has to be under -- you're going to pin it under a 107 theory, I think even there, to say, okay, yes, on the one hand, 107 is to be applied case by case and on the other hand, like the Ninth Circuit made clear in *Sega v. Accolade*, that fair use for purposes -- reverse engineering for purposes of finding elements that are not protected by copyright is fair use as a matter of law.

And so, that's something that you can take to the bank in other cases, that a lawyer can take to the bank in other cases, as opposed to saying in every single case you're going to have to kind of do this

really complex analysis and start from the beginning.

And so, I think, again, that's somewhere where the report that you come out here -- that can really be helpful, not only on re-articulating the strong policy in favor of interoperability, but also coming up with a basis -- a helpful basis that can be useful in the future to promote interoperability in this environment.

MS. ROWLAND: Thank you, Mr. Band. And I think with that, we're going to conclude our session. I think right now we are scheduled to show back up at 1:30. Maybe we push it to 1:40, so you have one hour. So we'll push the next session back 10 minutes, and we will see you all back here at 1:40, or we hope to see you all back here at 1:40.

(Whereupon, the foregoing went off the record at 12:41 p.m., and went back on the record at 1:42 p.m.)

MR. BERTIN: This session deals with sections 117 and 109, and the topic we'll be exploring is whether current limitations on and exceptions to copyright protection adequately address issues

concerning software embedded in everyday products or whether amendments or clarifications would be useful.

I'd like to start with just a general observation, from having reviewed all of the comments. And while this is not a universal statement, it does seem to be fairly common, that many of the commenters either said that no changes were warranted or needed, on the one hand, and others commenters said the same thing but qualified it by saying that sections 109 and 117, properly construed, no changes are needed.

While that creates the appearance of consensus, I suspect that somewhere in the middle there is some level of disagreement, which hopefully we'll get into this afternoon.

So I would throw that out as sort of an opening question, a general question of whether changes are needed or not. And if so, if changes are needed in the interpretation of 109 or 117, what those areas of interpretation are -- where they would be helpful. So perhaps we could start with 109, if anyone would like to jump in. Jonathan? Jonathan Band, rather.

MR. BAND: Sure. So I guess, sort of like the threshold issue of, properly interpreted -- but properly interpreted is -- if I were an Article III judge, the world would be very different. But that's -- I don't see that happening any time soon.

And I think, especially for ORI, we're very focused on the specific problem of 109(a) and how it applies to software-enabled products. And it seems that between the -- what is an owner and what is the proper scope of interpretation of 109(a) and all of these contractual issues that we talked about, the fact that you could just -- regardless of how courts interpreted 109(a), you could still have contractual restrictions on transfer.

So we just think as a practical matter, the only way in the foreseeable future to really deal with this issue -- with circuit splits and all the rest -- is to have something very short and sweet like YODA and that would -- it wouldn't obviously solve the entire problem. But it would solve one piece of the problem.

MR. BERTIN: Mr. Perzanowski?

MR. PERZANOWSKI: Yeah. So I would agree that YODA is an important first step and does embody some important principles. I would also agree that it doesn't solve the whole problem. I think I would not recommend any changes to the text of 109 or 117 relevant to the particular set of questions that we're addressing today.

What I do think would be useful is a definition in section 101 of owner for exhaustion purposes, right, owner of a copy as it appears in 109 and 117 or a definition of transfer of copy ownership. I think that is a crucial question. It is a question that courts have answered in a lot of different and I think inconsistent ways over the years. I think a definition of ownership would provide some much needed clarity, right? Who are we talking about here? We're talking about consumers, for the most part.

How do consumers know whether they own the things that they buy? I don't think it's a particularly satisfying answer to tell them, well, "here's a dozen cases decided by the Ninth Circuit and the Federal Circuit and the Second Circuit and maybe

you can make sense of this question." It's a really fundamental question.

And so, I think it deserves some attention here in terms of what that definition would look like. If it were up to me, I would have a definition that said that any time you had a transaction that was characterized by a one-time payment and perpetual possession, that is a transfer of ownership, right? So that I think is the key question that we have to answer here with respect to 109 and 117.

I also included in my written comments a couple of references to the Canadian and Israeli copyright acts and the way that they deal with the RAM copy doctrine and temporary instantiations of works, transient copying. I think there might be some benefit from clarification from there as well.

MR. BERTIN: Mr. Band mentioned the You Own Devices Act and suggested that would be a good -- I think Mr. Perzanowski said it was a good first step. What effect or impact, if any, does anyone anticipate if that legislation was passed, what impact would it have on innovation in the field of embedded software

for devices? Mr. Kupferschmid?

MR. KUPFERSCHMID: So I think if the YODA bill or something potentially similar or worse were to be enacted, I think it would certainly adversely affect the ability of software companies to license, including the manner in which these software companies license as well as their ability to enforce these licenses.

As a result, it will be more challenging for them to recoup their investment they make and to develop new software products and to update existing ones. It'll be more difficult for them to widely distribute their software products to the public, especially on a variety of different platforms that consumers enjoy today.

The availability and scope of warranties could be adversely affected as well. It almost certainly would change their pricing structure, certainly given the provisions on maintenance and support that are in the bill.

And it could also allow competitors to get access to their software more readily and therefore

steal the software -- the underlying code and create and sell cheap imitations because they will not have the sort of R&D costs of the original software company.

MR. DAMLE: So on that last point, why wouldn't just a regular copyright infringement lawsuit be sufficient then? I mean, YODA doesn't take away the ability to bring an infringement suit.

MR. KUPFERSCHMID: So yeah, no I think -- I mean, I think that's right. But like I said, it would make it easier. So I don't think you want to be in a position where you've changed your business model from instead of creating and innovating to bringing infringement suits either. And so, I think that's -- it becomes an issue of how do you police the software and similarly --

MR. DAMLE: But do you think the licenses are actually what are preventing that kind of theft?

