U.S. COPYRIGHT OFFICE
SOFTWARE-ENABLED CONSUMER PRODUCTS STUDY

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APPEARANCES

ASHLEY AILSWORTH, Specialty Equipment Market Association

ERIK BERTIN, United States Copyright Office

EVAN COX, BSA | The Software Alliance

SY DAMLE, United States Copyright Office

CATHY GELLIS, Digital Age Defense

STEPHEN LIU, Juelsgaard IP & Innovation Clinic / Engine Advocacy

SAM MCCLURE, Juelsgaard IP & Innovation Clinic / Engine Advocacy

JOHN R. RILEY, United States Copyright Office

CATHERINE ROWLAND, United States Copyright Office

BEN SHEFFNER, Motion Picture Association of America, Inc.

ANDREW SHORE, Owners' Rights Initiative

ERICA SOLLAZZO, Juelsgaard IP & Innovation Clinic/ Engine Advocacy

KIT WALSH, EFF

KYLE WIENS, iFixit
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MR. DAMLE: Okay. Good morning, everyone, and welcome to the second roundtable hearing on the topic of copyright law as it relates to software-enabled consumer products.

I'm Sy Damle. I'm Deputy General Counsel at the U.S. Copyright Office, and I'll let my colleagues introduce themselves.

MR. RILEY: My name is John Riley. I'm an Attorney-Advisor.

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

MR. BERTIN: I'm Erik Bertin. I'm the Deputy Director of the Registration Program.

MR. DAMLE: Great. So first of all, I'd like to thank the UC Hastings College of the Law for hosting us. I don't know if there are any representatives from -- no? Well anyways, for the record, I will note that David Faigman, Professor Depoorter, Lan Tran, Tom McCarthy and the Media Services Group and the ITS group have been very helpful in getting this set up for us. And so, we appreciate their hospitality.

So we're conducting this study at the request of the Senate Judiciary Committee, as you
all know. The Committee's letter observed that the revolutionary nature of digital technologies has led to software being essential to the operation of refrigerators, cars, farm equipment and wireless phones.

While acknowledging the role of intellectual property laws in that development, the Committee noted that there are questions being asked about how consumers can lawfully use products that rely on software to function. And so, the topic today is to sort of explore those questions and see whether Congress or the Office needs to act in some way to solve any problems.

So, just a couple of housekeeping matters before we begin, some of you are veterans of our roundtables. So you know this. But for the others, if you want to jump in on the conversation, just take your table tent that's in front of you and just tip it sideways so that way we know to call on you if you want to jump in.

And just a disclaimer that your remarks are being recorded and will be transcribed and made part of the public record. And the panel is being live-streamed, I believe. So there's that as well.
We've got four panels lined up for today. There are three before lunch and one after lunch. And there will be an opportunity for any observer comments at the end. We had a very productive conversation in Washington, D.C., and so, I hope we have a similarly productive conversation today.

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

Oh, and one thing about the microphones - the microphones are on all the time. So, during the conversation, if we can try to limit sort of cross-talk, for the Court Reporter's sake mostly, that would be very helpful.

Before I start off, we'd appreciate it if each of you could introduce yourselves and explain your affiliation for the record. Why don't we start over here with you?

MS. AILSWORTH: Hi. I'm Ashley Ailsworth, from the Specialty Equipment Market Association,
SEMA, and we represent the manufacturers, installers, retailers of specialty equipment automotive parts, specifically aftermarket parts that are unique and not necessarily replacement parts or direct replacement parts.

MR. COX: Hi. I'm Evan Cox. I'm an attorney at Covington & Burling here in San Francisco, and I'm here on behalf of the Business Software Alliance. The Business Software Alliance is the leading advocate for global software industry in the United States and around the world and is very involved in public policy and I've worked with them for about 20 years.

MR. DAMLE: Thanks.

MR. SHORE: Andrew Shore. I'm a partner with Jochum Shore & Trossevin. I run a coalition called the Owners' Rights Initiative. Groups like eBay, Goodwill, the American Library Association, who all rely on primarily the first-sale doctrine to advance their businesses.

MS. GELLIS: I'm Cathy Gellis. I'm an attorney in private practice. I participated in the study, filing a written comment on behalf of the R Street Institute. I'm not representing them today, although I may happen to say very similar
things.

MR. MCCLURE: Hi. I'm Sam McClure. I'm from the Stanford IP Clinic, representing Engine Advocacy, which is a policy organization that supports the growth of technology entrepreneurship through economic research, policy analysis and advocacy on local and national levels.

MR. WIENS: Hi. I'm Kyle Wiens. I represent iFixit and Repair.org, and we represent consumers that are trying to fix their things and professional repair technicians that are repairing everything from medical equipment to automotive vehicles to cell phones and a broad spectrum of electronic devices.

MS. WALSH: Kit Walsh, a staff attorney with the Electronic Frontier Foundation. We're a nonprofit digital civil liberties organization with over 26,000 dues-paying members. We work to promote civil liberties, freedom of speech and innovation in the digital age.

MR. DAMLE: Great. Thank you all. So, to start things off, the Committee asked us to examine the specific issue of copyright related to software in what they called “everyday products.” And so, we understand the committee to have not
asked us for a more comprehensive review of copyright in software generally.

With that understanding, one of the really key questions here is whether there are problems in the marketplace that are specific to software-enabled consumer devices separate and apart from software generally, and, if so, whether those problems can be solved without affecting copyright protection for software generally.

So if anyone wants to jump in and sort of discuss that kind of general issue?

MR. SHORE: Sure.

MR. DAMLE: Mr. Shore?

MR. SHORE: Yeah. So I guess my first comment would be to sort of reject the notion of consumer versus business products because what does “consumer” mean? Is it the product or is it the setting in which it exists? You mentioned refrigerators. If I have an LG refrigerator and I have it in my house, is it a consumer product, but if I have it in my restaurant, it's a business product? So we shouldn't balkanize the code by drawing these distinctions. And you know, the internet has democratized the sale of retail goods. So somebody could be selling a refrigerator
to that restaurant. Are they -- is it a business product? I think that's a little tricky and I would really encourage you to take the broadest possible view of what consumer is because there's really no definition for it.

MR. DAMLE: I'm sorry. So if I could just ask a follow-up?

MR. SHORE: Yeah.

MR. DAMLE: What about the idea of embedded versus non-embedded software? I think that was also kind of -- there was a strain --

MR. SHORE: Absolutely. No --

MR. DAMLE: -- underlying the letter, kind of assuming there was a way that could be drawn.

MR. SHORE: Yeah. I think there can be lines drawn. At least we've found in our experience, among our members, that there are some consistencies, for instance, people don't pirate embedded software, right? I mean, software that runs routers, you're not walking around the street going, "hey, I've got some router software for you."

And it also -- unlike freestanding software it has to exist on the platform. I mean,
it's sort of tied one to one. But there are
technical people who can probably address that
better than I can, people like Kyle and others.
Sorry to put you on the spot, Kyle.

MR. DAMLE: Ms. Walsh, I think you were
next.

MS. WALSH: Yeah. So to follow up on what
Andrew's last point was, one way to think about
this is, “why do we ordinarily have copyright
law?” One of the justifications diverging from the
normal rule of free market competition is that the
products can be duplicated at very low marginal
cost. And that's not the case when we're talking
about software that's embedded in a physical
object that has its own manufacturer distribution
costs.

So, if we look at the underlying reasons
why copyright protection is justified as a
divergence from the normal rules of competition,
then it doesn't apply as strongly in the embedded
software context.

That's one of the most significant
distinctions that may exist. But to also push back
on the premise a little bit, many of the problems
that have emerged in the context of embedded
software also have overlap in the world of software that's running on other general purpose computers.

And if I could highlight that point for a moment, I would resist drawing a distinction between general purpose computers like laptops and tablets and so on and other varieties of computers that people purchase as part of a specialized device because those are also general purpose computers and many of the people who use the devices either modify them. You can play Flappy Bird on an e-cigarette.

You can turn a videogame console into a low cost general purpose computer. And part of the innovation and the use that people find for devices that enhances their economic value and leads to more innovation is a direct result of the fact that the computers that are in all of these consumer devices are and can be general purpose computers. And that's a valuable thing. That's not something to resist.

MR. DAMLE: So can I -- I'm going to be asking a lot of follow-ups. I apologize. So can I ask -- I mean, there is -- the law does have this sort of idea -- I mean, to pick up on your point,
the law does have this idea already in the Computer Rental Amendments Act of carving out from this -- the new rental right this idea that if it's software that can't ordinarily be copied from the device during its ordinary operation, then that's not subject to the rental right.

And that was -- the legislative history indicates that that was done at the behest of things like car rental companies that said, look, if you were to pass this, literally it would mean that we can't rent a car that has software on it.

Is that a -- is that something useful that we can look at? If we were -- if Congress were interested in trying to draw a distinction between embedded software and software that you buy off the shelf, is that something useful that we can look to or is that problematic in other ways today?

MS. WALSH: I think the big danger to saying we're going to define a category of devices where you ordinarily can't copy the software out of it is because it creates an adversarial relationship between the device and the people who are relying on it.

So you have to -- in order for that to be
true, that you can't ordinarily copy the software out of the device, you need to create an extra layer of technological restrictions that are trying to keep the user from having the ultimate autonomy over what their device is doing.

And we live in an age where the internet of things can tell when you wake up, what you drink for coffee, whose house you're sleeping over at. It has cameras on your living room. It has microphones in your kids' Barbie dolls.

And letting those devices trump the autonomy of people whose lives are shaped by them is actually a very dangerous thing, both for privacy, for people's security because it introduces vulnerabilities that malicious hackers could use and just for the personal autonomy of the people, all of us who rely on software-enabled devices.

MR. DAMLE: Mr. Cox, I wonder if you have sort of a response to those points.

MR. COX: Well, I do to that but I first want to go back to something Andrew said, and that's that software in routers isn't ordinarily pirated. That's true if your concern is consumer piracy. But one of the biggest threats that many
people in the U.S. industry face is the copying of their software by low-cost competitors coming out of places in Asia. That is who the copyright law is going to be enforced against, not your routine consumer tinkering. So I think in making changes to copyright law, you have to think about who you're protecting and who it's going to be used against.

I think of the experience of one of my would-be clients. He can't quite afford me yet. But he's making one of these hoverboard-type products and all the innovation in his product is in the software and the algorithms that determine how it handles and how it shapes as you ride it.

People who have introduced products in that market have been swamped instantly by people who copy the software, take it apart, copy it, make it in China, re-import it here. Without a legal remedy, they can't do anything about that. And if you think about who's bringing enforcement actions, I think it's important to keep that in perspective. As to Kit's comments, just a very general comment -- and this theme will come back -- is then that's market choice. There are a lot of different options on the market and people who are
more sensitive about their privacy have choices
that respect that to a greater degree. And
companies work with copyright law and a lot of
other dynamics, including standards and other
things, to offer consumers choice.

People can find more or less intrusive
ways to equip themselves digitally in this world,
and they ought to do so according to their
preferences. But that is market forces at work and
that produces choice and a range of choice.

MR. DAMLE: And do you have thoughts
about the sort of premise that underlies the
Senate letter, which is that it's possible to kind
of identify the sort of category of software or of
products that we could have special rules for or
that we could solve -- sort of in my opening
question, that we could solve the problems in that
arena without affecting everything else. Do you
have thoughts about that?

MR. COX: The BSA thinks that that's very
difficult to do. The internet of things is in --
is one facet of developments that include moving
most of the processing power and functionality to
the cloud. BSA's submission goes into this and I'm
sure they commented on this in D.C., but more and
more, these devices are part of a service. They're not just a standalone device. They are intimately connected with cloud services. That's the majority of the value of the functionality and innovation that they provide.

And so, you're dealing more with a service relationship, which there's ongoing updating and interacting with software, a lot of liability and burdens on the provider of that software as a service, including liability concerns, security concerns, privacy breach concerns.

So, the desire of the people providing those to have a degree of control over that ecosystem is in some ways more pronounced in this environment. But to draw the line between the client-side and the cloud-side or what's an everyday product, not an everyday product. You know, there was embedded software in microwaves. There was embedded software in calculators back in the '70s when the copyright laws were being written. That, by itself, is not new.

MS. ROWLAND: Can I -- I was going to ask you a follow-up question about this. So at the D.C. roundtable, we had a lot of discussion from
the automobile industry and of mechanical uses that have turned into software.

So the example was given, I think, about the windshield wiper. Before, it would have been just some sort of mechanical process that would not have been covered by copyright at all. And now, there might be some software that kind of directs how fast the wipers go or how intermittent or whatnot. And there was a lot of discussion about why would that be treated the same as other kind of software when it's more purely functional.

And I wonder if you have a thought on that. Are there any kind of software-enabled things that might fall away?

MR. COX: I don't think there's an easy answer to that. Going back to my first point, if you come up with an innovative way to drive your windshield wipers, and that adds value to your car, the only person you're going to be -- well, the greatest threat you'll have to that is knockoffs entering the market from overseas.

As things get reverse engineered, software is very easy to extract and copy and put in a competitive product. So that's the primary concern of copyright holders.
MS. ROWLAND: And there's, I think -- I'm just realizing this, that the windshield wiper example is really emblematic of patent law too. It was that case, right? There was a movie about it, the intermittent wiper stuff and the patent. So is there -- do you think -- what do you think of kind of the crossover between patent and copyright in that specific area?

MR. COX: I can't say I have a deep view on that specific area. As a lawyer, there's a very large practical difference between enforcing a copyright and enforcing a patent, if that's your choice. The order of magnitude of cost and complexity and uncertainty about your patents, it's far more preferable to enforce your copyrights in a situation like that against a competitor, if that's what it takes.

MR. DAMLE: And sorry, to follow up on that, so if it's a competitor, if it's competitors that are overseas, are you -- how exactly do you anticipate enforcing your copyrights against them?

MR. COX: Well, you'd have to do that market by market. It's more difficult, less difficult in different markets. Often, the U.S. market is going to be the biggest and most
lucrative market and that's going to be what
you're most concerned about --

MR. DAMLE: It's about importation of
those goods back into --

MR. COX: --either ITC actions to block
importation or dealing with it on the ground with
distributors and retailers. There's a range of
choices. Enforcing it in China or in Taiwan,
that's pretty challenging.

MR. DAMLE: Okay.

MR. COX: But it's not -- you're not in
charge of their laws.

MR. DAMLE: that's right. So I know there
are a lot of placards up. But since we're talking
about automobiles, I thought it might make sense
just to quickly go to you, Ms. Ailsworth.

MS. AILSWORTH: Yeah. I just wanted to
make a distinction for the embedded versus non-
embedded. I think it might be more useful to think
of functional versus nonfunctional, because there
are a lot of software applications now that you
can install on a vehicle and it doesn't come
embedded with that software functionality. And you
can add that later. And I think that it's
important that these items that are functional
versus items that are nonfunctional, like a movie or a video and music, versus software that you're installing to change your windshield wiper speed and responsiveness, there's a difference in those two things. But it's not that one is embedded and one is not. It's that one is really functional and goes to the uses of the product and one goes to the heart of copyright law and the expression of the idea.

MS. ROWLAND: Can I ask a follow-up on that? So one of the difficulties I think everyone has with this topic is that we talk about functional -- and I was just talking about that as well. But software is functional. Like the point of software, it's defined as executing a function. It's a set of instructions. It does something. It's useful. It's not your normal copyright issue.

And so, where do you then draw the line or is it possible to kind of draw the line about when you say "functional," what do you mean? Is there like a merger doctrine situation going on or--

MS. AILSWORTH: Yeah, and I think there has to be some kind of line drawn there. I don't think it's easy to draw. But there's certainly in
the common understanding of functional versus
software that is for a different purpose, there is
an analysis that breaks it down into these are
functional aspects. These are the expressive
aspects. And there is an analysis that goes on in
the court doctrine.

So I think there is a possible way to
draw the line. But I think that there should be
further standards and possibly in the pleadings
standards or in a duty to conduct a good-faith
analysis before filing a claim that really looks
into, okay, what are the elements here? What is
functional in the court doctrine of functional and
what is the expression of the idea? And kind of
walk through that before just filing a claim
against anything that's doing a copy or a
reproduction.

MR. BERTIN: So it's your view that the
functionality analysis goes more towards copyright
ability versus whether there's an infringement or
not? So on the front end versus the back end?

MS. AILSWORTH: Actually, I think it goes
more towards the back end. I just think that there
should be some kind of an analysis on, you know,
the effects of this use and of the effects of the
fact that something is functional and whether --
that does go into the fair use analysis. So I
think that that should be part of this analysis.

But I still think that it's -- a lot of
these aspects are copyrightable and I don't think
that we should be forcing people to make that
determination of this is copyrightable, this
isn't.

But I think that there should be some
kind of an analysis of, well, the fact that this
is functional should -- we should require some
more analysis on the front end of the uses that
are fair to make on the back end. So it's a little
bit complicated and convoluted. But I don't want
to take away anyone's copyright protection at the
same time.

MR. DAMLE: Okay. We're going to go down
this line. I mean, it raises the issue of we have
sort of options for dealing with this. One is to
kind of leave it to the courts to try to draw
these lines on a case-by-case basis.