MR. KUPFERSCHMID: I would hope to some extent that that is the case. I mean, certainly, like I said, we'll talk about 1201 tomorrow and that's part of it. And I may be sort of joining two bills, the

YODA bill and Farenthold's -- another draft that he's been working on which would basically take away the 1201 protections, so in doing so -- but I think certainly the combination of the two would have that effect.

MR. DAMLE: So can I ask -- sorry, just a general -- which may be -- which other people can address, which I've always just been curious about. But why the essential copy exemption is limited to owners of the copies and why that's not automatically -- so CONTU recommended that the Congress adopt a rule that allows you to create essential copies if you're -- I think it's the lawful possessor of the copy and that was changed in Congress to be owner.

I'm just wondering just as a practical matter, what's the rationale for limiting the essential copy defense to owners of software rather than anyone who has lawful possession of the software. Mr. Bergmayer, I don't --

MR. BERGMAYER: Happy to address that. Well, as I look at the essential step copy doctrine as really making the most sense and doing the most useful

work in the case of installing software, which doesn't happen as much anymore since people just typically just install it over the internet.

But if you have a disk, I would say when you are installing -- you're installing from floppy disks or a CD-ROM onto a computer, well, that is a copy, right? And I think that is inarguably a new copy. And if you own that disk, then you should be able to use it by installing it on a computer.

I mean, I don't think that's a particularly controversial point and that's where I think that the essential step doctrine does the most useful work. Where I have sort of trouble with it is the notion that simply using software creates a RAM copy and using the essential step test in that context I think is -- it shouldn't be necessary -- either those RAM copies should be ephemeral and just excluded from the definition of copy or some other doctrine should say that the possessor in that context should not need to use -- need a license simply to use the software.

But I think limiting it to the lawful owner is logical in the case of installing software, because

otherwise I could take software and install it on my computer and I'm the lawful possessor. Then, I lend it to my friend. My friend is the lawful possessor because he's borrowing it and he can install it in his computer and so on.

So I think that -- limiting it to owner in that particular concept -- context makes sense, but not in the context of RAM copies, which I think needs to be more fundamentally dealt with.

MR. PERZANOWSKI: Can I add something?

MR. DAMLE: Sure.

MR. PERZANOWSKI: I think another point that's important here is to keep in mind that the owner of a copy stands in a special relationship to the work, right? The owner of a copy is someone who, in the ordinary circumstance, has compensated the copyright holder for that work, right?

And so, it makes sense to extend a set of rights to owners that we don't extend certainly the public generally, right? Owners have rights that the public at large shouldn't have. And there might be other people who are temporarily in lawful possession

of a copy that we don't think deserve those protections, right?

So I order some software. I don't know what decade this hypothetical takes place in. but I order some software over the internet and it gets delivered to me by FedEx. FedEx is in lawful possession of that software. I don't think they get to make copies of it, even if they're essential to running the program, because they don't stand in that sort of relationship with the copyright holder.

The exhaustion is premised in large part on this idea of the single recovery theory where copyright holders have been compensated and as a result, some rights get transferred to consumers. That's just not true for people who might be, like I said, temporarily in possession or bailees or something along those lines.

MR. BERTIN: Mr. Mohr?

MR. MOHR: A couple of things. I think I just wanted to associate myself with Keith's remarks on software. He hit all the bullets I'd written down, plus a couple more I hadn't thought of. The only

thing I'm somewhat confused about is there's been some suggestion that there's a split.

I'm not sure exactly which cases we're talking about a split on. But if we're talking about -- I mean, if we're talking about *Krause* and *Vernor*, in our view, there is simply no split. And there's certainly no split that warrants a different application of a newly crafted rule to embedded software. I mean, I'm just -- this is something that I'm struggling with. I don't -- I just simply don't see that.

MR. DAMLE: So in considering -- one of the things that *Krause* I think says is that you could consider -- so it says that the terms of the license aren't necessarily controlling and that one of the factors I think it identifies is whether the software is sort of embedded in a device.

I think they bring that one up as one of the factors. You think that's an appropriate factor for a court to look at in terms of determining sort of trying to draw this line between licensing and ownership?

MR. MOHR: Right. Appropriate, absolutely, right? Because, I mean, this goes back to the exchange that we I guess indirectly had before about consumer expectations. There are particular industries where there will be customs and practices, uses of trade about how these goods are sold and delivered.

In such cases, there is going to be a good deal of reticence, not only I think on the consumer side but also on the judicial side to engage in -- to find ongoing license agreements where they are in fact a fiction. But there are going to be a whole lot of other cases where a licensing relationship is completely appropriate. And I mean, in our view, the courts have solved that problem properly and there's no indication that they won't solve it properly going forward.

MR. BERTIN: Mr. Lowe?

MR. LOWE: So I wanted to comment on the issue that's come up about how innovation will be affected by YODA or any revisions. And I think our industry -- the whole vehicle aftermarket, which is

about a $350 billion industry in this country, has spawned a huge amount of innovation because of the ability to reverse engineer and the ability to work with patent law. And patent is still available to protect innovation and protect new ideas.

But the sense that you can use -- what we fear is the use of copyright law to inhibit that and I guess I brought that up before. And the issue of exhaustion, once that first sale -- the car owner should be the one that owns all the software, not necessarily the idea behind the software, but the software and able to do what they want with that vehicle. And that includes being able to put on parts for that car that may not be made by the same person or company that made the car.

So I think it’s important that when you’re looking at all this, that that needs to be considered as part of this equation.

MR. BERTIN: Just to bring section 117 into the debate here, section 117 does give certain rights of repair and maintenance. But interestingly, the language used is -- the key point is that you have to

be the owner of the machine, which in Mr. Lowe's example would be the owner of the car.

Is ownership of the machine itself enough or do we also have to worry about the ownership of the programs on the machine? Mr. Band, you're already up. So go ahead.

MR. BAND: So I'll answer that as well as the other questions on the table. So certainly in my view, it should be -- and actually I think 117(c), it's the owner of the machine or the owner or licensee of the machine, at least for 117(c), whereas 117(b) I think applies to the law -- is the owner of the software and that's part of the problem here, that they're different.

And I think to the extent of -- you were asking why -- with CONTU, why -- what was the cause of the change from what CONTU recommended to what Congress enacted. You know, I'm old. I'm not that old. It was before my time when the copyright software amendments were enacted in 1980.

But I suspect that there's a very simple answer, that the lobbyists from the large computer and

software companies understood that by shifting it from lawful possessor to lawful owner, that they dramatically narrowed the effectiveness of 117 because by then, already they were -- already by then, the predominant model was to license software. And so, they realized that they could completely neuter the effectiveness of 117 by just changing a couple of words. So that's actually pretty good lobbying. I wish I had been around and had done it.

But with respect to the question about innovation, I don't think a bill like YODA would have any impact on innovation. I mean, right now, sort of this control over the resale market is sort of like money that goes right to the bottom line.

A manufacturer knows that a product has a certain lifespan. They have no idea whether the purchaser of that piece of equipment is going to keep it for its entire lifespan or sell it after five years and then someone else will use it for the remaining two or three years of the lifespan.

But the ability to charge an extra license fee for that transaction, which they wouldn't have

made if it would have just stayed in the possession of the first purchaser, I mean, this is again just money that goes right to the bottom line. I don't think it will have any impact on innovation.

The possibility of infringement, again, a bill like YODA makes it very clear that this only applies to non-infringing copies, and as you mentioned, that it would also relate -- you still have the ability to sue for infringement. So --

MR. DAMLE: So YODA, just going back to sort of a point that I was making -- a question I had before about whether this was limited to sort of enterprise-level kinds of things, is it your -- so YODA would extend to all of those, right? It wouldn't just be limited to consumer devices. It would also extend to a $20,000, RAC server. Is that right?

MR. BAND: Yes, right.

MR. DAMLE: Yeah.

MR. BAND: It would be -- because at this point, when you're having -- it would apply to the iPhone. It would apply to this.

MR. DAMLE: Right.

MR. BAND: And again, we're talking -- I mean, when you say enterprise-level, I mean, you have a lot of government agencies. The Library of Congress. But it could also be the tree company that was chopping down trees in my neighborhood yesterday.

I mean, a lot of that -- a lot of the power saws have software in them now. And so, if you want to start up -- one guy wants to start up his own company and buy used power saws, it would allow him to start a new business as well.

MR. DAMLE: And is it your -- so it wouldn't be necessarily limited to circumstances where there's like an inability to engage in sort of -- the first purchaser to engage in negotiation. I mean, let me put it a different way.

To what extent is there kind of -- I mean, maybe you know, maybe you don't know. Is there sort of negotiation between a company purchasing a kind of -- I know you don't like the word enterprise, but enterprise-level kind of switch from Cisco and the first purchaser and Cisco, like negotiating over the terms of the license. Like how -- does that just

never happen?

MR. BAND: Well, my impression is it happens very, very rarely. I mean, I imagine when the federal government is buying things from Cisco, there probably is a negotiation. But certainly going back to -- and this does date me, but when I was working on UCITA, the understanding was that -- you even had these large insurance companies. And when they were dealing with the software vendors -- these are like Aetna and MetLife -- there was no negotiation. It was very much a take it or leave it.

This was the license. You've got to take the deal. And that's one of the reasons why the insurance industry was so involved in the fight against UCITA and ultimately prevented it from being adopted anywhere other than Maryland and Virginia was because there was no negotiation, even for these Fortune 50 companies.

MR. BERTIN: Mr. Bergmayer?

MR. BERGMAYER: Yeah. I just have just sort of a clarification. I'm curious as to how other people view this. I mean, when I read the definition

of a copy, it says it's a material object. So I would say that if I own the car, I necessarily own any copies of software in that car, unless you could say that there were physically parts of the car that I own and physically parts of the car that I don't own, because I can't sort of -- I don't understand how you could read the statute in any other way.

So if I own the car, I own the copies in the car, or if I own the machine, I own the copies that are contained in the machine. Or if you say that I own the machine and I don't own the copies, there are physically parts -- there are literally chips or portions of the physical item that I don't own while I do own the rest. And how do I pick out which ones I do and which ones I don't? I mean, this is just how the statute is written.

This is the entire basis of how all of these interrelated statutes work. And I keep hearing this notion that, well, you own the machine, but you don't own copies of software on the machine. And that just doesn't make any sense and it doesn't comport with the statute.

MR. DAMLE: So I mean, but what -- so I mean, do you think that Congress, when they -- when Congress reacted to the *MAI* case, do you think they were just -- what do you think that meant? Were they not implicitly sort of accepting that the premise of software ownership versus machine ownership wasn't actually a real distinction or how would you react to that?

MR. BERGMAYER: Well, it says if you own -- I mean, I'm just looking at the statute. And it says if you own the machine, then if there is a new copy -- in other words, something that does trigger copyright -- that is made by virtue of activating the machine, then you are given a statutory license to make that copy.

So that is not really relating to the nature of what a copy is or whether you own it or not. There's nothing in it that says you don't own the copy. It's authorizing you to make a new copy. So I think that's fine. And it does say a machine that lawfully contains an authorized copy. So that would seem to sort of say you could have a machine and parts

of it count as the material object that is the copy and parts of it that don't.

But if we're going to say that you don't own the copy, but you do own the machine, then that necessarily requires that you have some way of determining which parts of the machine do I own and which parts of the machine don't I own, because again, that's just what the statute says. There's no other way to read it that actually does justice to the actual words that Congress enacted.

MR. BERTIN: Mr. Harbeson?