And the other option is try to encode
something into the statute that tries to draw some
of these lines. And so, if you as you're making
your comments, if you have -- if you want to
address that, that'd be helpful. So we'll go to
Mr. Shore, and then we'll just go down the line.

MR. SHORE: Sure. So Evan made the
point and I'm going to apologize to Evan. I think
he's going to take a lot of body blows today from
this panel. But as the only Republican in San
Francisco, don't worry. You can beat me up later.

So I do want to push back on this notion
that we can have a set of laws on the books that
are applied sort of in one setting and maybe not
another, that we're not going to go after
consumers or smaller businesses. I have a litany
of clients who have been under siege not for even
selling -- they sell unauthorized products, which,
as you know, are not illegal products. They're
legitimate products outside of the supply chain.
Some of these clients have been raided by men with
guns for doing nothing illegal.

So the idea that this is just something
that the rightsholders want enforced against
Chinese pirates is a total misnomer. They drop the
heavy hand on legitimate businesses all across the
United States. So we should be very, very careful
to say, “oh, we'll put these laws on the books to
enhance copyright protection, but we're not really
going to use them against a certain set of businesses and people.”

MR. DAMLE: Do you have examples of -- I mean, to the extent you can talk about it?

MR. SHORE: I can't.

MR. DAMLE: All right.

MR. SHORE: I might be able to talk to you privately about it, with their permission.

MR. DAMLE: Okay.

MS. ROWLAND: Yeah, because other -- our panel in D.C., there was a lot of discussion of “this is not a problem.” You know, there's -- it can be more of a discussion about --

MR. SHORE: But --

MS. ROWLAND: -- give me an example, and --

MR. SHORE: But I have numerous examples of companies like Cisco and Oracle and others who right on their website address this issue of the sale of unauthorized products and they wouldn't do that if they weren't otherwise enforcing it.

MS. ROWLAND: Well, there was a discussion there about like --

MR. DAMLE: Yeah.

MS. ROWLAND: -- like the frequently
asked questions. So Adam, one of the panels -- I guess one of the frequently asked question was kind of viewed as kind of like a threatening thing and like it was Mr. Band who was saying, “well, why would it be a frequently asked question if it wasn't frequently happening.”

MR. SHORE: Right.

MS. ROWLAND: But then, other people were saying, “well, then please give us an example.” And it was a very -- it was a very heated discussion about what hard evidence is there to do something about it. So it would be interesting if we could learn more about that from anybody.

MR. DAMLE: Yeah, and I mean, to the extent -- I think the Senate had -- the Senate Judiciary Committee had in mind, sort of they were thinking about consumers principally when they were giving us this assignment. And the terms of service or licensing terms that were referenced in your submission all seem to be sort of fairly big enterprise-level type of devices -- switches and major server racks -- like rack servers, things like that.

And I didn't find anything that was sort of more towards the end of the consumer spectrum
in terms of those kind of restrictive terms.

MR. SHORE: I mean, Microsoft was going
to do it with the Xbox One, right? I mean, they
wound that back after consumer outcry. So there's
a consumer example. It didn't go to the finish
line. But it got close.

And again, I think the notion that -- I
would challenge you all to sort of tell us, is the
product -- is it the product or is it the setting
and then how do you distinguish? Because if it's
the product, then you have to come up with a list
of products that fit and don't. And if it's the
setting, again, back to the restaurant example,
the refrigerator's in my house. Is it consumer?
It's in my restaurant. It's business?

I think it's very dangerous to start
going down the road of creating lists of these
products are business, these products are not. I
mean, you might know-it-when- you-see-it. But
that's not -- businesses don't run on "know it
when you see it." They need a clear path forward
under the law.

MR. DAMLE: Okay. Thank you. Ms. Gellis?

MS. GELLIS: Thanks. Well, to back up, I
originally flipped the card when we were
discussing --

MR. DAMLE: Sure.

MS. GELLIS: -- some of what Mr. Shore just said about this distinction between different products and also comments that Ms. Walsh said. I think Ms. Walsh referenced the idea that Barbie dolls now are computerized. They have embedded software.

In footnote five of the comment I submitted for R Street, we talk about a pair of sneakers that runs game software on it where you can put computer logic on basically anything. And I think the understanding that copyright policy needs to have in -- if it's going to contemplate how it should apply is that everything can have computing logic.

And I think Mr. Shore's caution about, well, is that business, is that consumer is well-taken, that there's no real way of delineating which objects would get protection and which objects would get different sorts of protection or none whatsoever, and protection either in terms of the copyright in the software and also consumer protection of which objects would fall under different regimes of what users can do or what
other regulators might choose to let them be able
to stand in and control the operation of. So that
was the first point to make.

Let's see. I lost my train of thought
very briefly. So let me leave it with that. I'll
pick up with --

MR. BERTIN: Okay. We'll -- sorry, so if
I can just follow up on that.

MS. GELLIS: Yeah.

MR. BERTIN: And this is a point that Sy
talked about a little bit earlier. But the rental
right is sort of bifurcated in a sense like that.
On the one hand, you have the exception for
videogame cartridges, which is very, very, very
specific and maybe over time the industry has
evolved past that.

But on the other hand, you have the
exception for things that are embedded -- software
that is embedded -- in devices that cannot be
copied when the software is in operation. So that
to me seems like the other sort of example, a very
general carve-out. Can you speak to which of those
-- if either of those or any of those --
alternatives would speak to the problems that the
Senate has asked us to look into?
MS. GELLIS: Well, I remembered where I was going with that original thought, which is that once -- when you've got this idea that basically software can be embedded in anything, anything has its own market.

This is the market for a pen. There's otherwise the market for a sneaker. There's otherwise the market for a teapot or anything that we've put internet of things on. There's a market for a car.

And one of the things to think about is, well, whether it's appropriate to have IP policy affecting the market for the things because those things are capable of competing in the markets for themselves. Users want them to do something and the question is can the manufacturer produce the thing that will do the thing that the user wanted it to do at the best price, at a better price than what their competitor can deliver.

When we start adding in -- you don't have the market failure that Ms. Walsh was talking about where you need the IP protection to be able to make sure that the manufacturer can be in the market. Related to that, and I think getting back to your question, is I am not entirely sure it's a
healthy thing for copyright to necessarily --
people should be able to build things, buy things
and use things without having to read the
copyright statute.

And to have the copyright statute provide
if this/then that, if this/then that, particularly
when the thing, its operation and the market for
the thing that can do that operation is so
independent from software existing in sort of a
literary work, that I believe Ms. Ailsworth was
describing as being a significant difference with
when IP protection would be more appropriately
applied to software than when it's controlling its
function.

I'm not entirely sure if I've deviated
too much from your question, but I got out the
rest of my thought.

MR. BERTIN: I hear what you're saying,
and if we were having this conversation 15 years
ago when we were saying, well, “a refrigerator is
a refrigerator is a refrigerator. They're all
fungible to some extent where they all provide
coldness and maybe ice and water, et cetera, et
cetera.” But now, we're looking at a world in
which we have the same objects, except that the
functions that they perform are, we're told, 
provided not by -- or not entirely by -- the 
object itself but also the software that's inside 
of it so that the market for the thing is, in some 
ways, whether the consumer realizes it or not, a 
desire for the functionality that the software 
facilitates.

MS. GELLIS: I'm not entirely sure there 
has actually been the change that you describe 
because the refrigerator from the get-go always 
had a circuit. It at minimum had one circuit. Was 
current flowing to the compressor or was current 
not flowing to the compressor? And some behavior 
of the refrigerator was going to hinge around 
that. A chip is basically many switches put 
together and software controls how those switches 
work.

So all we have is the same technology, 
just on an extended scale where now there's an 
awful lot of switches and now we have to keep 
track with some sort of humanly written 
instructions in some way, and I want to put a big 
asterisk around that in case that's the phrasing I 
don't think is healthy as we think about this, 
where those switches are now controlled with
software. And -- but basically, you still have the thing.

Is the refrigerator providing the coldness? There's switches that are being operated with current going, yes or no, yes or no, but now there's a lot more switches with a lot more sophisticated control. But it's still what we essentially had, which I think goes to the point of it is operational because how well that refrigerator is going to provide coldness and in what context it's going to provide coldness, it's still the basic function of the refrigerator.

And if someone thinks a Samsung refrigerator will provide coldness in a way that meets their needs better than -- I'm not sure Maytag is still a refrigerator manufacturer, but to just name another competitor -- they can compete by based on how they're controlling the switches to the electricity that's going to go to the compressor and give the user their coldness.

MR. DAMLE: Okay. Mr. McClure? You've been very patient. Thank you.

MR. MCCLURE: Yeah, of course. Well, I've got a lot of things to say and I don't know how organized they're going to be. So I'll just try to
get through a few points and then we -- then you

guys can move on.

One quote that I think should just be on
the record in case you haven't heard it is Marc
Andreessen's copyright -- or software is eating
the world. Software is eating the world. He's a
top venture capitalist. He looms large here in the
Valley and he -- it's his business to build and
then invest in software companies and companies
that use software. And he understands that this is
sort of -- that this is a geometric progression,
right?

I think Aaron Perzanowski's comment is
probably the best sort of deconstruction of
copyright law as it stands, and I know there's an
inclination to kind of draw this distinction
between embedded software and then sort of the
standalone software or software in the past versus
software going forward or however you want to do
it, right?

So sort of leave this legal structure in
place that we've built up over the years and then
make some kind of small pivot to sort of handle
this new phenomenon of embedded software. But I
think it's just -- it's so huge that now software
exceptionalism has been exposed because software has been put into all of these physical products.

A theme that's kind of come up a little bit is what are businesses using software for really? Is it to improve core product value? Is it to sort of raise switching costs? Is it sort of -- is it malicious? Is it offensive? Is it defensive? I think something that we shouldn't underestimate is businesses' ability to use it offensively and to use it in a sense that it wasn't meant to be used and wasn't intended to be used because their primary interest is their shareholders. It's not necessarily their consumers.

There was one -- I think something that Mr. -- in the discussion with Mr. Cox, you were asking about an example -- or maybe it was Mr. Shore -- an example of consumers being harmed with their product. I know one example that comes to mind is that people who had purchased a Nintendo Wii had to make periodic updates to the Nintendo Wii software. And it was actually bricked for a period of time if you did not agree to that update.

So that's an example of hundreds of dollars of sunk costs in some kind of hardware
that has software on it, that unless you agree to
whatever contract is coming down the line or
whatever new license agreement is coming down the
line, you actually lose functionality entirely in
that product.

And that, to me, is not really speaking
to core product value, like we've -- as many
businesses -- software businesses would have us
believe, that they need to have these software
protections to protect their core product value.

It's sort of about raising switching
costs or imposing certain costs on consumers or
doing business in a certain way after a consumer
has already invested so much of sort of their time
and energy into their products.

MR. DAMLE: So I just have a question
about that, which is -- I mean, there are like --
there are websites -- so when I sign up for a
Google account, I have to agree to terms of
service -- for a Gmail account -- I have to agree
to terms of service. I have an Airbnb account, I
have to agree to terms of service. And whenever
they want to change those terms of services --
those terms of service, I have to agree to them if
I want to continue using that service, that
Your example, is that so atypical? I mean, that seems to be fairly common in the tech world generally, outside of, just sort of embedded devices. But just in general, that seems fairly common. So is that -- are you saying that that's problematic across the board? Is that -- is there some specific problem with respect to the Xbox example you gave that's different from those other examples?

MR. MCCLURE: Yeah, and I think there is-- so, yes, and I will get to that. But I think this goes back to -- I lost my train of thought there. But yeah, I think the big distinction for me is that if you read -- for whatever reason, if you actually sat down and read the Gmail terms of service and you found something in there that you didn't like, you could go use Hotmail or you could use whatever other email provider you want to. There's nothing that you have spent to set up your Gmail account. It's entirely free, right?

If you have a thousand dollars into a refrigerator, it's going to be a lot harder for you to switch over to a new refrigerator if the person who owns the proprietary software in that
refrigerator makes you sign a new license agreement that has you doing something that you don't like. And it's not just, I don't think, going to be necessarily -- well, I'll let you --

MS. ROWLAND: I was going to say, I would actually think that in terms of -- if you had your fictitious copyright.com email address and all of a sudden the Copyright Office changed it, but you'd had this email address for like 10 years, that would be way worse for you if your email -- if you had to swap out of your email address because this is like your personal -- this is like your address, right, versus a refrigerator.

So to me, that would actually be more of a problem if you had like to keep going with this. They introduced something that would make you switch to a different thing. And it seems less like copyright and more like there's a contractual issue and there's like the whole EULA business and whatnot that we're going to be talking about later. And I wonder how you would kind of parse between the copyright versus the kind of contractual issues here, because they are two separate buckets, right? So do you have any thoughts on that?
MR. MCCLURE: I don't think it's -- I think -- I mean, as a 24-year-old, I think it's easier to switch emails than it is to switch a refrigerator. But that's because I have no experience switching refrigerators and I switch emails all the time.

MS. ROWLAND: I have a 20-year-old email address.

MR. MCCLURE: Fair enough. So that's all I will say. I want to let other people have a comment. But I'll think about what you asked.

MR. DAMLE: Thank you. Mr. Wiens? Thank you so much for your patience. I appreciate it.

MR. WIENS: Sure. And -- sure. So I'll give you a bit of background on myself and, again, how maybe I can help and then I'm happy to address any specific questions. I'm a software engineer. That's what I studied in school. I have built computers out of physical switches. I have programed digital logic to simulate a computer.

And in the course of learning how to be a software engineer we spend a lot of time as software folks thinking about copyright and then we're building products that then go out in the everyday world that people don't necessarily see.
One of the first kind of large, major projects I worked on was building a robot and we went all the way down to -- I mean, we're like writing assembly language at the lowest level all the way up to the high level -- high level logic. And then, I started iFixit, which is a repair manual for everything. And iFixit's mission is to teach people how to repair all the things that they have and sometimes those repairs are you have an iPhone and the screen is cracked. Let's get new glass, put it on the iPhone. It's a simple physical parts swap.

Sometimes, it's more complicated. I have -- this is a PlayStation. So this is interesting from a number of perspectives. Of course, we have copyright concerns about pirating software on this. But as a result of that, the optical drive and the main circuit board on this are linked together.

And so, if you have a hardware failure in the optical drive, the DVD drive, you have -- and you put a new optical drive in, you have to synch it up with the main board. And in order to do that, you have to modify the firmware and bypass some encryption.
You can either do that or you can do a repair that's twice as expensive and you can swap out both the optical drive and the main board to keep them coupled together, which is the non-software fix. You're just buying a board that already has software embedded.

We have been able to work with a broad spectrum of products. I spent a lot of time over the last couple of years working with farmers. Farmers are buying a $200,000 tractor that has some software on it. It's got something like seven separate microcontrollers on it. And if they buy a repair part, that repair part may or may not have software on it. They don't necessarily know.

When I have talked to farmers about this concept of ownership and John Deere tells them that they have an implied license to use the tractor for the life of the vehicle, they're astonished because their concept of ownership is kind of rooted in the core of what America has always been, which is I paid you money for this thing, it's mine.

And to be able to say, hey, you want to do a repair on this, and that involves going in and modifying a couple of bits in that software
and there are copyright implications of that and
you have to have permission from the manufacturer
really gets a lot of farmers very angry. And it's
not been a good thing to be a John Deere dealer
over the last year or two, as farmers have been
storming in asking copyright questions. And you
know, I understand we're talking about consumer
products. But this is really a challenge that
impacts all kinds of products.

I was looking on some parts websites last
night, and you can buy a 32-bit microcontroller
for about five cents, in quantities of a thousand.
Okay, so five cents, and if you imagine I'm going
to buy that and I'm going to put it on a product.
Let's say I'm making a greeting card and I want
the greeting card to play music. So I've got my
five-cent microcontroller. I'm going to embed that
in a product, sell it to a distributor. Maybe I'm
selling it to them for 10 or 15 cents. They're
going to double their margin.

You can have a product with 32-bit, fully
modern software that sells at retail for 50 cents.
And it can be reprogrammable. So I can take --
I've got the data file that's the Happy Birthday
song, that of course we all know about from the
world of copyright. But ignore the data file. Now I've got the software on this chip. Is it legal for me to sell this greeting card to somebody else? Is there implied license of that? Can I go in and modify the software? We would think of this from a hardware repair perspective as it's mine. I bought it. I should be able to do what I want with it. If I want to cut the greeting card up and modify it, I can.

There's a tremendous amount of expectations of things we've been able to do with personal property, that the moment you add software, which costs five cents, to a product, you change everything. So I'm a tinkerer. I like getting in and messing with things and taking them apart and modifying things. And I have the capability to modify software just the same way I've always been able to modify hardware.

But the rules that have always governed what I can do with personal property -- I can cut it up, I can modify it, I can tinker with it, I can repair it if it breaks -- are becoming much, much more complicated in the realm of software. And I think that what farmers need and what consumers need across the board is simplicity.
And if you look at the DMCA rulemakings and the exemptions, there's 86 pages of exemptions that were granted. No farmer is going to be able to parse 86 pages of copyright rulings that, by the way, don't go into effect until this next October. So across the board, if you have any guidance back to Congress, it needs to be something simple.

MR. RILEY: So first of all, let me thank you for bringing your PlayStation here, and I hope you're entering that into the record so we can bring it back.