MR. HARBESON: I just -- I'm not going to have a lot to say about section 117 based on my membership, of course. But I do want to make two points. The first is that there was another case that was decided the same day as *Vernor* and that's *UMG v. Troy Augusto*, which is a case of distribution of promotional CDs to radio stations via -- from record labels. And that case was decided in favor of -- in favor of the person who was doing the selling. To my knowledge, it has not affected a market for CDs. So, and I offer that only because it seems relevant to me.

But I recognize that I'm a little off point here.

The other thing is I want to respond to some points that were made on this side of the table regarding -- with regard to piracy. And just to point out that I have some experience with the concept of piracy. I've been accused at this table of being a pirate in previous hearings. And we make laws for the law-abiding, not for the people that don't.

Someone who is going to violate a license is going to violate the copyright. They don't care. The people who this will affect are the people who do want to follow the law. So I'd just like to remind people of that. That's probably all I'll say on this panel.

MR. BERTIN: A general question. If Congress decided to enact YODA or some other legislation of a similar or different nature or made the changes that have been suggested here today, is there a risk or a concern -- that Congress should be aware -- that private parties would just simply contract around them? Say, notwithstanding the provisions of the now newly amended 109 or 117, you are not considered an owner?

MR. PERZANOWSKI: I'm happy to start to address that. As I recall, I don't have the text of YODA memorized, but I do think that the bill contemplates the possibility of contracting around those rights and it explicitly rejects that possibility.

So I think this is really important to go back to the point that someone made earlier about the distinction between a contract and a license. A license is fundamentally a creature of property law, not a creature of contract law. And I -- if what has happened is a transfer of ownership as a matter of property law, a contract doesn't change that, right?

It might create contract liability for breach. But I don't think it can change that fundamental question of the transfer of ownership. That's why I think it's really important that we have a clear, well-settled understanding of what kinds of property transitions trigger a transfer of ownership. That's not a function of contract.

The other point that I wanted to make is, in some of the earlier panels, we had some discussion

about concrete examples of harm to consumers and whether we can point to specific instances where consumers have been prevented from transferring their devices or whether we can articulate other kinds of harm. And I think we can.

But I also think it's important to use the same standard in evaluating harm when we're talking about these sort of potential future harms to consumers, which I agree have not all materialized yet, and the kinds of speculative harms that have been articulated when it comes to passing legislation like YODA, right? I think we need to hold those two kinds of harms to the same standard.

MR. DAMLE: So can I ask you about sort of the *Krause* test, which starts from the premise that the terms of the license are not necessarily controlling. They're relevant, but not necessarily controlling. And at least in that case, the court kind of went beyond the four corners of the contract to look at kind of the sort of facts on the ground to determine whether there was a license or whether there was ownership.

I mean, do you think that that test is sufficiently clear? Or is it sort of an appropriate approach for courts to take in trying to draw this line?

MR. PERZANOWSKI: So I think the *Krause* test, by looking at the terms of the license, is not mistaken, right, to take those terms into consideration. I think what's crucial though is trying to figure out exactly what question we're trying to answer.

And the question we're trying to answer is not what are the hopes and dreams of the copyright holder that they have reflected in this agreement, which is I think what the *Vernor* test does, right? It says as long as you recite the right kinds of restrictions, as long as you announce your intention to restrict use, to restrict transfer and you call this thing a license and not a sale, you get your wish.

Of course, the context in which the transaction occurs is important. And some of that context is going to be reflected in the license. But

we can't stop there, right? My beef with the *Krause* decision is in part a question about terminology, right? I think this term licensed copy is misleading in an important way, right? It distracts our attention from what the real question is, which is whether or not a transfer of ownership has occurred.

And I think the more familiar transactional categories are really much more useful than the term license in figuring out the answer to that question. The statutory language rental, lease or lending I think is much more effective because a license, as we know -- this is one of the beauties of licenses -- is that they are infinitely flexible, right?

Property transactions are not infinitely flexible, certainly not property transactions when it comes to personal property. There's a limited number of accepted transactional forms and what we have to do is look at a set of facts, including the text of the license, and decide which category works, right? The numerous classes principle applies in this context as much as it does anywhere else in property law. Does that get to your question?

MR. DAMLE: Yeah. I mean, I -- so this is sort of -- I'm sort of trying to see where -- if there's any real disagreement between you and Mr. Mohr in terms of -- Mr. Mohr said it might be appropriate, it would be appropriate to look at -- again, going back to the topic of the study, which is software-enabled consumer products, which is it may be a relevant consideration to look at whether what you're talking about is software that's embedded in a product when you're trying to determine under a test like *Krause* whether something is owned or not.

MR. PERZANOWSKI: So I would not -- I don't think the question of ownership hinges on whether the software is embedded in a device.

MR. DAMLE: I wasn't suggesting it was. But I was suggesting that it might be a relevant factor and it might be an important factor. Just going to the point that it gives you an indication of what the customs are, what the consumer expectations are, which is I think something Mr. Mohr agreed would also be relevant.

MR. PERZANOWSKI: Yeah, I think it could be

a relevant factor. I don't think it's the driving factor. The things that I've talked about before, one-time payment, perpetual possession I think are much more clear -- are much clearer indications of the answer to that question. But I think that context is important and there might be reasons to treat some kinds of products and some kinds of industries different from others.

MR. DAMLE: Thank you.

MR. BERTIN: So just to take a jumping off point from what Sy just said, in the legislation for 117, there's a carve-out for embedded software in devices in the context of rentals, the notion being that you can rent the car and you don't need to worry about the software in it.

And in the legislative history, there's reference, as examples, of such devices as microwave ovens. And I guess you might look to that and say, well, Congress has sort of recognized that that's an issue and they've carved that out. And that will give us useful information about what has happened since that change or that provision was added.

And I guess the question generally for the panel is, does that give us useful information from experience? Is it the case that that change is really irrelevant because, again, getting back to the ownership question, if you don't own the software or you don't own the machine, the provision essentially doesn't do the work that it may have been intended to do? Mr. Band?

MR. BAND: Well, I think it's helpful in that it shows that, at the time, a certain industry group came forward, the rental car industry and said, hey, this is a problem. And Congress addressed that problem and the sky didn't fall. And we're now -- the economy is in a different place and the level of technology and the level of -- the number -- the kinds of devices that have software in them is different.

And so I think it's certainly worth looking at and saying, well, that's a good starting point. But now, that only applies to the rental of devices that have the software in it.

And so, it's worth saying, okay, can we -- does it make sense to expand it beyond the rental

context to other contexts and does it make sense to perhaps consider expanding it to the universe of software? I mean, the definition that they have in -- or, the category of software that it applies to is kind of hard to understand exactly what it means and even with the report language, it's hard to understand.

But I think it has been applied -- people know -- I think people basically understand what it's applied to and it has not, as far as I'm aware, led to any litigation. But I think it's certainly worth saying, this is a good starting point.

How do -- how can we expand on that and how can we build on that, given the fact that the world has moved forward from there and the issue is far more pervasive in the economy than it was at the time.

MR. BERTIN: Mr. Kupferschmid?

MR. KUPFERSCHMID: So just to follow up on your example of the microwave in the context of what Jonathan just said, I mean, the Congress knew microwaves had software back when they passed the act. Microwaves still have software in them. Not sure what

in that context has changed. In other words, Congress understood the issue. They knew the issue and decided to limit this carve-out to rental. And so, I think until we have very sort of specific concrete examples of problems, I think it would be a mistake to sort of legislate in this arena.

I'd also like to point out in the context of 109 -- I mean, we talk about licenses as if they were a four-letter word and as if the mere fact that there's a license in place means that you can't do x, y and z, that you could do if you were an owner. And that simply isn't the case.

It may be the case sometimes. But I think in the vast majority of examples -- or at least I think we'd need to study all the different consumer products that are out there that include software to figure out how many of them actually do restrict transfer. And of those products that restrict transfer, how many of them just sort of condition transfer?

Like for instance, that allows you -- there's a lot of software companies, for instance,

that allow the transfer of their software, provided you let them know who you're transferring it to and so they know who to give the updates to or the bug fixes or what have you.

And so, I think what you'd see if you'd look at these licenses is that there are, number one, not those restrictions on things like essential copies, not those restrictions on transfers that you think that people think may be out there and you might even find a lot of provisions in those licenses that provide benefits that are not found in a usual ownership or contract agreement.

MR. BERTIN: Mr. Mohr?

MR. MOHR: Just I guess a couple of points in light of the discussion that's gone on. The first thing is I do see some overlap between Professor Perzanowski and I on -- at least insofar as the concept of relevance goes. When we get to the concept of weight, I think we probably have considerably different views.

The second thing that struck me is in discussing the drafting of 117, like everybody else, I

don't know how it got there. I suspect Mr. Band is probably right. And if he is right, then the development of the licensing model for software was part of congressional design. This was not an oversight.

And so, if we're doing that -- I mean, again, this is the Office is doing its job. If I'm coming back to the same points I made in the beginning, we've been thoroughly examining these issues. But again, there's an enormous record of success here in how that model has played out for software providers.

To that end, I guess I feel obligated to voice extreme skepticism about the idea of any sort of preemption of license terms. That's just not something that serves this industry well for a whole host of reasons.

MR. DAMLE: So there are some -- there is at least one case, maybe more, that have actually preempted license terms in the copyright context.

MR. MOHR: Oh, there's more than one.

MR. DAMLE: Yeah. So what do you think? I

mean, what have the ill effects been of that, of those?

MR. MOHR: If you are saying -- there are certain cases -- so under the -- well, there's a couple of different kinds of preemptions. There is statutory, right, and then you have field and conflict. I'm assuming you're talking about statutory preemption cases?

MR. DAMLE: Well yeah, yeah.

MR. MOHR: Okay. So with respect to the statutory preemption cases, there is a dividing line that we have historically not really had a problem with between -- oh, I'm trying to remember the exact words. But essentially, it's a qualitative test that the courts have applied. And there's a difference, for example, between use restrictions and copying restrictions. And if you have copying restrictions and the court looks at those particular cases as can'ts and if you have use restrictions, they don't.

That's an appropriate and workable line. That's a quite different matter from a statute that preempts contracts or a specific type of contract for

a particular industry. It's very, very different. So we're okay. I mean, we're okay with existing law. We don't have a problem with it. But when we're talking about in this discussion moving beyond that, that's where the hackles start to go up.

MR. BERTIN: Mr. Zuck?

MR. ZUCK: Yes, thanks. Thanks again for allowing me to be a part of this conversation, and it's very interesting to find the intersections between sort of the practical implications and some of these deep dives into the legal discussions.

And so, taking a step back again, I want to reiterate what Chris said, which is that we have a system that's largely working in terms of software licensing and in terms of serving the needs of the majority of consumers, right?

In other words, most consumers have a particular mode of operation and don't have assumptions about if I buy an app on my phone, that app will transfer with the phone if I give the phone to someone else, for example. It ends up being exception cases that I feel like we're talking about a

lot. And so, when trying to address those exception cases, I think it has to be weighed against the success of the industry to date and also some of the flexibility and, again, the dynamism associated with those licensing practices.

When I sell a piece of software -- a game or something like that -- for 99 cents, I do it with the expectation that you will probably tire of that game eventually. So the point at which you have tired of that game is what I consider to be the duration of the life cycle of that game. It's not how long somebody -- an indefinite number of people could be interested in that game into the future, right?

So when I'm pricing it at 99 cents, I'm sort of building into that notion that after six months, you're going to either stop playing this or you're going to buy new levels or something like that. I'm not building into a 99 cent cost the ability for an infinite number of people to become bored with that game.