MR. WIENS: Happy to.

MS. ROWLAND: And everything else there too.

MR. WIENS: I also have -- yeah, this is a LeapFrog tablet. So this is like in the -- like it might be a specialty like firmware, embedded firmware, but it also can be modded to be a general purpose computer.

MR. SHORE: I call dibs.

MR. RILEY: So this question came up some in the 1201 proceedings, and I know we're not going to get into it here, but some manufacturers suggested that when people tinkered with their
machines, there was this branding issue. What if the machine failed and people see a John Deere brand on the side? They don't necessarily understand that someone has altered the software.

MR. WIENS: Right.

MR. RILEY: What do you think of that line of argument?

MR. WIENS: Right. Yeah, so that's an interesting argument. The same issue has been in effect for physical products, right? I could buy a Honda car, like damage it or get in a crash and then repair it poorly and sell it and it has the Honda brand on it. So I have heard that argument and I don't think that's a new or interesting argument because that's always been the case with property. You can -- you can manipulate property.

What's interesting about software is it's actually trivial to verify that the software hasn't been modified. You do a checksum. Are you familiar with --

MR. RILEY: Yeah.

MR. WIENS: Okay. So you just do a checksum and you can instantly say is this the software or you can just the original software from the manufacturer, flash it and you're back to
square one. So I don't find that a particularly compelling argument.

MS. ROWLAND: That does almost sound more trademark-related, I mean, depending on if you were to resell it. There's a whole jurisprudence about reselling goods and whether or not they run afoul of trademark laws.

But it's an interesting -- in the world of trademark.

MR. RILEY: Yeah.

MR. BERTIN: Could I ask just a general question, Mr. Wiens? I have this sense that as a society, we've sort of got to a point where you have a product, you buy it and you get the periodic updates from the provider. Maybe you understand what they're for. Maybe you don't.

More often than not, you simply accept them --

MR. WIENS: Right.

MR. BERTIN: -- without questioning them.

And you keep doing that for some period of time. And then, eventually, the product stops working and then you just simply go out and buy a new one. And I think that this is becoming more -- just from my own personal sense -- that this is
becoming more and more prevalent, that this is just sort of the way things are. Do you have any thoughts on that, sort of this era in which we now seem to be going towards?

MR. WIENS: Right. Yeah, well, and so that gets to the heart of why I am doing this and why I started iFixit, which is that manufacturing electronics is different than manufacturing a lot of other products in that it's more, much more resource-intensive. The amount of raw materials that it takes to manufacture a cell phone -- like I have an iPhone here. It'd take over 500 pounds of raw material to manufacture an iPhone.

Semiconductors are the most resource-intensive product that we manufacture. The semiconductor industry consumes over 70 percent of the world's supply of several critical metals that are in -- and they're hugely geopolitically important. Rare earths, things like the neodymium in the magnets in these things, can't be recovered in recycling. The cobalt and the lithium in batteries in these phones can't generally be recovered in recycling.

And so, we have a massive environmental problem that we're making all these products and
we don't have systems in place that make it easy to repurpose them. And so, for example, this PlayStation 2 -- okay, so we've got some new PlayStation 2s since then. So no one really is playing or pirating games on a PlayStation 2. But this is a perfectly good computer and actually people have built supercomputers out of clusters of PlayStation 2s bundled together.

So the hope would be that we can -- that one of the solutions to this e-waste crisis that we're in is to allow people to repurpose and modify electronics for new uses that the manufacturer didn't intend. There is a project in Indonesia where they have issues with illegal mining -- or illegal logging. And so, they have taken old cell phones that people don't want anymore and set them up throughout the forest with solar panels and they're using the microphone and the cellular transmitter in them to detect illegal logging.

And it's a really cool project and they're able to do it with phones that maybe they couldn't have afforded technology that sophisticated. But it's our five-year-old phones.

Now, of course, to do that, you're going
to need to go in and modify the original software.
But that's kind of the same thing as modifying the
hardware and attaching a solar panel to it. You're
just changing a physical thing that you own.

MR. DAMLE: So just a couple of follow-up -- I mean, just to go back to my original
question if we're looking at it from the copyright
law perspective, what do you think -- is there
something in the copyright law that you think is
preventing that kind of reuse and repair that
could be clarified or improved in some way or -- I
mean, looking at existing doctrines, like fair
use, oftentimes people look at fair use for --

MR. WIENS: Right.

MR. DAMLE: -- things like
interoperability and reverse engineering. Do you
think those existing doctrines are sufficient or
does Congress need to do something more specific?

MR. WIENS: Right. Yeah, so there's a
huge spectrum of issues where copyright is causing
problems for people. One is 1201. We'll talk about
that tomorrow.

MR. DAMLE: Right.

MR. WIENS: But outside of 1201 and this
fear of modification, we've seen across the board
the folks who end up with this expertise or end up selling products that are based on derived software frequently are based outside the United States.

When we were looking at the tractor situation and the challenges that farmers are having, all of the companies that sell chips to modify and improve fuel efficiency on farm equipment are in Canada and the UK. There were none of them in the U.S. And it's the same thing with diesel equipment. There's a lot of modifications. You want to be able to make the diesel equipment that you can't. We are seeing dealers threaten local mechanics over access to things like diagnostic software.

I have a friend in San Luis Obispo. He's a diesel mechanic. He's phenomenal. He repairs everything from tugboats to big Mack trucks. And he has to have access to the software because he's got to go in and make some modifications. So like a diesel engine is sort of the -- it's basically the same platform. There's four or five major manufacturers. But some manufacturers have settings that make repair easy and other manufacturers don't.
And so, you have to go in there and modify the actual software itself. And when he goes to the local dealer and asks for either parts or diagnostic components to connect into the engine, they start treating him like a competitor and they cut him off from access to the parts and tools that he needs.

So yes, I would say anything that transfers control from the owner back to the manufacturer ends up as a stifling influence. And what we have seen is that -- so another friend is a local farmer. And over time, they used to do all of the repairs on their farm equipment themselves. And over time, they've had to do less and less because as functionalities move from hardware into software, they've had less control over the things -- over the physical equipment. And they've had to start going back to the dealer.

MS. ROWLAND: What is your solution?

MR. WIENS: I would pass to Kit for that. Ms. Walsh has I think thought about solutions more than I have.

MR. DAMLE: Sure. Yeah, Ms. Walsh, if you want to talk specifically -- the Copyright Office, to the extent we're talking -- to the extent
copyright law is a solution, we'd be curious to
know about that.

MS. WALSH: Well actually, my first point
would be to build on something that Mr. Cox said
which is that the rightsholders are concerned
primarily about commercial competition and that
they're not concerned about what individual
consumers are doing. And that's probably
particularly true in a context where you have a
device -- again, you can't sort of duplicate your
friend's refrigerator for free. There's no risk of
sort of consumptive --

MR. DAMLE: I'm sorry -

COURT REPORTER: I'm sorry. Your
microphone is turned off.

MS. ROWLAND: No, it's on.

MS. WALSH: Oh, it's illuminated. Let's
try moving it closer. Okay.

MR. DAMLE: Is that good?

COURT REPORTER: I think so, yeah.

MR. DAMLE: Okay. Thanks.

MS. WALSH: Okay. So I was building on
something that Mr. Cox said earlier about the
interests of rightsholders being primarily about
commercial competition and infringement that might
be involved in competition and not with the acts
of individual consumers and that that's
particularly true with embedded software where you
can't copy your friend's refrigerator. You
wouldn't download a car. You can't download a car.

   MS. ROWLAND: Well, not yet.
   MS. WALSH: Maybe a 3D print file.
   MR. BERTIN: 3D printer.
   MS. WALSH: And actually, a very -- that
presents a simple fix, which is that there could
be a minimum threshold of commerciality for
something to be infringement. That's a
particularly good fit again for the embedded
software context where there are markets for the
physical objects. That would fix a huge number of
the problems with individual self-repair, with
noncommercial research and so on.

   If this is really a problem about large,
industrial activities, which is the origin of
copyright law and sort of where copyright law was
its best was before it spread into everyday
activities of every single American and person in
the world. That presents a relatively simple way
of ameliorating a lot of the harms that we're
hearing about today.
I would also like to point out that market forces haven't provided great solutions, in part because people don't have good information and in part because people feel powerless.

There's a Pew Research study that showed that 91 percent of Americans thought they had lost control over their privacy with respect to software-enabled services and devices and most wanted the government to do more to protect them, and --

MR. DAMLE: Is that -- again, like we're the Copyright Office. There are lots of other agencies looking into these privacy issues. You know, it sort of hits us glancingly in the copyright context. But I'm just wondering what the sort of copyright --

MS. WALSH: Yeah.

MR. DAMLE: -- sort of angle on that is.

MS. WALSH: So it's actually a lot of the other agencies are trying to come up with affirmative consumer protection measures that will protect people's privacy. And copyright is a little bit flipped because what we have is copyright rules that in many cases prevent people from protecting themselves.
So when you have 1201 that keeps people from auditing devices and figuring out, hey, my TV is dialing back to Korea and sending voice data there, then that would prevent people or watchdog groups from identifying privacy harms that are taking place.

If we don't let people modify what their devices are doing, devices that are full of microphones, that are -- that have control over your communications, then people can't, if they determine, oh, I don't actually want Apple to be tracking my location all the time -- if you cannot modify the functioning of that device, due to a provision of copyright law, that is a way copyright law is actually acting to harm consumer privacy.

So the consumer protection approach there is dialing back the restrictive rules that are keeping people from protecting themselves and that works in conjunction with affirmative rules that prevent the privacy invasions in the first place.

So sort of the best way for the mark to be able to moderate harms to privacy as well as other issues that people have when they're trying to purchase devices and they want to know if they
can repair it, if they can lend it and so on, is for the default rule to be a consumer protective rule. And if manufacturers want to diverge from that with technological restrictions or contractual restrictions, then those need to be very prominent and very visible.

We'll talk about this more in the next panel, what happens when manufacturers try to get people to waive, in these elaborate one-sided EULAs, important consumer protection rights. That can undermine all of the protections that Congress has tried to put into place in the form of fair use, in the form of statutory exemptions to 1201, 117 rights, et cetera. So really having limits on the scope of the exclusive rights is the best measure.

Fair use is a very important catchall measure. But it can't be the first line of defense for people. If you always have to rely on fair use to do your own car repair, to innovate, to enter a market, that can be risky and unpredictable. So again, narrowing the scope of the exclusive rights in the first place is the most predictable and helpful means. Carve-outs can be helpful, as long as it's clear that they're a floor on permitted
activity rather than a ceiling.

So if we identify a narrow problem and make a carve-out for it as opposed to narrowing the exclusive right in the first place, then it should just be very clear that that's a floor, that's a safe harbor and you still get the full scope of your fair use rights as a backup. But that clarity has been introduced just to make it a little bit easier.

We also advise people all the time on the need to be concerned about some of the contractual provisions that restrict reverse engineering, restrict research. As part of our Coders' Rights Project, we do that. And I have a list of consumer products that have restrictive EULA terms.

MR. DAMLE: Sure, and we can talk about the licensing terms in the next panel. But we're running short on time on this panel --

MS. ROWLAND: Can I ask a little, one quick question?

MR. DAMLE: Yeah.

MS. ROWLAND: It sounds like you're kind of focusing on a solution that would be about a noncommercial use by an individual. Is that a fair assessment of what you're going for or --
MS. WALSH: That is one large swathe of activity --

MS. ROWLAND: Right.

MS. WALSH: -- that can relatively easily, if we can all agree that that's not what rightsholders are traditionally concerned about, then that would be a good start.

It's not -- there are other activities. So the ability for other companies to come in and compete in the marketplace in a legitimate way by reverse engineering, by creating interoperability with APIs, that's also important, something that we care about.

MR. DAMLE: Okay. So Mr. Cox, I feel like I should give you a chance to response to all of that.

MR. COX: Thanks. There are a few different threads to respond to, but a couple of basic comments. One is I don't think you should be using copyright law to fix privacy problems.

You can remove restrictions and perhaps protect privacy more. But that has a lot of other unintended consequences. That's not copyright policy. That's privacy policy and I happen to be a huge fan of the EFF in that area. So I'm very
sympathetic to privacy concerns. I just don't think they can be solved with copyright.

MR. DAMLE: Well, do you think that -- I mean, do you have a sense of where they should be solved? What is the --

MR. COX: I'm getting into personal views at this point.

MR. DAMLE: Okay. All right. That's fine.

MR. COX: I don't want to try and sum up BSA's position on that.

MR. DAMLE: Okay.

MR. COX: The second point is that a lot of these issues come down to business model. The story of the tractor or the PlayStation, the personal, noncommercial exception works up to a point. But to take, for example, the Nintendo or PlayStation and turning it into a brick. Most of those things -- as a consumer, it would be frustrating to spend a couple hundred dollars and then have your thing be a brick. You're out a couple hundred dollars.

But what that misses is that you got that thing for a couple hundred dollars because it's a business model that sells that thing as a loss leader. Most of the console games makers have sold
their consoles at a loss on the presumption that
they can use their constellation of legal rights
around that device to make money on the back end.

And this is a business model you see in
game consoles. You see it in printers. You see it
in a variety of areas. Competition and choice and
business models, there's discipline on that. If
John Deere makes too much trouble for too many of
their consumers at some point, people are going to
be driving Lamborghini tractors and that is a
tractor maker. It's one of the biggest tractors in
Europe.

So you can't separate the individual
problems from the business models. And fixing that
with copyright law takes away the certainty and
stability that allows companies to experiment with
business models and find ones that do and don't
resonate with consumers. And companies get
disciplined by consumers if they go too far in any
of these directions. People push back. So I'll
stop there because you said we're short of time.

MR. DAMLE: Yeah. If there's anything
else, I mean, we can go a little over if there's
anything else you wanted to respond to.

MR. COX: That's it, I think.
MR. DAMLE: Okay. All right. We'll just get two more people for quick comments. You have - Mr. McClure, and then, Ms. Ailsworth, to close us out, the first panel? Do you want Ms. Ailsworth to go first or -- okay.

MS. AILSWORTH: I was just going to follow up quickly, just to make sure my point on embedded versus non-embedded gets across because I think that's something that could show up in whatever final legislation the Judiciary Committee puts forward.

So I just want to caution using an example of chip technology in vehicles. And I want to make sure that if embedded shows up in the legislation, and we are defining things on a dichotomy, embedded versus non-embedded, that embedded is very well-defined because there are situations where the software or whatever added functionality that's using software is coming direct from the original manufacturer on the vehicle, there are situations where it's installed at the dealership prior to first retail sale.

So, and then there's obviously the vehicles purchased and then taken to a shop and it's put on there. So at what level is this
embedded software? That needs to be fleshed out a little bit. And then, another example would be chips that are soldered on versus not soldered on. The vehicles used to come with engine control modules that were not soldered on and they would be switched out quite easily. Now, almost across the board, they are soldered into place. And so, if you want to reprogram it, you need to re-flash it. It's not as easy just to switch it out. So does that affect whether we're designing this as embedded versus non-embedded.

MR. DAMLE: Okay. Thank you. Mr. McClure, you want to close out our first panel?

MR. MCCLURE: Yeah. Just to state briefly, the questions that you asked me to think about were Google versus a refrigerator and also the copyright versus contract. And, well, it came up again, but Google -- in this sort of Gmail example, of course it was software alone. And there's a consumer expectations idea that kind of floats through that point. We talked about personal property and sort of ownership expectations there.

Just to respond to Mr. Cox very briefly,
I think his point is well-taken that these sort of business models wouldn't arise necessarily if there weren't these copyright tools at hand. But I think that goes to sort of the broader theme that businesses are able to respond very flexibly to the tools they have at hand and use them in certain ways that maybe we didn't expect or didn't anticipate. And do we necessarily want them to have the ability to be able to use copyright to leverage contract, to have -- to sort of pass the baton off to contractual lock-in? And I think I just wanted to push back on the ease of switching a refrigerator a little bit. It could be easy. But if you had a refrigerator that was bricked and somebody who couldn't afford to buy a new refrigerator or who was in an emergency situation or whatever, I mean, this is perishable food that's in their home. And I can think that sort of gets to safety issues and things outside the scope of copyright. So, and I see --

MS. ROWLAND: Yes. I think it's about demographics. It's a demographic decision.

MR. MCCLURE: Sure.

MS. ROWLAND: And for the record, I was saying it was a copyright.com email address. I was
not targeting Gmail.

MR. MCCLURE: Fair enough. Fair enough.

But I think the broader point that I just wanted to make was that there are going to be sort of far reaching implications and as all refrigerators have embedded software, we're not going to be choosing between a normal functional fridge and an embedded software fridge. We're going to be choosing between embedded software fridges. And for most consumers who don't have enough information to make that choice effectively or who don't know how it's going to affect them downstream, it's something to be wary of.

MS. ROWLAND: Can I say one thing? It's kind of like a point, I suppose --

MR. DAMLE: Sure.

MS. ROWLAND: -- which is -- and maybe we can talk about it in later sessions, that, you know, we had a lot of discussion in D.C. about oh, well, if you don't like this, you can just go to that.

But at some point, it becomes like an industry standard, right? So at what point -- every refrigerator is going to have like the same software embedded. So it's kind of when is the
market not an option anymore.