And so, there is sort of an expectation in some of these dynamic licensing models that says that

I understand how users are going to go about using it. And then, again, in the context of embedded devices, which is where we have the least amount of information about this because there's not a lot of licensing cases that have been addressed in situations.

But if I say just automatically that if you buy a refrigerator, you own all the software in the refrigerator, does that mean that I can carry that software into another refrigerator, for example, that I buy or does the lifetime of the software die with the refrigerator? Well, if I own the software, then why don't I have the ability to transfer that to another refrigerator that I want to use instead but with this software that I somehow own as a result of purchasing a refrigerator? So I can see a lot of situations --

MR. DAMLE: Well, that's not particularly realistic for consumers.

MR. ZUCK: No, well, it's -- well, not particularly realistic for a consumer. But that's just it. Most of these cases that we're talking about aren't consumer cases. They are about very large

industries that are trying to commoditize add-on products, aftermarkets, et cetera. It's very seldom about a consumer doing any of these things.

So in that case, I could very much see a situation where I could take advantage of ownership law, provide some way that here's my new refrigerator that's half-priced and here's a way to transfer the software out of this refrigerator you owned before and you don't have to buy another one or something like that. That could be done at a higher level than just an individual consumer and made pretty easy, I guess.

It's a weird example, the refrigerator, because it's such a big device. But I mean, it certainly could have been the case with TiVos or something like that where a lot of that kind of active hacking took place even at a consumer level. So I mean, again, ownership of the software I think has downstream consequences that we haven't fully thought through. That's all -- even in embedded devices.

MR. BERTIN: Mr. Bockert?

MR. BOCKERT: Thank you for bringing that one up, Mr. Zuck. So maybe we can put a more

realistic face on it when we talk about exchanging software on parts in automobiles.

And so, in this example, where somebody owns the copy of the software on their automobile and one of the parts malfunctions, there's a piece of software on that part, right? Well, imagine that it's just a part that's not covered by copyright or covered by patent. So it's just a screw that has a piece of software in it that communicates with another screw, just to say "this is the correct approved screw that's authorized by the automobile manufacturer."

Well, if the software is not there, an aftermarket parts manufacturer can come in and say, "I can make that screw. Let me put that screw in." You have several options. But in the scenario where the owner of the automobile does not own the software and does not have the right to transfer the copy of the software into the new screw, now they don't have options for replacement screws. They have to go to the person who owns the copyright and the software and the screw.

You say maybe in a refrigerator market, this

is sort of unrealistic and it's impractical to think about this. But the aftermarket auto part industry is a $350 billion industry. I mean, this is something that exists and it's changing because of the prevalence of software in purely mechanical parts. So I think it's a very real concern.

MR. ZUCK: And I think that a lot of that is going to get adjudicated over time. And we've seen already cases where pure interoperability has fallen in favor of even replacement printer cartridges and things like that. So I think the systems that are in place are addressing those issues.

Let me think of another example -- cameras, right? I'm a photographer. If I buy the Canon 5D Mark II, it has a certain amount of firmware on it that provides a certain functionality. There's other cameras that they sell. The only difference of them is in fact the firmware, right? And there's additional functionality provided to the owners of those cameras and the difference between them is in fact the software and not the hardware because it's simply easier to fully implement it and to provide

different firmware than it is to have different manufacturing practices.

So if I own the firmware associated with the more expensive camera, can I then later upgrade to a cheaper camera and install the firmware from the previous one? I would consider that to be a bad potential. And yet firmware is something that's completely transferable and is done by users today, right?

So it's not unimaginable, right? And so, if we're having a theoretical discussion about it, I can come up with as many theories why I don't want that transferability as you can come up with you do. I guess my understanding of what has happened historically though is that the things on which we would all kind of agree would be a good idea, the courts have ended up ruling in that direction.

MR. BERTIN: Mr. Bergmayer?

MR. BERGMAYER: All the examples you're bringing up are not transfers of material items. They're all about making new copies or all about making adaptations. They're all about things that

really don't relate to whether or not you own the copy. Owning a copy of 99 cent software app would only mean that you could transfer your phone, your physical phone. It doesn't give you the magical right to make an infinite number of new copies to anyone else who wants one.

If I own a refrigerator, that doesn't give me the right to transfer the software because it would give me the right to move the chips from one refrigerator to another, sure, but not to make a new copy. And the same thing with the firmware.

So I think there's a failure to distinguish between ownership of a copy, which is a material thing, and then the implication of actual copyright rights such as reproduction or derivative works and if those were allowed, those would be allowed under fair use or maybe they are allowed under some other doctrine.

But whether or not you own the copy really has no bearing. Owning the copy just means that you own the physical thing and that's it. And it means that you can move the physical thing around and resell

that physical thing. It's not about giving you IP rights of any sort.

MR. ZUCK: On the flipside of that though, if I license a software, for example -- and again, this isn't embedded, but these are the examples I'm drawing from -- I have the ability to install it onto a new device, for example. So if I'm only confined to my ownership of the copy that exists on a single device and I then sell that device and get the new iPhone or something like that, that would suggest that I don't then have a right to bring a new copy of software onto that device. You can't have your cake and eat it too.

MR. BERGMAYER: If I buy software -- if I buy physical -- if I buy optical media, then I'm given an essential copy --

MR. ZUCK: None of it's optical. You're downloading it from a store to your phone.

MR. BERGMAYER: Yes.

MR. ZUCK: So you're saying that that's the thing that you want to own. Okay, I --

MR. BERGMAYER: Yes, I own my phone.