MR. DAMLE: Okay. Something to talk about in the next panel. Perfect segue to our next panel. So let's take a 10-minute break and try to be back here at -- well, let's just say 10:15. Take a nine-minute break. So let's try to start the next panel at 10:15. Thanks.

(Whereupon, the foregoing went off the record at 10:06 a.m., and went back on the record at 10:15 a.m.)

MR. RILEY: We are now on to our second panel, which will discuss ownership and contractual issues as they relate to consumer devices with embedded software. This panel was pretty lively in D.C., and we hope it will continue to be spirited here.

Whether a software transaction is characterized as a sale or a license has important implications for consumers, including whether those consumers qualify as owners of the software under section 109 and 117 of the Act, provisions we will discuss more in panel four.

In submitted comments, some parties suggested that the government should limit parties' ability to contract away certain rights,
especially through clickwrap or shrinkwrap end-user license agreements or terms of service.

Parties also suggested that enacting a statutory preemption when a copyright holder tries to enlarge their rights granted under copyright by contract.

Other suggestions include intervention when important public interest considerations are at issue, such as privacy or security. Even more wanted to protect a right to repair or tinker, despite any contractual prohibition. Of course, some in the D.C. hearings thought these were an extreme measure and suggested that the government should not interfere with parties' freedom of contract without a compelling interest.

As we go through this panel, as is true throughout these proceedings, any real-world examples of contracts regarding software on embedded consumer devices are helpful. Before we get started, we have two new panelists. I'll let them introduce themselves. Mr. Sheffner?

MR. SHEFFNER: Ben Sheffner, Vice President, Legal Affairs at the Motion Picture Association of America.

MS. SOLLAZZO: And I'm Erica Sollazzo.
I'm here from Stanford's IP Clinic on behalf of Engine Advocacy.

MR. RILEY: Great. Thank you. With that, let's open the discussion. And same as with the first panel, if you're interested in responding, please tip your tent card to the side.

Generally, how often are software-enabled consumer products accompanied by terms of service, end-user license agreements or other licenses or contracts? Would anybody like to kick us off? Ms. Walsh?

MS. WALSH: I would say that it's the norm, not always, but that it is very common for there to be assertions of an enforceable contract that accompany the sale of a device. And sometimes the contract is hidden at the back of a user manual. Sometimes when you initiate the device, you need to click "I Agree." Sometimes it's on the labeling and these have different levels of enforceability. But it's very common that there are restrictions on these terms. And many of them include terms that you restrict rights that you traditionally have under copyright law or under general free speech principles.

I have a few examples. One is that the
Nest Labs’ EULA, the Nest home automation system, includes a prohibition on discussing the performance of the product, so sharing the results of functional and performance tests with respect to the product. It’s common to have a prohibition on reverse engineering.

As one example, the Apple Watch Terms of Service, but that’s one if you pick up an arbitrary terms of service relating to a software-enabled device, you’re likely to see a reverse engineering prohibition.

Another one that’s quite common is a ban on the use of non-approved software or hardware, so anything that the manufacturer has not given permission to run on the device or to plug into the device. That’s a common prohibition. For example, the Windows 10 license includes an ability to remotely kill-switch your software if you use non-approved software or hardware.

Another restriction is a bar on using the software on a secondhand device, which is a sort of clever attempt to get around the first sale doctrine by saying, sure, you can sell someone — this is the Cisco router terms of service — you can sell someone your Cisco router. But then, they
don't have a license to run the software on it. So you've sold them something that has very little value to them.

One that we've talked about earlier is the ability to make continued use of the device in the event that there's either a new software update that the manufacturer would like you to install or a new terms of service or EULA that the manufacturer would like you to agree to.

The example which we already discussed is the Nintendo Wii U, which is not the only one but it is the one that I have handy because the device was actually bricked and there was a very unhappy user who said I would like to keep using the device that I paid for in the way that it functions until today, until Nintendo called up my Wii U and said, stop working, make this person agree to new terms or do nothing. Don't let them keep playing single-player in their home. Don't give them access to their saved files. Just stop working.

MR. RILEY: So can I ask about the Wii U? Has there been any lawsuits regarding that particular incident or --

MS. WALSH: Not that I'm aware of.
MR. RILEY: Okay. But we did see an earlier example of I think -- Mr. Shore brought up the Xbox. Xbox One had always on -- basically this prohibition from people being able to play without it being connected to the internet, which was turned off because of basically consumers being upset by this and rising up.

What's the difference between something like the Wii U and the Xbox One where we have this bricking and consumers being able to change their contractual terms in what was their terms of service on the Xbox One versus the Wii U?

MS. WALSH: I think people had a lot more leverage at the time that the controversy arose around the Xbox One. So that was before the device was issued. Microsoft was trying to build hype for it. It hadn't already had its initial burst of sales, whereas with the Wii U, this is something that arose later on where people had already paid out. They'd paid hundreds of dollars.

It was in their living room. They'd had saved games and it was -- both the public had less leverage with respect to Nintendo and also the typical user, this would just contribute to their sense that I don't like what's being done to me,
but there's nothing I can do. It's easier to just click through. Probably it's not going to get me into any trouble. I want to keep playing my games. So it's at that point a combination of less leverage and the idea of what you would be losing as opposed to not buying some product that's unappealing because of its terms, you'd actually be losing something that you've invested time and money into. So the leverage of the company is greater to just get you to click through and agree to the terms to be able to keep using your property.

MR. RILEY: All right.

MS. WALSH: A couple more common terms — one is a lot of the terms of service claim that you are waiving your right to prepare derivative works, including non-infringing derivative works like parodies, like software patches and so on. So the Fitbit is an example. Blizzard terms of service is another example. And related to that, terms often ask you to waive your ability to engage in lawful circumvention of technological protection measures, so for purposes of accessibility or interoperability. The Sony PlayStation 4 is an example of a software-enabled
MR. DAMLE: So, sorry, on the last one, it's even where there's regulatory exemption --

MS. WALSH: Exactly.

MR. DAMLE: -- the contract says you waive your right to assert that regulatory exemption?

MS. WALSH: Right. It's a contractual restriction that is stated in terms of a general ban on engaging in circumvention, which doesn't have a carve-out. So some actually do have a carve-out and say if it's lawful circumvention, then it's not a violation of the contract and that's fairly responsible. But that's -- there's nothing that compels companies to do that and it's not a universal practice to do that.

That's an example of the way that if these contracts were effective at waiving all of the rights that they're trying to waive, it would erase the balance that Congress has tried to enact and that the Copyright Office, through the rulemaking process, tries to enact by creating exemptions to the exclusive rights that copyright holders have.
MR. RILEY: I wanted to go back for a second. Cisco has been brought up a couple of times regarding their terms. But Cisco also has terms that say software bundled with hardware is subject to a software transfer relicensure policy.

I think on an earlier panel, or on the panels in D.C., we talked a lot about the difference between business entities and enterprise-level companies versus those with basically -- I don't want to say a consumer because I know Mr. Shore will be upset -- but those that are not subject to such negotiated licenses.

But we did see in Cisco at least that there were some terms that would apply more towards that consumer end of the spectrum, the user end and not a business end. I'm just -- do you see a difference there in terms of how should we approach this versus when we have a negotiated contract versus a non-negotiated contract?

MS. WALSH: That's exactly -- the distinction that you just arrived at is exactly the way that I think about it. Do we have a contract of adhesion where there is -- which is a term of art that courts are pretty good at
figuring out, when we have a contract of adhesion, when it's non-negotiated. There's a difference in bargaining power.

The conditions of the transactions suggest that it's -- that it's take it or leave it and that there's not an opportunity to alter the terms, which is the norm with respect to EULAs, terms of service and so on. Then, it's appropriate for a different set of rules to apply.

And in that context, you ought not to be able to waive fundamental rights, including fair use, including the other rights that are granted to you under copyright law. If it's a contract of adhesion, you cannot. You should not be able to waive those rights. But to honor freedom of contract, if you have parties who are engaging in an actual negotiation, then that's the kind of scenario where you could engage in trading, freedom to operate, as long as it's conspicuous and transparent.

It's not something that's slipped in or imposed on someone through a contract of adhesion or other inappropriate bargaining practice. So the clear per se rule for contract of adhesion is a non-waiver of these rights. And then, if you want
to do a business-to-business, truly negotiated
transaction between sophisticated parties, then
you can order that as you like.

MR. RILEY: And did you have any -- well, maybe this is for other people, as we go down the panel. Is there ever any evidence that non-business-to-business consumers have negotiated terms out of contracts or no? Not that you know of, or --

MS. WALSH: The non-business entities that I know of that can negotiate these terms are government entities, but not individual consumers.

MR. RILEY: Okay.

MR. DAMLE: I mean, so one question this sort of conversation raises is -- to go back to Ms. Rowland's two buckets, right -- I mean, we've got the contract law bucket and we've got copyright law.

And so, just to go back to what you said, that courts are pretty good at figuring out what's a contract of adhesion and declining to enforce it -- to the extent that these terms are improper as a matter of contract law, then -- so what would be the -- well, I mean, assume that they're enforceable as a matter of contract law. What's
the copyright implications of those terms?

MS. WALSH: To rewind one second --

MR. DAMLE: Right.

MS. WALSH: The courts are good at figuring out when something is a contract of adhesion. In terms of figuring out whether it's enforceable or not, that can be very unpredictable. And so, I wouldn't --

MR. DAMLE: Okay.

MS. WALSH: -- go so far as to say that they've actually been good at vindicating the rights that we're talking about here, particularly when it's in the specialized area of copyright.

But to address your question about how we think about contractual and copyright restrictions, one of the most harmful practices that emerges is companies essentially writing their own law of copyright infringement, both by -- so in a private contract, one means of doing this is saying you're waiving defenses to copyright infringement. You're waiving your right to reverse engineer. You're waiving your right to circumvent lawfully, to prepare lawful derivative works.

And so, not all of the courts have gotten
it right in saying we should treat that just as a contractual violation as opposed to --

MR. DAMLE: Yeah, so I'm curious about that. So let's say I have a contract that says you waive your right to fair use and I engage in something that is a fair use. Is it your -- is it your claim that that -- that courts might consider that a copyright infringement, not just a contract violation?

MS. WALSH: Courts -- so the Eighth Circuit would and the rightsholders insist that that's the appropriate rule. I disagree with that. I think that's extraordinarily harmful to take the private contract and use it as a means to bootstrap into copyright infringement where you have statutory damages. You have the ability to take speech down with the DMCA takedown notices.

You have doctrines of secondary liability that wouldn't attach otherwise and that was actually at issue in BnetD. It was someone who created software that interoperated with Blizzard's online game.

And even if they themselves were not the party to the terms of service, Blizzard successfully argued that they were contributing to
the copyright infringement on the part of users
who were in violation of their end-user license
agreement and therefore when the software -- when
they engaged with the software, they needed a
license to do that, they were unlicensed. It was
infringement. BnetD was liable.

Now, the Ninth Circuit, in MDY v.
Blizzard, rejected that argument, saying that in
order for copyright liability to attach, the Act
has to have a nexus to copyright infringement. It
has to be within the scope of the exclusive rights
and --

MR. DAMLE: Do you think that's -- so the
Ninth Circuit's MDY v. Blizzard is the right mode
analysis, do you think, for courts to take when
they're analyzing these contracts?

MS. WALSH: So I think that MDY gets us
part of the way there. So in MDY, you could only
have copyright liability for acts that fell within
the scope of the exclusive rights of copyright.
And if you tried to get someone to waive -- if you
tried to attach copyright liability to something
totally unrelated to copyright, like cheating in
the game, then that would be clearly rejected
under MDY. If you tried to get copyright liability
to attach for a fair use, then by the logic of
MDY, that would also be rejected.

MR. DAMLE: Right. It's interesting
because --

MS. WALSH: That --

MR. DAMLE: Sorry. The representative --
I will say the representative from Copyright
Alliance, and my colleagues can correct me if I'm
wrong -- at least the representative from
Copyright Alliance suggested that in that
situation, it would not be -- or he had a hard
time imagining why that would be a copyright
infringement, view at least that it would be a --
that, in his at the hearing, he suggested that
that would be just a contract violation.

MS. ROWLAND: Yeah. I do believe he and
Mr. Band had a back-and-forth about whether or not
it was something that the -- in litigation. I
think Mr. Band was saying kind of the same thing
Ms. Walsh is saying --

MR. DAMLE: Right.

MS. ROWLAND: -- that there is a concern
about what happened.

MS. WALSH: So --

MR. DAMLE: Right, right.
MS. WALSH: -- there are sort of two reasons why MDY doesn't fully resolve the issue. The first is that the theory that you need a license to use a copyrighted work that you've bought is a dangerous theory. That's not one of the exclusive rights granted under copyright law. And it depends -- it's software-specific. It depends on the idea that you need a license to copy your software into RAM, even though the RAM copy exists for less than transitory duration. It vanishes when there's no longer electricity to the RAM. It ought not to be considered within the scope of the reproduction right. And MAI v. Peak is the Ninth Circuit case that said in this scenario, we're going to consider this to be a reproduction.

The Second Circuit has distinguished that in the Cartoon Network v. Cablevision holding by giving some life to the statutory requirement that something actually persists for more than a transitory duration. And if, as you should, you can continue to use a copyrighted work without infringing anyone's exclusive rights -- you can read your book, you can use your software on your computer, you can read your e-book on your tablet.
then that takes away the leverage that companies have to assert copyright infringement if you violate the terms of service or the end-user license agreement.

You're not engaging in any act that implicates the exclusive rights of copyright when you read an e-book, when you run software on your device, except under the incorrect theory that copying into RAM is an infringement of the reproduction right. So that is one of the two things that needs to be--

MR. RILEY: Yeah, and the other--

MS. WALSH: -- needs to be resolved.

MR. RILEY: Sorry.

MS. WALSH: And the other is the idea that it would be helpful if the explanation that you cannot waive fair use or your other free speech rights that attach, as a user of copyrighted works, is something that should be extended to the contract realm as well with respect to contracts of adhesion.

MR. RILEY: So I just have one more question before we move on. You said before that these rights were--or these licensing terms might have been hidden. But they're not hidden.
It's just that they're not very visible. Is that right? Would you -- I guess my question is for these contract terms to get people to assent to them, would you have them look like a disclaimer of warranty or would that even matter? Are people going to read the terms whether they're there or not?

MS. WALSH: Yeah. So at present, in the marketplace, there's a spectrum of visibility for terms. They could be buried at the back of a manual, which is sort of the least visible, or they might not even exist. In the 1201 hearings, we heard Auto Alliance claim that when you bought software, there was an implied license, that you don't actually own it, even if there's no written agreement. I think we can probably move that off the table. There's when it's hidden at the back of the manual, when it's in browse-wrap or clickwrap.

So there are tiers of visibility. But even at the level of clicking through "I agree", we know that people don't read those. We know there have been studies. There was a study released -- actually, for years we've known that people don't read privacy policies in terms of service because it would take you six weeks out of
every year to read all of the things that purportedly bind you. So that's not an efficient means of ordering relationships between vendors and purchasers. And the citation for that is in our written comments.

We also know more recently from a paper that came out of UC Berkeley and Case Western that when people click "buy now", so when they're engaging in a transaction for consumer goods, which could be software-enabled devices or other media, then their expectations about their rights at that media are most of them think they still have the rights that they have with respect to physical goods, even if there's a click-through that's purporting to restrict their rights to resale, of lending, et cetera.

So we know that people aren't reading them. We know that people are buying things, expecting that they're going to get the incidence of ownership that they always had. And so, the idea that this is a business model and consumers are knowingly getting less for their money is actually wrong. Consumers think they're getting what they used to get for their money and then they're surprised later on when their Wii stops
working, when someone says they don't have the
right to repair their tractor or other software-
enabled device.

MR. RILEY: Thank you.

MR. DAMLE: So Mr. Cox, I know that you
don't have your placard up now, but I thought that
this might be a good breaking point, if you wanted
to kind of respond to some of the points that were
made before we move on to some of the others.

MR. COX: Yeah, a couple of points to
make. Going back to something I said earlier, you
have to look at these situations and distinguish
whether what you're really dealing with is a
contract driven by software and copyright and the
fact that there's embedded software in the thing
and how much you're dealing with a service
contract because increasingly these are service
contracts. That's not to say that there aren't
issues with contractual terms in these.

But very often, what you're getting is
not just the thing and the software in the thing
but a continuous stream of services, access to
databases, access to content, access to upgrades
and updates. It's also tied to a business model
where oftentimes a lot of this is free and what
you're paying for -- what you're -- the way you're paying for it is by being connected to a stream of advertising or something else.

So oftentimes it's a service. Oftentimes it's a business model issue. And those are things that I think become a step removed from copyright as such and therefore are not best addressed by changes to copyright law.

MR. DAMLE: If I could just cut in there--

MR. COX: Sure.

MR. DAMLE: I'm sorry. Do you have a specific response to Ms. Walsh's point that it's really the RAM copy doctrine that allows these contracts to happen, that that's sort of the hook that allows a software company to engage -- to essentially require a license from consumers?

MR. COX: I don't think it's the only hook. I mean, you have to get pretty granular about specific terms and specific provisions before you get into whether what's being addressed is use and therefore the MAI case is why that is an issue.