MR. ZUCK: Okay. So --
MR. BERGMAYER: I already owned my phone.
MR. ZUCK: So you don't own --
MR. BERGMAYER: I owned it after installing software on it.
MR. ZUCK: So you want to own that software that you've downloaded.
MR. BERGMAYER: Yes.
MR. ZUCK: Okay.
MR. BERGMAYER: Because I own the copy --
MR. ZUCK: Then fine, when you get a new phone, then you have to pay me to get the software again for that new phone is what you're suggesting.
MR. BERGMAYER: There are markets that work that way and there are markets that don't. I mean, there are markets that give you unlimited re-downloads onto new physical devices that you own --
MR. ZUCK: That's because that's a license.
MR. BERGMAYER: Right. So what I bought then is I bought the right to make new reproductions.
MR. ZUCK: You bought nothing. That's the point. Yes, you bought the --

MR. BERGMAYER: But I own the phone.

MR. ZUCK: -- license of the software. So then regardless, sometimes you can use it on three different devices.

MR. BERGMAYER: Okay --

MR. ZUCK: -- for example --

MR. BERGMAYER: -- if I own my phone, I own a copy of the software that is installed on that phone because a copy is defined in the statute as a material item. There is no other category. There is no ethereal copy, like right to own a copy, right to make a new copy.

I can license IP rights or I can own a physical item. And there's just a continual failure to make that distinction which is vital in specifically the embedded software context that we're here to discuss because it specifically implicates the ability to transfer devices with software that is embedded in them from one person to another.

MR. ZUCK: I guess there hasn't been that much problem doing those transfers of devices that have embedded software though.

MR. BOCKERT: In the automotive industry, there have been those issues. So we see that all the time.

MR. ZUCK: But you're talking about replacement parts though. That's a different issue than --

MR. BOCKERT: Right, but --

MR. ZUCK: -- transferring --

MR. BOCKERT: But there are -- so this gets to what Mr. Bergmayer was saying earlier about how when you own the automobile, are we going to distinguish between whether you own certain parts and don't own others?

What we're saying is when you're replacing a part, there are restrictions that are not allowing you to transfer the chip that contains the software to the other because you can't access it and you can't get it to reboot on the other -- on the replacement device.

MR. ZUCK: Is it about you transferring a chip or building your own chip and the new screw that you're trying to provide, the new function you're trying to provide? Is it really about making a

physical transfer of a chip from one screw to another that you're trying to accomplish?

MR. BOCKERT: Well, it's both issues. It's both issues.

MR. BERGMAYER: I mean, I'll just say I'm actually adopting what I think is a pretty narrow view of 109 because I am specifically not saying that this is about digital first-sale, which is some right which people have proposed to -- yeah, to make new copies.

This is about transferring a material item from one owner to another and that's it. There are other issues that are related to digital first-sale that we can discuss. But specifically when it comes to section 109 and the ownership of a copy, it is only about the ownership of a material item. It is not about IP rights and it is not about anything sort of broader than that.

And I think it is simply misleading to suggest that saying that the fact that someone owns a copy gives them intellectual property rights, which would be a license, that they otherwise don't have.

MR. BERTIN: Okay. I wanted to hit one

other topic before we close out. And that's open-source software, which is often accompanied by conditions on the free transfer and reproduction of such software, such as requiring the disclosure of any software modifications or the downstream licensing of such software.

And the question I'd like to put out is would YODA or an amendment like YODA affect the development and use of open-source software. Chris?

MR. MOHR: So this question came up before and the answer to that question is yes. And the reason is because an owner of a copy -- if I make a modification, suppose it's a fair use. I have no obligation whatsoever to share that. I may in fact sell fair uses of particular works without permission. That's the point, right?

So under that type of model, that undercuts -- that type of model rather undercuts the incentives for communities to develop around open-source and the sharing that goes on in those communities to quickly fix bugs and so on and so forth. It's a very different way of distributing software. And the

current model allows people to choose. If they think they're going to do better under an open-source model, they are free to do so and to adopt any number of different licenses, whether it's the GPL or another one.

And if they want to do a closed ecosystem in the way that Apple does, they can do that too. That's fine. And it seems to have worked pretty well.

The only way it doesn't work, I guess, is if you are adopting -- I mean, I don't know what more I can say about differing ways of construing the statute vis-à-vis ownership and copy, other than if you don't -- other than to really say I don't agree.

I'm having trouble finding a court case that agrees. And there are lots of people who have invested lots of time, money and effort on particular constructions of that very provision that has been shown to be an enormous success. I think it would be unwise to disrupt those expectations or that performance.

MR. BERTIN: Mr. Band?

MR. BAND: Yeah. I don't see YODA or

something like that having any impact at all on open-source software. As we heard before, the open-source licenses are affecting the rights attaching to the software but not the copy of the software because it's -- and so the open-source license allows the second user to make copies or to make derivative works. Those are completely different from what we're talking about in YODA, which is purely about can the first person sell the product to the second person. And it doesn't -- and it would in no way limit what's -- how the open-source model would work.

But also, just getting back to the previous colloquy about -- let's say firmware that is transferred from one device to a newer device, I mean, you see that all the time with refurbished products. And we think that that secondary market for refurbished products is -- I mean, that's a good thing.

It's positive for consumers because you have consumers that are able to buy products at a lower cost than they would have been able to buy a new or un-refurbished product. And it's environmentally good

to recycle products. And so yes, it means -- it conceivably means that you'll have a manufacturer who would have to compete with a refurbished product.

But we think that competition is good, basically that -- and copyright and other statutory monopolies are the exception to the general rule in our economy that we want to promote competition. And so, having refurbished products is a good thing and we should encourage it as much as possible.

MR. BERTIN: Mr. Perzanowski?

MR. PERZANOWSKI: So I want to go back a few minutes to a point that was made about the possibility that at least some license agreements grant consumers certain rights that might otherwise be within their control as owners of copies.

There are circumstances, right, where a license does provide something akin to the rights under 109 or 117, right? That happens out in the world sometimes. And I think that those kinds of flexible licenses are a welcome addition to what we see out there in the market. So Amazon, for example, has a sort of simulation of lending that works on the

Kindle. So publishers can opt in for some books to allow consumers to lend an e-book one time for a period of two weeks and then never again, right?

And so, there are I think two important limitations to keep in mind and I think demonstrate why those kinds of licensed secondary markets are a pretty poor substitute for the real thing. One is they are incomplete, right? I mean, Amazon's system, for example, is opt-in. Not all platforms do this. Certainly not all publishers participate. So you get this sort of spotty set of rights for consumers.

And the other I think more important big picture thing is there's a big difference between granted permission to engage in a behavior and having a right to engage in that behavior, right? Property is not having to ask for permission. That's why we care about ownership. And there are some really important things that flow from unregulated property interests, right, unregulated secondary markets. We might think that those uses are most valuable precisely where permission is not going to be granted, right?

So you mentioned that sometimes they say, look, you can sell your software. But like, write down who you're selling it to and keep track of that transfer. Well, one of the great things that comes from unregulated, unlicensed secondary markets is privacy. No one keeps track of who owns what. No one keeps track of what books you're reading. No one keeps track of what software you're using and I think consumers see that as a benefit.

You can think about user innovation or, potentially competitive uses that -- or competitive resale markets where it's really unlikely that anybody is going to give permission for someone to take their product and build on it and do something new and interesting with it, where you might not see permission to sell a used product at a lower price that competes with the new product.

But that's precisely what a property interest allows owners to do. So those things do exist. But they are not a perfect substitute for actual ownership by purchasers.

MR. BERTIN: Chris? Mr. Mohr, do you have

one more -- one final thought? Or Mr. Harbeson?

MR. MOHR: No -- (off mic).

MR. HARBESON: If I --

MR. BERTIN: Mr. -- sorry, go ahead.

MR. HARBESON: It's kind of ridiculous. I'm glad I'm not going to be the final word because that would be kind of silly. But I promised I would shut up, but I did not sign a contract to that effect, so you're stuck with one more -- a word.

I want to just go back to a couple of things that were said earlier. There's been a lot of talk, or some talk anyway, about unintended consequences of changing the law. The Music Library Association is here precisely because we're worried about unintended consequences of looking at something too narrowly and having that have broader consequences.

So just to be clear, unless -- what is recommended is something incredibly narrow, to the extent of only affecting 109(c), for example, and the way, again, that legislation works, I think that's unlikely -- making a change in this small field will have larger ripple effects. So please -- I implore

the Office to consider the wider impact of what they're recommending.

The other thing I want to address is the question of preemption of contracts. And the reason I want to do that is because we are -- we do propose a form of that. But I want to be clear that we do not support, for example, what was done in the United Kingdom, which renders certain contracts unenforceable if they contradict limitations and exceptions in their law. That would cause enormous problems for us in negotiations of gift agreements and the like.

What we are requesting is a much narrower form of preemption. And I'd just like to underline that proposal. It's in our initial comments. And so, I just would like to point towards that.

MR. BERTIN: And Mr. Kupferschmid, you get the last word.

MR. KUPFERSCHMID: Okay. So just to point out sort of an inconsistency with what at least I'm hearing from I'll say the other side of the table. We hear that consumers have a right to privacy. I understand that. I get that. We're also hearing that

they should have a right to updates and bug fixes and customer support, as would be in the YODA bill. You can't have it both ways.

I mean, there's no way for the software company to know who I am -- know that the software has been transferred and to know who to provide these updates and bug fixes and customer support to if the individual wishes to be -- remain anonymous or something in terms of who you sell to.

So there's an internal inconsistency there that is problematic. And I think from a consumer protection -- or from sort of satisfying their customer base, I think it makes a lot of sense for these software companies to include a provision in there that says, yes, you can transfer -- we're giving you -- that's what you want to do.

Yes, you can transfer this software, but under these circumstances, which is we need to know who you're transferring it to so we know who to deliver the customer support to, the upgrades, the bug fixes. I think that's completely reasonable.

And to the extent we're hearing otherwise,

it's sort of putting the software companies in a no-win situation. And I guess that's the last word.

MR. BERTIN: Thank you to the members of our panel. This concludes our roundtable on software-enabled consumer products. Oh, excuse me. I'm being corrected on that.

MR. DAMLE: So we have a microphone set up, a freestanding microphone. We wanted to have sort of a period of time for observers in the audience to offer any thoughts or comments they might have. So there's a mic stand that's making its way to the front of the room. So if anyone's interested, go ahead. There's a microphone there. Mr. Tepp?

MR. TEPP: Thanks. Is this on? Is it on? No? There we go. All right. Just a couple of remarks in regard to the harm from the proposed contract preemption concept.

I'd like to point out that commonly in the business-to-business context, licenses are the result of face-to-face, arm's-length negotiations and that preemption of those contracts introduces unnecessary uncertainty into the marketplace and is inconsistent

with the basic free market approach of the U.S. copyright system, dating all the way back to Article I, Section 8, Clause 8.

In any event, what this issue really boils down to is preempting contract terms that some people don't like, notwithstanding the fact that they're enforceable contract terms. So it's about government banning certain business models which will actually have the predictable effect of increasing prices because software companies have fewer options in how to tailor a license to particular uses and they'd be forced to offer higher level, higher priced licenses.

And the case for government control in place of free market approach simply hasn't been made. The evidence is scant, at best, particularly in the context of the software industry, which is as dynamic, as competitive and as innovative as any industry in the United States. Thank you.

MR. DAMLE: Any other thoughts from the audience? Okay. Well, thank you. That was -- now it's the end of the first roundtable on software-enabled consumer products, and next week is in San

Francisco.

(Whereupon, the foregoing adjourned at 2:50 p.m.)

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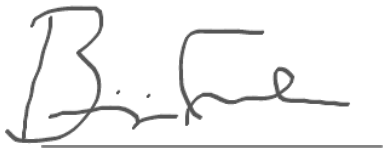

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