I also think the discussion about BnetD and MDY v. Blizzard is an important one because it demonstrates the courts know how to look at these
things and draw distinctions between what's a copyright issue and what is a contractual issue. So there are mechanisms other than changing the copyright statute to address these things.

MR. DAMLE: Does BSA have a view about the hypothetical that Ms. Walsh and I were exchanging about if I enter into a contract that says I waive my fair use rights and then I engage in some activity, that is violation of the contract a fair use, whether my is a violation of the contract and infringement or whether it's just a violation of the contract?

MR. COX: I can't speak to that one. I can get them to follow up with you on that.

MR. DAMLE: All right. Thank you.

MR. SHORE: Can I offer a specific example in response to that?

MR. DAMLE: Yeah, Mr. Shore?

MR. SHORE: Okay. Because there are instances where the rightsholders have used copyright as a mechanism for enforcing contractual rights. There was a case where Avaya brought suit against a company called Continuant. And if you're not familiar with the case, what Avaya -- Avaya had a regime where it was -- these were post-
warranty contracts that you were required to
purchase if you wanted security patches.

And Continuant was a company I think in
the Northwest that was offering alternative
service contracts. And Avaya brought suit,
claiming that Continuant was violating the DMCA in
offering these -- their version of a post-warranty
service contract. So I mean, it's not a binary sort
of thing but -- MR. DAMLE: What was the DMCA
claim in that? I'm sorry. I'm having trouble
understanding what the DMCA claim would be.

MR. SHORE: And it was all dismissed.
MR. DAMLE: Okay.

MR. SHORE: So it wasn't founded. And
that was the point. But they tried to sort of
jerry-rig their contract almost of adhesion into
the DMCA. And the court said it failed. But we
shouldn't sit here and think that -- MR. DAMLE:
I mean, people --

MR. SHORE: -- one is contract --
MR. DAMLE: Yeah.

MR. SHORE: -- and one is copyright. I
think that the rightsholders can and do, as in
this case, use it interchangeably. Now, the courts
didn't recognize it. But --
MR. DAMLE: Okay.

MR. RILEY: So I guess to follow up with you, what is your response to arguments where Mr. Cox brought up in the last panel some devices are sold as loss leaders and the follow-ons are where they make their money back. His example was for a videogame system.

Are those sorts of economic models -- how do they work with -- if there was no contractual prohibitions or --

MR. SHORE: I guess I'm not -- I'm not wholly sure what the point was that he was making. I mean, they can design -- they're the ones who decide how many game systems to make. They're the ones who decide what these game systems look like. They're the ones who negotiate with their suppliers. Like, they --

MR. RILEY: So if there was a contract that said you cannot use any interoperable games, right, and but for that contract, the loss leader of the videogame console being sold would make its money back. How do you approach --

MR. SHORE: But see, the delta is the loss leader. And I don't -- I don't understand why that it's sort of government's responsibility to
step in and protect the game manufacturers because they've opted to make the -- or sell the consoles at less than the market price, right? Why not simply -- if the consoles cost $200 to make, why not sell them for $201? Right? I mean, they're relying on government to them step in and allow them to make a business decision predicated on the notion that we're going to sell the console at a loss leader but we're going to license the games because the government protects us, protects the license.

MR. DAMLE: But I mean, are you denying that there's consumer -- I mean, just as a basic sort of --

MR. SHORE: Yeah.

MR. DAMLE: -- business proposition, there are consumer benefits to having that kind of business model, right? It requires less upfront investment and you can sort of get in on a particular game system --

MR. SHORE: Yeah, but I have a 14-year-old son. I mean, the investments -- the long-term investments substantially outweigh the short-term savings. I mean, if you've ever bought games for a 14-year-old boy, I can tell you with reasonable
certainty that it's a very expensive proposition. And again, these are like subjective -- again, I find these to be fairly subjective notions.

I mean, should we -- should we be in a position where because large companies have said, well, we're going to sell it as a loss leader. You're going to protect us on the back end. I don't know that that makes a whole lot of sense because that's what they're suggesting, right, that they should be able to -- that they should be able to sell -- to license the games -- they license the games because they've made this decision to sell the unit at a loss.

MS. ROWLAND: Well, I -- you keep saying that "why should it be the government's place?"

But I'm not really sure why it would be the government's place anyway. It's a matter of contract law, which you could argue could be a contract of adhesion or whatnot or --

MR. SHORE: No, because the license is exempted from the first-sale doctrine.

MS. ROWLAND: So you're going to the other issue where --

MR. SHORE: Yeah, right --

MS. ROWLAND: Which is a whole other
conversation.

MR. SHORE: They have -- they have blurred the line between -- they've used license to obviate sale.

MS. ROWLAND: Well, that's actually the courts, right? So “what is a license” is really a court distinction which is another topic that we would be discussing during this panel, like in the Vernor or in the auto or in the Krause doctrine and --

MR. SHORE: Yeah, but that's sort of where the yellow brick road leads, right, because I mean, the more you have licenses, the less you have ownership. And that's the real question that somebody has to decide eventually.

MR. RILEY: We'll go back to Mr. Wiens. Do you want to follow up on that before --

MR. WIENS: I was going to answer your original question. I don't know if the one that --

MS. WALSH: I'd just be happy to very quickly follow up on that point, if I may, which is when you ask, well, but manufacturers want to bind people to a contract that says you can't make interoperable games, that sounds like copyright misuse to me. That sounds like we want to
prevent competition with respect to video games for this console because it's going to make us more money because monopolies tend to make us more money. But that's not an exclusive right that Congress has granted to device manufacturers. You don't get the right to decide who can create things that interoperate. In fact, Congress has rejected the idea that it's a good idea to grant people the right to restrict interoperable software and hardware.

So that doesn't strike me as a business model that we need to bend over backwards to protect. It actually strikes me as something where it gets me thinking if companies are trying to use copyright in order to impose restrictions that keep other companies from competing in lawful ways, then we should consider copyright misuse as a way of giving a stick to people who are improperly kept out of the market or to consumers who are improperly deprived of their rights because if we just say, okay, you can try -- you can put whatever you want in your terms of service.

You can intimidate people with the legal language. But ultimately, if they spend the money
to defend themselves in court, we're going to vindicate it, companies are still going to get a benefit from putting that language in there.

If there's no penalty to putting in effective language in there, if there's no penalty to sort of claiming to people that they don't have rights they actually have, then that's going to lead to a continuation of bullying and that would be worse than if the terms were actually enforceable. But it's still a problem and copyright misuse is one way of getting back at pushing back on that, providing a disincentive to such practices. Thanks.

MR. RILEY: Mr. Wiens?

MR. WIENS: Okay. So your original question was just give examples of EULAs. So we're seeing EULAs in a broad spectrum of products. We have a CatGenie kitty litter box that is robotic and automatically cleans the cat litter. And the EULA says -- I've got it here -- but it says basically any modification of the CatGenie exceeds the scope of the license granted to you by PetNovations, Inc. So we're innovating in the cat box arena. And you know, there's a few ways of fixing this. It turns out that the cartridge -- I
mean, this is like the ink cartridge model. The cartridge, if you just replace the fluid in the cartridge with water, the thing is totally fine, or you can modify the software to reset the counter.

Barnes & Noble, in the Nook product, in the EULA, it specifically says that you're not allowed to repair the product. And I don't know why they would do that. They don't actually provide the repair option themselves. So they're not even preventing competition. It seems like it's a form of planned obsolescence baked into the EULA.

The way that electronics recyclers work - I spend a lot of time in the recycling community and they end up as the owners of vast quantities of product. And if you were to walk through an electronics recycler's warehouse, you have 100,000 square feet and there would be 100,000 different types of products in there. And not a single one of them has the EULA still with it.

So the recycler is the owner of the product and recyclers actually fund the recycling work they do by repairing and restoring -- sometimes they're restoring software. They're
doing security updates on products and then reselling them. And they have no idea what, you know, was waived by the original owner in the license or whether that license has been passed along to them.

So a big part of the distinction between embedded software maybe and traditional software is that the embedded software is required for the product to function and the license is not generally available at the time that you're using or repairing or maintaining the product.

MR. RILEY: Ms. Sollazzo?

MS. SOLLAZZO: Sure. I'd actually like to follow up on Mr. Wiens' point, which I think is very important. We've talked a lot about consumers so far. But I think it's important to keep in mind that these license agreements have a really big effect not just on consumers but also on secondary markets and innovators who are looking to make products that are interoperable with devices currently on the market. So the company that makes a fridge that talks to the lamp, that talks to the car.

I'd also like to return briefly to Ms. Walsh's discussion on how courts have been
characterizing or been treating breach of a EULA and whether they deal with it in contract law purely or whether they treat it as a copyright violation. And I just wanted to point out that in a way, that almost doesn't matter because companies are characterizing this as a copyright violation. And that's the message consumers are hearing.

So consumers and small businesses and startups can be chilled from making legitimate uses just by the fact that a company may attempt to enforce it as a copyright violation, which has this huge specter of statutory damages attached to it.

MR. RILEY: Thank you. Ms. Ailsworth?

MS. AILSWORTH: I just wanted to bring up the example of EULAs being used in vehicles. And I know that traditionally they haven't been used to a great extent except with telematics systems and navigation systems. You'll see it a lot there.

There is an increasing use of a user interface that involves a computer screen in cars. And so, with modern vehicles -- not going to name any manufacturers by name but some of them you can't buy one of their cars without these in the
center of the vehicle. And you need to push a
button to agree to certain things. And so, this is
going to become more prevalent in automobiles,
which are a type of product that really do -- are
monopolized by a few manufacturers.

And so, if there's any rule that can be
put in place to protect the ability to make fair,
non-infringing uses, that would be important
because if you can't start your car without
pressing a button to agree, that's really not a
choice. So that's just something to think about.

MR. DAMLE: So are you seeing the license
agreements -- are you saying you're seeing the
license agreements extend to things like the ECU
or the emissions -- the emissions- like systems,
things like that? Is that what's happening in the
marketplace?

MS. AILSWORTH: I'm not sure what they
cover.

MR. DAMLE: Okay.

MS. AILSWORTH: But they're there and you
have to agree to them. So you know, you have to
read through -- scroll through by using this
little knob and scrolling all the way down and
reading exactly what it's covering.
So if it's not covering the ECU at this point, I know that the warranty -- a lot of the warranties have attempted to do that. But these agreements could be used in that fashion and they're easier to put in place in the vehicles now and easier to force a consumer to have to agree to it before you can use certain functionality of the vehicle.

MR. RILEY: Thank you. Mr. Sheffner?

MR. SHEFFNER: Thank you. I think we set a world record today for the longest discussion of copyright at a Copyright Office event without any mention of motion pictures. We've heard a lot about computer software and cars and tractors. But it's --

MR. DAMLE: No, this is a software -- I will say.

MR. SHEFFNER: Yeah, this is. So why am I here? The reason is not because the studios that we represent have any particular interest in tractors or refrigerators or what have you, but because some of the legal principles that have been discussed here have at least a potential to spill over into the way that our studios distribute and profit from their works.
The thing that actually made me flip my name card up a few minutes ago was a statement that Mr. Shore made. And he says that as we have more licenses, we have less ownership. And I think he said it as -- I think as a criticism. But I want to tell you it's true. But it's a good thing, or at least it's a neutral thing. It describes the way that the world is shifting.

And I would recommend that you all take a look back at the White Paper that the PTO released several months ago. And there was a quite extensive, and I thought very good, discussion of the move in many industries that involve copyright, but as well as outside the copyright sphere, from ownership-based models to access-based models. And that's certainly an accurate description of what's happening in the motion picture industry.

If you go back 15 to 20 years, at least as for home entertainment, it was largely about the sale of physical objects -- DVDs or Blu-Ray discs later. Those still exist. They're still a major part of the studios' home entertainment businesses. But what we have seen over the last say 10 years or so is the rapid rise of access-
based models. There are now about 115 legal ways for consumers here in the U.S. to access movies and television shows legally, about 400 worldwide. Every single one of those is based on a complex web of agreements. I think people have the impression of motion picture studios as employing, you know, vast armies of antipiracy lawyers. That's actually not true. They employ a small handful of antipiracy lawyers. What they do employ vast armies of is transactional lawyers who are negotiating all these agreements with all these various distributors as a way to distribute their content to the public.

My point is those agreements are, in general, very good for the public. They have resulted in an explosion of new ways for the public to access motion pictures and television shows at a variety of price points and at a variety of different ways of doing it. Just to give an obvious example, iTunes -- it used to be that I'd have a choice. I could either buy or not buy for approximately $15, $20 the physical disc.

Now, I have various options. I can pay, say, $5 or $6 and to rent the movie, watch it over a 48-hour period. But if I want to keep it longer,
keep it permanently, I can pay a little bit more
and do that. Again, these licenses -- the move
away from the physical ownership -- the ownership
of a physical item towards access-based models,
which are again, governed by a web of license
agreements, is a good thing and it's benefited
consumers.

And I would just ask in closing, ask that
when you consider the implications of copyrighted
software for all these other industries that don't
have -- necessarily have anything to do with our
industry, to think about the spillover effect that
it may have on an industry where the licensing
practices, again, have resulted in great benefit
for consumers.

MS. ROWLAND: Can I ask a follow-up
question on that, which is, a lot of the case law
really doesn't focus on -- it focuses on kind of
like the software as software. So you've got the
Vernor and you've got the Krause and whatnot.
Would you think that perhaps a distinction in how
that's applied to various types of goods -- like
what would you think -- this is kind of a
theoretical.

So somebody comes in and they are trying
to enforce the -- they bought a refrigerator,
okay? We all love a refrigerator apparently. So
they buy a refrigerator and there's some sort of
software. And maybe, when you open the
refrigerator and you can like pick out your
tomatoes and you pick out your garlic and spinach,
then maybe some sort of like motion picture comes
up on your computer saying this is how you like
put together this great recipe.

And so, this person who bought the
refrigerator wants to kind of start messing with
it. Would there be a different, or should there be
a different analysis than kind of this Vernor
thing because it was -- it's not the same thing.
It's not software as software. But is that logic
kind of able to be used with this kind of
different good and use?

MR. SHEFFNER: Yeah. Well, I should
mention the MPAA actually filed an amicus brief in
the Vernor case because, again, although it was
about the sale of a particular kind of software,
the rules about what counts as a license versus a
sale are obviously very important to us.

It's funny that you mention the
refrigerator example. You'd think, oh,
refrigerators have nothing to do with motion picture studios. In drafting the written comments that we submitted, I learned that there are now actually refrigerators that have televisions in them, which of course can play all sorts of content.

So look, I understand at a very high level that there are differences between, you know, functional software versus, say, entertainment products. But it's interesting.

Reading through all the comments, there was a lot of disagreement about various things. There was almost unanimity that it's extremely hard, if not impossible, to draw distinctions in the law between, say, everyday consumer devices and other kinds of consumer devices.

It's also maybe a little bit less difficult, but still difficult to draw distinctions between, say, functional software and the kinds of expressive works that the companies that I represent put in the marketplace.

MS. ROWLAND: Well, therein lies the problem, right? Because it's almost like a “you know it when you see it” thing. We were talking about in the other hearing where you can't have a
law -- you can't have, except apparently for
obscenity, you can't have you know it when you see
it kind of doctrine for do you own it, do you not
own it.

But there's obviously -- there's
something there. There's something where people
know it's a tractor. Oh, most people would
disagree -- John Deere not -- but most people
would disagree that that was where copyright was
headed versus perhaps like the business model
you're talking about where I think perhaps a lot
of the public and people would think, well okay,
that's more protectable because it's more about
traditional copyright interests.

And so, the problem that we've been
struggling with, and we would really love some
help with, is we understand it's a "you know it
when you see it" and it's hard to make a line.

But the farther we go into the future,
you never know what's going to happen. It's going
to get more embedded in everything. And we can't -
it seems difficult to kind of just throw up your
hands and be like, oh well, it gets hard because
it's going to become probably more and more of an
issue.
MR. SHEFFNER: Yeah. I mean -- well, just one last thing. One thing that I did take from reading a lot of the comments in the first round is that there are a lot of hypothetical scenarios that people have come up with that do sound kind of scary.

But you know what, we have not had a situation that I'm aware of, of somebody being sued for copyright infringement for infringing the distribution right because they gave away their secondhand refrigerator to a friend or sold it on eBay. And although no one will claim that the market is perfect, I think that there is a lot of self-correcting mechanisms in the market, in that anyone -- anytime anybody tries to use their rights under copyright law or contract law in a particularly sort of oppressive way, there is an outcry.

And I know it's an example that's been mentioned in some of the written comments -- Keurig, the coffeemaker manufacturer, a few months ago tried something where they essentially made it so through the use of software that you couldn't use a competing pod. There was an outcry. It was like every blog and tech publication on Earth said
this is a terrible thing.

And my understanding is that within a couple of weeks, if not months, they reversed that policy. So again, I think that the market isn't perfect but there's largely a self-correcting mechanism when consumers perceive that the company trying some tactic like that has overstepped.

MS. ROWLAND: What do you think of Ms. Walsh's discussion of copyright misuse and its place in kind of this discussion?

MR. SHEFFNER: The copyright misuse doctrine exists. It hasn't been fully developed. I mean, our concern is that -- one concern we have with that is that it essentially tries to create sort of a parallel body of antitrust law that doesn't have the great body of antitrust law and case law behind it.

So courts are kind of making it up as they go along without a whole lot of guidance. I think when it's more closely tied to antitrust law, which of course still exists and governs what our companies and every company in the country I think do, I think that's probably a more -- from our perspective, a more appropriate way of governing anticompetitive behaviors. But you know,
we certainly haven't called for the abolition of
the copyright misuse doctrine. I think it can be
applied in appropriate circumstances.

MR. BERTIN: One issue that Mr. Sheffner
just raised in my own mind as far as line drawing
-- the examples that you cited of the different
means by which you can access motion pictures, be
it the physical DVD or from a Hulu subscription or
from various service models -- there's really kind
of a substitution issue. It seems to me that what
I'm really after is that episode of Curious George
that will placate my child. And I don't really
care how I get it. I just need it -- I know that I
need it right now.

And that's very different than saying --
because I'm getting the same experience regardless
of where I go -- as opposed to this physical
device which I'm interacting with, be it my Nest
or my refrigerator -- that what I need is my
relationship with that physical object, that I
need that physical object to work.

And that's what I really care about at
the end of the day. Mr. Shore, I wonder if you
might speak to that, that distinction between sort
of the creative side and the -- sort of the more
practical side of this type of software.

MR. SHORE: So I apologize. I was looking for a statistic to rebut Mr. Sheffner. So I'm going to have to ask you to play that back for me.

MR. BERTIN: Sure. So the question was whether there's a distinction between creative works where you're -- sort of the license is providing access to the work itself, which is what you care about, the experience of the work, as opposed to the functionality of the physical object.

MR. SHORE: I don't -- I mean, for our purposes, know that -- I mean, we view that these things are sales. And so, the motivations -- I think are you trying to get at what the motivation is for why somebody bought or licensed the good? Is that your question?

MR. BERTIN: Well, I don't know that that's -- I don't know that we would ever really know what -- or that copyright would care about what people's motivation is --

MR. SHORE: Yeah.

MR. BERTIN: -- in terms of making a decision as to whether to purchase or license, right? That's not something that copyright would
do very well, I wouldn't think.

MR. SHORE: Yeah. I mean, I don't -- I'm not sure I have an answer to your question.

MS. ROWLAND: I think --

MR. SHORE: I'd defer to someone else on the panel.

MS. ROWLAND: I think what Erik is saying is that you go out and you expect to buy that refrigerator, right? Or most people do.

MR. BERTIN: Right.

MS. ROWLAND: And instead of going to one of those rental places and rent to own or something, versus perhaps a movie that you would stream for your kid, who's freaking out and wanting to watch a Curious George episode where they went to the pond or something. So the question is you probably don't expect to own like that streamed content. Most people I think would not.

MR. SHORE: Sure.

MS. ROWLAND: So I think that's kind of what you were discussing.

MR. SHORE: Yeah. We have no problem with that. I'm not sure that there is any problem with that. I think the problem exists on creative
works, for instance, where you've now got efforts underway to pass resale royalty acts, right, where that, in these creative works, they want to constantly control downstream distribution.

MS. ROWLAND: Well, that is limited. But so, the Copyright Office, for those of you who do not know, we have done a resale royalty report and whatnot --

MR. SHORE: Yes.

MS. ROWLAND: But those were limited to works of fine art that were in a rarefied air.

MR. SHORE: But again, it's this constant notion of encroachment, okay? It's this constant notion of expansion. And I actually had a question for Mr. Sheffner on that because he said licenses are such a good thing.

I'd be curious to know where the MPAA believes ownership is a good thing. I mean, it has to be somewhat binary. It can't always be about licenses or are licenses always good because consistently the MPAA has only sided -- I mean, you start with Vernor v. Autodesk. You have Kirtsaeng, which, by the way, was a student and a consumer, not some big behemoth business that they brought suit against.
So we're seeing, yeah, it may be streaming. You may be able to distinguish between streaming a creative work today and embedded software in a refrigerator. But those lines are constantly being blurred and they're constantly expanding the scope. And I think we have to have some fairly bright lines, again, that don't distinguish between -- sorry, Mr. Riley -- consumers and businesses, that don't distinguish between -- but give very clear rules.

Another -- a final point I need to make is most businesses don't go from zero to 60, right? Like I think we're all taking the view that, well, a business can handle -- it can make these decisions. It can hire lawyers, can defend themselves in a lawsuit, right? The Continuant case was a small, somewhat family-owned business where the CEO was being dragged back and forth across the country almost on a weekly basis, nearly bankrupted him. These are not situations of economic parity, right? In many instances, you're talking about -- you need to create bright-line rules because you're talking about businesses that don't have the deep pockets or the resources to go into the legal system and get an answer spit back
And it's somewhat sort of disconcerting that we tend to look at it and say, “well, if they're businesses, they can handle it.” That's not really the case because, you know what, businesses start small. And we need to create an environment where they can be successful, they can have access to the secondary markets, that they can own the things that they need to own, that they don't get ensnared and entangled by complicated EULAs. I mean, just because they have LLC after their title doesn't mean that they have, the resources to take on, big, giant rightsholders.

MR. RILEY: Did you have a question or –

- thank you, Mr. Shore. I know Ms. Walsh is chomping at the bit, but I want to let Mr. Sheffner respond really quickly.

MR. SHEFFNER: Yeah, just very briefly. Mr. Shore said there's this binary choice between licensed services and physical things that they own. I don't think it's binary in the sense that those two things coexist at the same time, those two markets. And I think it actually gives consumers more choice.
I mean, our companies, although there is this move towards more access-based services, selling physical DVDs and Blu-Ray discs, which the consumer owns -- those are not licensed transactions. They own it. They own the copy. That's still a big part of our studios' businesses.

Again, it gives the owner -- it gives the consumer choice. There may be -- what, if it's that one time you want to watch that Curious George episode, there's probably a way you can go in iTunes or Amazon and pay 99 cents, $1.99 and watch that one episode. But you know what, if you know that your kid is going to want to watch Frozen 200 times and --

MS. ROWLAND: Two million.

MR. SHEFFNER: It probably makes more sense to go and pay the $15 or $20 or whatever it is to own that DVD. Again, that spectrum of choices -- you have the choice that you can own it. You have the choice that you can access it through a license-based model. Again, it's an array of choices and it doesn't necessarily have to be binary one or the other.

MR. SHORE: But that wasn't your argument
in *Kirtsaeng*, right? Your argument in *Kirtsaeng*
was goods made overseas are not subject to the
Copyright Act. DVDs printed and pressed overseas
we can license. You don't own them because the
Copyright Act doesn't apply extraterritorially.

MR. SHEFFNER: But that -- I mean --

MR. SHORE: So that was your argument
there.

MR. SHEFFNER: It was.

MR. SHORE: Okay.

MR. SHEFFNER: I mean, that was an
argument about statutory construction about how
you construe section 109 and, what is it, 601-2? I
forget. Anyway, but that doesn't mean that -- I
mean, we acknowledge and I will acknowledge once
again here that DVDs and Blu-Ray discs, when a
consumer goes to Best Buy or Target and buys one,
they own that copy. That is not a licensed
transaction. And the first-sale doctrine applies
and I don't think we've ever denied that.

MS. ROWLAND: Right. No one's going to
come to your door and like knock and say, okay,
it's been five years, give me the tape.

MR. SHEFFNER: Not with the physical disc
that you own.
MR. RILEY: Right. Ms. Walsh, you've been very patient.

MS. WALSH: Yeah. So there are a number of reasons why ownership is important and valuable in all contexts and in specific I'll talk about how that relates to the software-enabled devices context.

In sort of general, the rights that you get with ownership are the default. They're what's set, people's expectations when you buy something. This is something that's borne out by the UC Berkeley-Case Western study about what people think they're getting when they buy now. And licenses are often about taking away rights that you otherwise have when you are an owner of a copy of the work.

And as we've discussed, many of those rights are obviously important. Those are the rights that give us permission-less innovation. This is why we get to have Netflix. This is why we got to have Comcast video rentals. It's what makes libraries work and it's what let people engage in the full scope of reuse, of remix of materials, of criticism, of converting something for accessibility and so on. These are all the kinds
of rights that we've seen in earlier discussions try to get taken away in license agreements and that people expect that they have nonetheless when they're buying things that it turns out that are subject to a click-through agreement.

Now, in the software-specific context, there's another important reason why the owner of the physical device in which the work is instantiated ought to have full scope of copyright-related rights to control, audit and manipulate that software and it's because the device has sensors that can monitor what they're doing all the time, can control their communications, can record their habits.

What are you getting out of your smart fridge at each time? When are you home? And the ability to tell what your hardware is doing is important for your rights, both with respect to the original manufacturer, who configured it in a certain way that accords with their business interests, but also with respect to the vulnerabilities that are quite prevalent in the internet of things.

Hewlett-Packard did a study and found that 60 percent of the most common internet of
things devices contained vulnerabilities, and the more that those devices include limitations, either contractual or technological, that prevent the end user from detecting and addressing those considerations, the more that's harmful to consumers, the more that their personal financial information is exposed.

MR. DAMLE: But is it --

MR. BERTIN: So can I -- I'm sorry. But is it reasonable to think that the consumer, the average person would be detecting and looking for those deficiencies where they exist? I mean, isn't it more likely that the onus is on the manufacturer of the device to say, oh, you know what, either we found it or other people have pointed out to us -- security researchers or what have you -- and here's the patch.

And we're going to provide it to you down the line. And sort of what allows that to happen is the expectation that there is a licensing arrangement that allows us to provide that fix to you.

MS. WALSH: So you mentioned that security researchers might bring vulnerabilities to the attention of manufacturers, and that's
often how it goes because security is often not a high investment priority for people who are deploying internet of things devices. You can introduce these cool, nifty new features, put them on a selling point, ship them and this is why the University of Princeton Research Center labeled it “the internet of unpatched devices” because it's not actually common that manufacturers will take it upon themselves to go out, find these vulnerabilities and patch things. There are obviously responsible companies that do that.

But the force -- the countervailing force that forces manufacturers to acknowledge and patch security vulnerabilities is the freedom of the public, which includes professional security researchers, but also lobbyists -- we went through this last year in the 1201 rulemaking.

You heard from a whole bunch of security researchers about the need for members of the public, without permission, to be able to audit and analyze the features of the device in order to detect these vulnerabilities and put pressure on the company. Sometimes public pressure is sometimes enough to just say you have a
vulnerability, you'd better fix it.

Sometimes the company will respond by threatening you, trying to silence your disclosure of that research using copyright law or DMCA. And sometimes, you actually do have to go public.

Sometimes you have to publish your results, get Senator Markey to write a letter to the automakers asking them why they're not securing cars better before you start to see improvement.

MR. DAMLE: Do you think -- I mean, just to Mr. Sheffner's point and Mr. Cox's point earlier, do you see any room for a licensing arrangement sort of in a -- we're talking about software now. But the same could be true of movies, either a rental arrangement, subscription models for software where you say you pay for continual access, even though, as a technical matter, like a copy of the software may be on your device itself.

But you still want some sort of licensing arrangement around it to enable that kind of ongoing relationship, or in the examples that Mr. Cox gave, of sort of a continuing service arrangement, where you say “I want to -- I need to
have some sort of contractual structure around the continuing relationship between some cloud service and the device itself." Do you see any room for that or could everything just be owned?

MS. WALSH: I think sometimes it's worthwhile for customers to engage in a sort of ongoing subscription for improvements to the device. Sometimes a device ships and there's an expectation of continual improvements just to keep it working at the default level, keeping it secure and so on.

And that's something that should not undermine your rights of ownership. That's something that the manufacturer is keeping the device functioning in the way that you expected when you paid for it. If we're talking about a subscription to get new updates, then that's potentially a different question.

MR. DAMLE: And what about sort of like a subscription model that's like kind of more of a lending model where you say "I'm paying you a certain amount."

It downloads it to my -- to my computer. Like movies that work this way, and there may be software that works this way as well where the
work gets downloaded to my computer. I can use it for a certain period of time and then it deletes itself. Is that -- do you think that that's an appropriate sort of realm for licensing?

MS. WALSH: I think certainly the idea that you can rent or lend copies of copyrighted works to people is something that's important that's actually part of this secondary market that libraries and Netflix relies on, so --

MR. DAMLE: Right. Yeah.

MS. WALSH: So the idea that you can become a rightful possessor of a copyrighted work without necessarily being the owner of that copy is something that can happen.

MR. DAMLE: Okay.

MS. WALSH: One of the reasons that it gets quite confused is because the Copyright Office defines copies as physical objects. But the metaphor for software and for a lot of digital goods is that the object that's being transferred or lent is the file.

And so, that's what got the ReDigi court confused when it was analyzing the question of a first sale of digital products is it said, well, it has to be a copy, even if you sell something
your MP3 and delete your copy and there's only one copy left, we don't think this fits within the statutory definition of first sale.

And I think identifying the fact that for software and digital products, we're running with a little bit of fiction with respect to the way that copies are defined in the Copyright Act is an important thing to do.

MR. RILEY: All right. I have one follow-up question for you, Ms. Walsh, and I think we'll do a bit of a speed round because we're running --

MR. DAMLE: Well, we can extend -- we should -- we did this in Washington, D.C., because obviously a lot of issues come up in this panel. And so, I think we can go ahead and extend this one for -- let's say until we're sort of wrapped and then adjust the schedule accordingly.

MR. RILEY: My question is -- I'd like you to respond, if you could to Mr. Sheffner's suggestion about copyright misuse, that it's frequently tied to an antitrust cause of action. Do you see that copyright misuse should be in the situation where a company has market power? Do you see it as not so -- is that --

MS. WALSH: Yeah. I think that it should
not be so restricted because of the ways that antitrust doctrine has generally been confined, that would make it an inadequate tool for addressing the abuses that we've identified.

I don't think it needs to be tied to market power or that the only harms that ought to be cognizable are harms to competitors because so many of the harms that we've identified are harms to individuals or to speed interests.

I'd also point out that Ms. Rowland asked the question about the different ways of thinking about the Vernor question with respect to non-software works and Vernor was actually a departure from the Ninth Circuit's decision earlier that year with respect to entertainment discs where there were transfers -- there was an attempt to insist in a one-sided way that they could not be further distributed and the court rejected that contention. The citation for that is in our written comments.

MR. DAMLE: Sorry, just one more, but do you think that the Krause analysis -- Krause is built on an assumption that you can license software in particular circumstances, but obviously it found that there wasn't a license
under the facts of that case. But do you think that's the appropriate way for courts to look at and analyze the question of ownership?

MS. WALSH: I think that Krause will typically lead to the right results in the software-enabled device context.

MR. DAMLE: Right.

MS. WALSH: So by focusing on whether the person has ownership of the physical object in which the software is instantiated and whether they have an ongoing right to possess it, whether they paid consideration, those are -- those are typically all present for software-enabled consumer products and then under the Krause analysis would lead to a conclusion that there's not a license, that you are an owner.

MR. DAMLE: So I think, Mr. Cox, you've been waiting very patiently. I wonder if you could address that last point first, which is Krause and whether that's -- the Krause versus Vernor analysis, whether Krause is an appropriate analysis for software ownership versus licensing.

MR. COX: So if I could, since I have been waiting patiently --

MR. DAMLE: Okay, yeah --
MR. COX: I'd like to address that in context.

MR. DAMLE: Okay, sure.

MR. COX: So I think it's an interesting linguistic approach to say that licenses take away rights. Licenses give rights.

They state things that you can do, that otherwise you can't do without permission. Licenses have the advantage over -- and the idea that ownership is always good, licensing is always bad, I just think is fundamentally wrong.

Licenses provide flexibility. They can give more rights, less rights. They can give a range of rights. They can allow giving the degree of rights at a price that people want. The idea of rent versus own is correct and you can -- in the software area, in the United States fortunately, we still have Vernor and you can price software very low to educational users. You can give it away free to community colleges and so on.

The idea that most business people will deprive consumers of their expectation of ownership-like rights, contrary to consumer expectations, I think is basically not true. I mean, most packaged software, to the extent it
still exists, has almost always said, "yes, you
can of course transfer your copy to somebody else,
as long as you delete yours and pass it on and so
on and they're not trying to take a cut at that."
But a lot of the consumer demand is actually in
the other direction.

On the business side particularly, people
don't want a one-time fee for their software. They
don't want to buy a one-time version and pay a
price and have it perpetually.

That's why things are moving to the
cloud. On the cloud, you can pay what you need, as
you need it and only that and you get this
incredibly nuanced, metered pricing.

Now, in the cloud context, because
copyright doesn't protect against use, that's
almost completely a non-copyright transaction.
That's a service relationship with software
functionality provided to you from the cloud. But
on the consumer side, I would say the trend in
demand is not to pay a price and get a copy and
keep it. I think the biggest trend is we want it
for free. I want free software. I want a free
operating system. I want a subsidized phone and I
want to pay for it some other way. And if that is
looking at a lot of ads, I'm willing to look at
the ads or if I really don't like ads, then I can
pay for the ad-free version.

But it's nuanced pricing and it's enabled
by licensing rather than ownership. You know, you
want to harvest my data and make the money that
way? Fine. Most consumers, for better or worse,
they might be better off if they knew more about
what was going on. But free is good. They want
free. And that happens more with licensing than
ownership.

So back to Vernor, I think the ability of
the software industry to rely on licensing models
has worked incredibly well for the software
industry. It's produced a very vibrant software
industry with a lot of choice. And as I said at
the outset, it usually includes the right of
ordinary consumers to take an ordinary copy of
software that they bought in their mind and pass
it on to somebody else. That's been included in
the license rights.

I'd say preventing that is the exception
rather than the rule and it is either a bad
business choice or a good business choice,
depending on how many people push back.
MR. DAMLE: And what are your thoughts about the Krause test and whether -- I mean, one thing -- I think it was the Copyright Alliance said in their papers was the tests are -- there's a lot of overlap in the tests and that the Vernor case would have come out essentially the same way even if you applied the Krause analysis. Do you agree with that? What do you think of --

MR. COX: Again, that's a point on which I'm going to say I haven't thought deeply about that one and Emery Simon has.

MR. DAMLE: Okay. I'm sure he has.

MR. RILEY: All right. Mr. Wiens?

MR. WIENS: If you look at the American economy as a whole, we're in an ownership economy, not a licensing economy. I mean, what portion of the economy is the entertainment industry? It's in like the 5 to 7 percent, I think.

MR. SHEFFNER: I don't know that statistic.

MR. WIENS: See, but across the board, all of the things that we buy, everything from bulldozers to things like this microphone are things that we are buying. And as software is moving into all of them, licenses are moving into
all of them and this is really causing a challenge. We have to have a floor that is expected fair use of what we can do with the things that we buy.

And yes, there are cases for cloud services and Gmail. So there's a license involved in that because they're providing ongoing service for free and that's fine. But that's not most of the economy. And what is -- what's happening -- and all of you, all of a sudden, are in a very pivotal moment I think in history because copyright is expanding from a -- the section of the economy that is the entertainment industry and arts and literature to the entire material economy.

And I would invite you to like go to an electronics recycler and see the spectrum of products that come into electronics recyclers because that Keurig that you mentioned actually has more electronics in it than my iPhone. And so, what are the implications when -- I understand what you're saying, that you want licenses when it comes to movies. And that makes sense.

But this is a real slippery slope. And you start getting into licenses where they say you
don't have the ability to repair it. And if we didn't have the ability to repair everything, every single product that we own, it would be a massive, massive problem. And so, that's where Ms. Walsh is suggesting we cannot be allowed to waive our fair use rights in these licensing agreements. That's just not going to work.

MR. RILEY: Okay. I'm actually going to Ms. Ailsworth.

MS. AILSWORTH: Thanks. I just wanted to bring up a situation that didn't affect transferability but it does affect ownership. So I think this is the right time to provide the example. There's a situation where a vehicle was transferred and the software in the vehicle was transferred.

The purchaser experienced issues with the performance of the vehicle, made changes to the ECU, invested significant funds in making those changes to achieve the functionality that they needed. And then, because of this complex ownership of software between the seller and buyer, the seller was able to remotely flash the software, re-flash the ECU and wipe out all the
changes that the consumer had made and the consumer, if he had had a choice, would not have permitted that to happen.

So there are other issues involved with the ownership -- sharing of ownership of the software that don't involve the ability to transfer it and just go to ability to use the product.

MR. RILEY: Thank you. Ms. Walsh?

MS. WALSH: Yeah. So this isn't a referendum on licensing, whether it's always bad. That's derailing if we try to get into that question and no one is actually saying that licensing is always bad.

What we've done is we've identified several very specific ways that licenses are asserted to strip certain consumer protections, to create barriers to competition and we've proposed specific ways, like preventing licenses that are contracts of adhesion from waiving fair use and your rights under copyright law, that we can ameliorate those harms.

So it's not a referendum on licensing. It's licensing has gotten out of whack, particularly some of the more aggressive theories
about how licenses can be used to bootstrap into copyright infringement and that degree to which it's out of whack needs to be reined in, in order to continue to protect the values of copyright law and new interests of consumers that are implicated by software-enabled devices that previously were not threatened by copyright law but now are.

MR. DAMLE: Is that -- so sort of to your point about that, about the perhaps misuse of licensing, is that something that should happen in the Copyright Act or is that something that really is -- the jurisdiction properly lies elsewhere, as like an FTC matter, as a -- I mean, FTC is the one that -- the agency that sort of comes quickest to mind in terms of dealing with those types of issues.

MS. WALSH: Well, I think it's appropriate for the Copyright Act to articulate to what degree it preempts contract law and in addition for the Copyright Act to be a place where the doctrine of copyright misuse is fleshed out.

So as Congress is defining rights that users of copyrighted works have, it's helpful to explain that you cannot take away these rights through contracts of adhesion.
I would also -- I would also point out that a lot of this goes back to the RAM copy issue. And one of the underlying issues that licenses have grown so out of whack is the idea that if a RAM copy is reproduction, now you need a license. You need permission to engage in a whole range of uses that previously were not governed by copyright law because the use of a copy of a copyrighted work is not within the scope of the exclusive rights.

MR. DAMLE: But I mean, just to Mr. Cox's point was I think in response to my question was that there may be other hooks as well, particularly as internet of things especially -- in the internet of things where there's a sort of continual kind of communication with the cloud server run by the manufacturer of the good, that the inability to engage in those communications is also a basis for these types of contracts.

So I'm wondering if whether sort of your point about the RAM copy is really yesterday's problem and that's not really today the kind of -- the sort of hook that software companies really need.

MS. WALSH: So that's another potential
hook for consideration. It's not necessarily a
hook for bootstrapping into copyright
infringement. So the reason that I as the user of
a device -- so we can discuss both the sort of
server and non-server case.

So if I just own a copy of a work, I'm
using it locally, the copyright law doesn't have
anything to say about that unless copying it into
RAM implicates the reproduction right, which means
potentially that there's a hook to impose
restrictions on what I do with my property on my
device because I need, in theory, a license to do
that.

If we're talking about an ongoing
relationship with a server, then in the contract
sense, there may be ongoing consideration that can
support a contract, according to general contract
principles. And we can determine sort of what's
the appropriate term for that relationship in
terms of default contract law, but also if
contract law is leading to results where people
are waiving fair use rights and other speech
rights under copyright.

We can say that's not on the table. These
rights are important and in a contract of
adhesion, that's not on the table for a contractual waiver. But the communication -- ongoing communication with the server isn't necessarily something that you need a copyright license for. It might be if you're going to reproduce a copyrighted work, like a software update, that you might need a license to do that. There might just be implied by the fact that the server is transmitting it to you. But it's important to distinguish between hooks for copyright liability and hooks for contract consideration.

MR. RILEY: Just a quick question. Before, when Mr. Sheffner suggested that copyright misuse as case law is not developed yet, do you have any response to that in terms of writing something into the statute now?

MS. WALSH: I think one important thing that the Copyright Office could do is identify that it's a gap and that it's a potential means for -- the copyright misuse doctrine is a potential means for addressing the gap of we've identified practices by rightsholders that are harmful.

There is not a deterrent in the law and
whether we're going to call that copyright misuse or something else, then we should figure out how to disincentivize anticompetitive and anti-speech behavior through the copyright law.

    MR. RILEY: Thank you. You wanted -- I think Mr. Sheffner wanted to reply.

    MR. SHEFFNER: Sure. Just a couple of brief things. Going back to Mr. Damle's question from a few minutes ago about Krause and Vernor and the relationship between those two, I don't have an opinion sitting here today about the whether the facts of Vernor would have -- whether the result in Vernor would have been different under the Krause test.

    But I would just note that the Ninth Circuit in Vernor analyzed Krause. You know, and the amici supporting Vernor said don't rule in favor of Autodesk because it would create a circuit split with Krause. And what the Ninth Circuit said is essentially, no, it wouldn't. The cases are distinguishable, which I think suggests that, yes, they used different verbiage. But I'm not sure exactly how different in practice the tests actually are. So I don't think we should overstate the difference between those two
approaches.

And then, finally, in response to several points that Ms. Walsh was making a minute ago about sort of bootstrapping a contract violation into a copyright violation, this is a difficult and complicated area of law. But just a couple of things that I wanted to make sure are just sort of on your mind as you go ahead and write this — write the report that you're ultimately going to do.

The first is sort of a fundamental principle of copyright law that I didn't think was controversial, and I still don't, which is that exercising -- for a licensee to exercise a right outside of the scope of the agreement that they have entered into is itself copyright infringement.

I mean, an easy example is I'm a movie studio and I license to a theater chain the right to publicly perform a certain motion picture in the city of San Francisco, according to the contract. But then, they go and exhibit the movie in Oakland. They have in some sense violated a contract but they've also committed copyright infringement. That's a pretty basic fundamental...
rule of copyright law and I think we need to keep that.

MR. DAMLE: So can I ask you a further question? So let's say that the contract said you have to serve popcorn made by Orville Redenbacher, right, and I think if you were to analyze that under MDY, or the Ninth Circuit, because it's San Francisco, that they would -- the court would probably say that that's not -- that's a breach of contract, not an infringement. Would you agree with that sort of -- that there has to be some nexus of copyright?

MR. SHEFFNER: Well, I'm not sure I would use the word “nexus.” But I would say just a distinction that hasn't really been made that, again, I think you sort of need to look at in the case law is between a covenant and a condition.

MR. DAMLE: Right.

MR. SHEFFNER: And that's exactly what you were getting at with your popcorn example.

MR. DAMLE: Right, right.

MR. SHEFFNER: And again, this is a complicated area of law. I'm trying to draw the distinction between a covenant and a condition is sometimes difficult. But essentially, what the
courts have said is that if the provision in the contract is a condition, then violation of that condition is also an infringement of copyright.

If it is a mere covenant, which I think the popcorn example may well fall into, then it is only a violation of the contract and not necessarily the copyright as well.

But again, when you're thinking through these, I wanted to make sure that, as it sounds like you are, that you take into account that distinction because there is a way in the law that sort of divides what's a contract violation from a copyright infringement. It's not that you can sort of automatically bootstrap any contract violation necessarily into a copyright violation.

Mr. Damle: Do you have an answer to the hypothetical that we've sort of been discussing here about what if the -- what if the contract says you shall not make fair use of this work? And then you do make a fair use. Do you think that that's a breach of contract or is that a -- is that a copyright infringement?

Mr. Sheffner: Again, it depends. You know, in analyzing this distinction between a covenant and a condition, the courts have said
that the particular wording of the contract matters. So I'm hesitant to make a blanket statement that that always could be or would not be a copyright violation. I think in certain circumstances it could be. And again, it depends on the actual phrasing of the contract.

    MR. DAMLE: Okay. I mean, that seems a little -- I mean, you acknowledge that in the case where it is a copyright infringement, that it is sort of by contract countermanding a policy decision that's been made by Congress that fair uses are not copyright infringements.

    MR. SHEFFNER: Well, that's right. But look, all license agreements are gives and takes. I mean, as Mr. Cox mentioned, license agreements are not simply a way for the licensor to restrict the rights of the licensee. Each side gives and gets.

    And the example that I come back to -- and I appreciate your point. Okay, Congress has made this policy decision that people that -- certain sues are fair uses are not an infringement of copyright. And I obviously -- I don't disagree with that.

    Congress has also said there's this
policy decision -- or not Congress, but the First
Amendment to the Constitution says you're allowed
to speak freely. Well, people enter into contracts
where they agree to a restriction of that right
because they get some other benefit.

I mean, people enter into nondisclosure
agreements all the time and courts have no
problems enforcing that, despite the existence of
the First Amendment. I mean, again, the person who
enters into that agreement, they're doing it
because they're getting some benefit. So --

MR. DAMLE: Sure. But violations of those
agreements -- I'm sorry to be extending this panel
-- but violations of those agreements are breaches
of contract, whereas here what you're saying is
something that, but for a contract, would not be
copyright infringement can be made copyright
infringement, not a breach of contract, because of
the contract.

MR. SHEFFNER: Yeah, but I guess you
could also flip it. I mean, the -- something that
would be a violation of copyright for the licensee
to engage in is made not a violation once they've
entered into the contract, the license agreement
that allows them to do it. Again, there's give and
take on both sides.
And I would not agree with the principle that, well, it's sort of a one-way ratchet that the licensee is somehow barred from giving up certain rights because, again, both sides give up something and get something that they otherwise would not have, absent the agreement.

MS. ROWLAND: I was going to say that we're -- our next panel is about fair use. So we can talk about this kind of in the context of fair use overall if people want to continue discussing it. But I think --

MR. DAMLE: So yes, we've extended this panel far beyond its allotted time. So when do you think we should --

MS. ROWLAND: I think -- I mean, in D.C., we only -- we kind of kept to our 12:30 break, so we could like maybe get like eight minutes?

MR. DAMLE: Yeah.

MS. ROWLAND: That's very precise. An eight-minute break.

MR. DAMLE: So 11:50?

MR. RILEY: 11:50. I told you it was going to be spirited. Thank you.

(Whereupon, the foregoing went off the
record at 11:43 a.m., and went back on the record
at 11:52 a.m.)

MS. ROWLAND: Are we all here? Are we
waiting for Mr. Cox or --

MR. DAMLE: Is he on this panel?

MR. BERTIN: He is. He switched in for
Mr. Green, so --

MR. COX: I hope you weren't waiting on
me.

MR. DAMLE: No, no.

MR. COX: You know what I'll say.

MS. ROWLAND: Okay. I think we're all
here now. So as was shown in our last panel, there
was kind of a lively discussion about fair use and
contractual provisions that kind of led into this.
And so, we know that it can be a little bit -- I
wouldn't say controversial, but a little bit of a
topic that everyone is very interested in.

So we decided to devote an entire session
to fair use because it does encompass a lot of the
things that perhaps some of the panelists and
other people are interested in doing that might
otherwise be a problem under copyright law -- for
example, reverse engineering or using things with
interoperability. And so, we wanted to have this
panel to kind of discuss the state of fair use vis-a-vis this kind of embedded software in everyday products and where it should be going, if it's robust enough, if it's too robust and what can be done about it. And so, we wanted to open up the discussion with a kind of broad question, which is at this point, are there any specific parts of fair use or fair use overall that you think are in need of alterations or that you guys think would -- are working just great.

MR. RILEY: And I think we need to introduce our one additional panelist.

MS. ROWLAND: Oh, I'm sorry. We have one additional panelist here today. Mr. Liu?


MS. ROWLAND: Thank you, Mr. Liu. Does anyone have any opening thoughts? Ms. Ailsworth?

MS. AILSWORTH: Yes. Just a very brief thought. We believe that fair use is extremely important and really protects our members' ability to engage in -- achieving interoperability with parts. The only drawback to fair use is obviously that it is a defense. So if there is anything that
can be done in pleading standards or at the front end that would help make sure that fair use is taken into consideration before lawsuits are filed and before innovation is chilled, that would be really beneficial in this area of functional products, consumer products.

MS. ROWLAND: Okay. Is there -- how is it working with regard to like reverse engineering? I don't know, Mr. Wiens, if you had any thoughts about fair use and how it impacts what you do.

MR. WIENS: Sure. Yeah, and maybe it would be interesting to share a bit of just like what mechanics do on a regular basis with cars because it's very frequent -- if you have an issue, the first thing that you might do is re-flash the firmware, so take -- you might take a copy of firmware from another vehicle and put it on that vehicle to see if you can isolate the problem.

Sometimes you -- usually, there is a -- there is an additional diagnostic software that talks to the software on the car and allows you to change variables. You'd change the fan speed setting, for example. But then, on some vehicles, there may not be a setting in the software for
that. So then, you actually have to extract the firmware from the vehicle, modify the byte code and then re-flash the car with it. And in this -- there is a spectrum of repair-specific reasons you might want to do that.

There are emissions and mileage reasons you might want to do that. And there has been -- I mean, within the automotive world, I mean, there has been so much fear of kind of repercussions -- during the 1201 exemption process, Charlie Miller testified and one of the things that he said was that he had -- he had found security vulnerability in a vehicle and he said to an American auto manufacturer at the time -- he said, “hey, I've violated the DMCA in the process of doing this.”

And it was a very bold thing for him to come out in the process of a formal setting and say, “hey, I did this” with the Auto Alliance lawyer, who could turn around and file suit the following day. And it turned out that this was the GPAC that was kind of known around the world last summer where he was able to take control of a vehicle on a highway through the cellular network.

And the level of bravery that was required for Charlie to show up and do that is
astonishing. And he's a one in a million security researcher.

Most security researchers are very cautious. Most mechanics, they just want to get their job done. They're fixers. They're not interested in all of these issues. And so, there really has been a stifling impact.

We have seen very little innovation around farm equipment in the United States, even though there's a huge amount of interest, because of these locked down interfaces and the fear that the people have.

MR. DAMLE: I have a question. So you know, also in the 1201 hearings last year, we heard from documentary filmmakers who had kind of developed a fairly robust set of fair use guidelines for documentarians, which, they relied on and they felt pretty comfortable using things that were within those guidelines.

Has there been any thought given to sort of -- I mean, this is a question maybe for you as well, Ms. Ailsworth, about creating those types of guidelines around fair use in this space, for repair, replacement parts, things like that. I don't know if you know that, Mr. Wiens, or if --
MR. WIENS: I think the challenge has been that everywhere we look, we see a TPM. And so, it's been hard to identify fair uses because you're always breaking through some kind of fair use to get at the device.

And so, it's been hard to say, well, this is fair for you to use. And I think that's been the situation that EFF has had, is they haven't been able to tell people, it's okay for you to tinker with your thing in these contexts because there's so much -- there's so much uncertainty.

MR. DAMLE: Sure, sure. And, but that's specific to the 1201 -- to the TPMs. Okay --

MR. WIENS: But that may be --

MR. DAMLE: Yeah, I see. They sort of interrelate in that way.

MR. WIENS: Right.

MR. DAMLE: Ms. Ailsworth, have you --

MS. AILSWORTH: Yeah. There hasn't really been any kind of breakdown of this is specifically fair use, go forward. There is a general understanding that if you are just interacting with the maps, with the parameters on the ECUs and not changing the really hardcore software and the firmware, you're just changing the parameters, so
if it's -- if the air comes in at this
temperature, you do X.

There's a general understanding that that
is a fair use and that if there is something more
extensive going on with the software, that it may
or may not be a fair use and that some further
analysis has to be going on. But there is a
general just industry understanding that if you're
making mere changes to the parameters and how the
vehicle responds to the parameters, remapping the
ECU, that that is a fair use.

MR. WIENS: Right. But I'd say in general
there needs to be an understanding that repair or
modification of a vehicle that you own is a fair
use or any software -- embedded software in
something that you own is a fair use. And that's
not the case now. That's not the perception in the
market. There should be a fair use for security
research and there's not really that perception.

So I mean, and it's causing harm. Nest
bought a company, Revolv, who was a company that
makes a smart home hub. And so, you get the smart
home hub and it connects to all of the things in
your house. And once you hook one of these things
up -- and I actually did this at our office, where
we have an automation system. Everything is tied in. Unless you have this thing working, you can't open the doors. The sprinklers don't work. The lights don't work. Nothing works. And you're saying this is the brain of the house.

Nest bought this company a couple of years ago and then just announced that they are going to be shutting down the cloud service that this connects to, which is going to remotely brick all of these devices. And so, you have a lot of people that have built their entire homes around this. And Nest is saying that they're going to remotely shut off people's houses, every single thing in the house.

And the only way, without either rewiring the entire house and replacing all the devices, is going to be to go into that Revolv system and modify the firmware and loan in some software that excludes the cloud check. Is that a fair use? People are afraid.

MS. ROWLAND: I would like to ask a follow-up question because you were talking about fair use and TPMs and we're going to be doing a 1201 hearing tomorrow, as you probably know. And one of my questions is kind of where is the
dividing line between 1201 and just fair use and copyright law.

So if your concerns about a TPM were stripped away magically, what would be left for the fair use vis-à-vis this kind of software and how do you think it's been working and what would be the fears at that point?

MR. WIENS: Right. So one argument that manufacturers might use is under the commerciality factor, that by doing independent repair, you're harming the manufacturer's monopoly on repair. And so, I haven't seen this really be litigated.

But it would be I think helpful to ensconce the importance of repairing. Going through and evaluating repair and modification under all the existing factors, I'm not sure if they're sufficient or not. It would be nice to see clarity as we're moving into a world where electronics are in everything.

MR. DAMLE: Right. Well, our next panel is going to discuss 117, so -- which is another exemption that may be relevant. But we can wait for that.

MS. ROWLAND: Ms. Walsh?

MS. WALSH: So Oracle and Google have
been litigating the fair use question over the past week. And one of the things that we keep seeing is the sort of preamble for fair use not fitting into the software context, Oracle saying, “look, this painting is a fair use and it says criticism, commentary, et cetera. None of that has anything to do with software.” And for a lay jury who are not copyright experts, that might be persuasive.

So we often rely on the courts to elaborate on fair use. And that's been a good approach. In the software context, I think it's pretty clear that research for interoperability and security research is within the scope of what ultimately would be found to be a fair use by a court. There are places where that case law hasn't gotten to develop in large part because TPMs are chilling people from engaging in those things.

In several jurisdictions, fair use is no defense to a 1201 claim. So you actually cannot get to test in the Second Circuit and the Ninth Circuit. You actually cannot get to a decision to test your fair use claim if you would be liable for circumvention anyway.

And the chilling effect both of 1201 but
also on the expense and unpredictability of fair use I think is manifested in the marketplace when, as Kyle said, people don't know if it's lawful under copyright to repair their car or do security research. I think in both of those cases, it is clearly lawful by the time you get to a court.

But there is a significant chilling effect due to the threat of copyright infringement. And a large part of that again is statutory damages. Statutory damages are such a disproportionate punishment that they create a very wide range of chill around conduct that is clearly lawful. If you're not sure about your conduct but the downside is up to $150,000 per work infringed, that is obviously something that's going to chill you.

One thing that would fix that is if you have a plausible defense to copyright infringement, that statutory damages then be taken off the table or at least dramatically reduced. That means that even if ultimately you thought your conduct was a fair use and the court said, “no, you didn't quite get it right, but it was a plausible fair use case,” then statutory damages could be off the table or diminished and that
would reduce the chilling effect when it is currently present when people are trying to innovate, to do new things where there isn't case law out there.

I never had to tinker with software to repair my car before. What's the new rule? I'd better not test it. Or if the downside is something closer to actual damages, probably well, that's within my risk tolerance if I'm a mechanic and I want to continue to service all these vehicles that my customers are bringing to me.

MR. BERTIN: But don't the courts already have that discretion? I mean, the only thing that's said in the statute is that it has to be at least $750 and, at least for non-willful, it can't be more than $30,000. And in between that, it's up to the courts to decide where the appropriate range falls.

MS. WALSH: And that is a huge range of discretion. That means that you can't predict what your downside is going to be if you want to engage in something that you think might be a fair use or might not be. A court or a jury could award crippling damages. Maybe you wind up getting lucky, as long as your service isn't one where
thousands of copyrighted works are involved, like if you're trying out digital first sale like ReDigi.

Even then, when there's a minimum of $750, that can quickly add up to more than the GDP of the planet. So I think reducing that minimum, imposing a cap, the cap is also important just to create some certainty in the marketplace for people trying to innovate.

MS. ROWLAND: When we're talking about kind of the individual kind of consumer products, so we have this issue that Mr. Shore was talking about, the consumer versus the business, but focusing for a bit on individuals, so the individual who wants to fix their car or whatever, what is -- what kind of decision-making process, or do -- have you heard, anyone, I suppose, do statutory damages come into their decision-making? Are they sophisticated enough to know, oh, there's like statutory damages out there or are they just kind of flying blind? I'm curious to see like what that --

MS. WALSH: People know that there are extreme penalties for copyright infringement. I think they probably could not name the figure, but
have heard about the massive judgments against
like Jammie Thomas or other sort of people
engaging in file-sharing, Tenenbaum, for example.

      MR. WIENS: Well, I can answer that --
so, I mentioned the issue with the optical drive
on these guys. So we sell -- iFixit sells a repair
part of these. So we sell the drives and the
boards. And we have the technical capability of
re-flashing these things and being able to sell
people just an optical drive that we've re-

But because we're afraid of the risk, and
we've talked with lawyers and we're very concerned
about the multiplier effect, we've chosen not to
do that. And so, we're selling a $300 repair
option instead of $100 repair option that we could
provide to consumers because of the murkiness of
being able to modify hardware that we own.

      MS. WALSH: To continue to answer your
question, we actually -- we have a Coders' Rights
Project. We routinely have people come in who are
actually clever enough to ask before they do
something what their risk would be if they did it.
And that's the case where we say we think it's a
fair use. If we're wrong, this is the Potential
penalty. And as an attorney counseling someone, you have to be honest. This is the potential downside. It could be up to this. And we can give, you know, estimates a little bit more than a layperson could about what the actual risk would be.

But you have to put that on the table as a possibility and it creates a huge chilling effect and there are people that decide that they are not going to engage in their parody, in their research, in their innovation because of the risk of being bankrupted and losing their house if they get the law wrong.

MS. ROWLAND: I think Mr. Liu had the next turn.

MR. LIU: Oh, yes. So as numerous people have mentioned, the issue with fair use right now is that it's a defense and it's not very predictable. And the main reason for that is because every case is different. It's a fact-dependent analysis. The best way to resolve that, at least maybe the easiest way to resolve a lot of the problems that come from that is by creating carve-outs.
I'd like to just mention -- bring up a couple of principles that the Copyright Office or Congress, if it eventually gets there, should keep in mind, especially when they're considering carve-outs for interoperability. The first is that when innovators make interoperable functionalities for devices that have copyrighted embedded software, they tend to actually increase the value of the underlying device.

So if you have a fridge that has software controlling the temperature inside the fridge and someone decides to create software, an app, for example, or some other device that connects the -- or synchs the fridge temperature with a personal calendar or -- and then someone else comes along and makes similar software that you can control the fridge's temperature using a smartphone, these two people have expanded the refrigerator's utility beyond just simple refrigeration.

And now, the fridge can run on more complex, customizable schedules. And to that extent, the fridge is now more valuable. These kinds of modifications -- I mean, it's the consumer's choice, right? So if you don't want these modifications, you don't have to have them.
So there's no possible negative impact on the value of the fridge. And what that means is it increases the demand for these fridges that now have all these interoperable functionalities.

Another example, we saw this before the Sega court where basically they were creating additional videogames for a console increased the value of a console because you need the console to play those games.

So what -- interoperability basically makes -- increases consumer freedom and you could even argue that this is transformative in some sense because you're re-contextualizing the fridge. So that's the first main thing to keep in mind as far as the interoperability goes.

The second thing would be kind of following -- so the Lexmark court had made a rather cursory fair use analysis because that wasn't the dispositive issue in that case. But they made this distinction between the market for the software itself and then the market for additional goods that use the software. So of course the case was about printer toner cartridges. There's software built into those that let you use it.
And market harm, the court said, was not -- did not reach the actual market harm to toner sales. It was just about the software itself. And that's another distinction to keep in mind when we think about what kinds of interoperable uses are clearly fair use and we can make carve-outs for that.

MS. ROWLAND: So when you're talking about carve-outs, what do you mean? Like actually inserting something into the statute or --

MR. LIU: That's one way to do it, I guess. Another way, I think section 107 has these different labels for educational uses or criticism, things like that.

So if we make some kind of -- something like that where it's just a presumption of fair use, then it just will help decision-makers, whether it's innovators or people -- or rights owners who are deciding whether to sue or not, if we can tilt that balance further in favor of less litigation over things that are obviously fair use, then that would definitely help.

MS. ROWLAND: So you're talking about inserting something into the preamble, like Ms. Walsh was talking about how the preamble is not --
is being looked to --

MR. LIU: Sure, yeah. I think that's one way that we could do it.

MS. ROWLAND: Okay. Ms. Gellis, I think?

MS. GELLIS: Thank you. I want to -- in talking about fair use, I want to put out the caution -- I know we've sort of moved our mind down through the statute to think about, okay, well, let's look at this clause and see how this clause could potentially be optimized to deal with real-world situations that we're encountering.

But again, fair use is way too late in the process and that real harm is being done when we've gone past the question of the copyrightability in the first place. And Oracle v. Google has come up at least once, and I think that needs to be regarded as a cautionary tale. It is a canary in the coal mine and we're all going to suffocate. If we even look at how that trial is unfolding, the logistics of testing that fair use claim off the API usage, when only some courts think that the API was even subject to copyrightability, is extremely problematic.

How you even present that question to the jury is extremely problematic. It's massively
expensive and very, very difficult to communicate.

When I was sitting in the gallery during the last panel, I was looking at tweets from the courthouse where the jurors can't figure out how to even look at the code that they're looking at to do their analysis as jurors to figure out whether or not there was fair use.

The fact that it is thislogistically difficult for the jury to make a fair use analysis I think tells us two things. One is that this is an extremely expensive and debilitating position to put fair-users in, to have to defend the use.

And secondly, I think it also points to the fact that the extent of the copyright monopoly has been implemented too far where it is this difficult.

And I think what we were talking about in the first panel is important to go back to, that some of what we're talking about, about putting under the rubric of copyright law, is really something that should be under the rubric of patent law potentially, trademark potentially or no protection whatsoever and that when we look at the question of, well, so we don't protect this as strongly as we might have been inclined to, that's
not necessarily bad when you take a step back and
look at the overall effect to the public and to
the world of what the consequence of that is.

No monopolist wants to be told that their
monopoly has been trimmed or they don't have a
monopoly that's as extensive or as broad. But when
we extend the monopolies, what we've seen, and
even in the course of this discussion, we've seen
there's a creep. And we've seen creep ever since
we've had modern copyright law.

When they did the Statute of Anne, books
were protected. And then, next thing you know, the
engravers wanted some protection. So everybody
down the line says, well, if they got protection,
then I want protection. And at a certain point, we
dole out the protections, losing sight of why we
had the protections in the first place.

When we look at what the goal and purpose
of copyright is, to promote the progress of
science, and we've created a regime where people
who want to innovate and build on what's come
before are essentially being told no, either a
literal no or a functional no because they can't
take the legal risk to do that exploration and
make that next step, I think we have a problem and
the balance is out of whack.

MS. ROWLAND: Well, so that discussion of Oracle is kind of more software without the embedded software within the consumer products. So my question is to kind of draw it back to the subject of this study, which is how much of that kind of concern and the expert testimony and whatnot do you think would be at play in an infringement action if it was to take place against somebody who was repairing their car.

MS. GELLIS: I don't think we would -- there's any reason to think that the logistics of that sort of judicial test would be any easier. They're looking at software code, they're looking at an enormous amount of lines of software code. And I mean, I'm not an expert in how much code is riding on a car, but my understanding is that these -- the amount of software is growing and growing and growing, depending on how --

MR. WIENS: It will be more complicated.

MS. GELLIS: Even more complicated. So the test of fair use for people interacting with previously existing software that's been put somewhere -- I mean, even to the extent that Java was embedded code because they embedded it on the
-- well, testing fair use off of the use of software is a very, very messy proposition. And I think before we thrust users into that position, we need to think about whether it's a fair test that they even have to go through.

Now, if we are looking at, yes, we think it's a fair test, then I think maybe other things we could do is shift the burdens on the copyright owner. Right now, all the burdens seem to be on the fair user, and that's debilitating. That would be a fix.

But I don't want to push that too far and lose sight of I think we've created a problem we shouldn't have been creating because it's out of step of why we have copyright in the first place. And to the extent that we do think that it's something that it's appropriate to have law to do, we have other like patent law that's better positioned to do it.

MS. ROWLAND: So are you arguing or saying that you would support kind of a pullback of copyright protection for software overall? Like I guess that's what I -- it sounds like, but--

MS. GELLIS: Well, in the original Federal Register --
MS. ROWLAND: Because that is outside the scope of this study, right, because we are --

MS. GELLIS: Well --

MS. ROWLAND: -- really focused on software within the embedded software in consumer products. We're not trying to, you know, question the legitimacy of copyright ability of software generally.

MS. GELLIS: I might swing for the fences. But I understand that's the purpose of the study even within the NOI that came out, there was a discussion about the extent of copyrightability in the software space and that it does run into some limitations, including on the limitations of the copyrightable subject matter.

And I think what I'm saying is that the limitations in how -- those limitations need to be brought to bear in this discussion, particularly when you apply it to embedded software. You would run into similar problems in other contexts.

But I think what we're noticing is that you see these problems in a very pronounced way when you see software being overly treated as a copyrightable medium and now that we've also embedded it. Now we can really see the collisions
in a very vivid way that we might not necessarily see as pronounced in some other contexts.

MS. ROWLAND: So, and I will turn to Mr. Cox, who I'm sure has much to say. But before I do, I will say that that discussion in the Notice was -- it was really for more of a kind of background historical process. It was not sort of an indictment of copyright ability of software.

MS. GELLIS: It wasn't an indictment. But it did note that there's tensions even within that. And my point is that these tensions exist, particularly even when we look at this space, and that when we do look at this space, we can see how those tensions play out in a way that can be debilitating towards the types of uses that other panelists have been describing.

MS. ROWLAND: Mr. Cox?

MR. COX: So two levels of a response, and I'll try to keep these short because it is getting -- drifting back to the first panel in theory. A lot of these -- there's sort of two things going on. One, I want to be able to make fair use by interoperating in some way, and then I want to do repair. Those seem to be the two scenarios that we keep hearing.
On interoperability, I mean, I think there is already a very well-developed balance in that. But a lot of these comments are driven by the notion that all incremental innovation is inherently valuable and should be protected without regard to its effect on the original innovation on which it's building. If that were the only value enshrined in the copyright law, we wouldn't have a modification right for copyright owners to enforce.

The problem with saying, "oh, if I do this or that with the refrigerator, it makes it inherently more valuable," is that that's a very static notion of how things work. And the copyright exists to incent the person who made the refrigerator with a particular set of features to go out and sell it and to compete with other people who might put more features in it.

So if this is a really valuable innovation, you're either going to be able to license it to that refrigerator maker or to another competitor and so on. But the copyright law is incenting innovation in a dynamic system in which you have to look at the first movers and what their reward is versus people who can add
bells and whistles to it. But I don't want to go
too far down that road.

To go back to repair, though, I'll go
back to one of the first things I said, is we
should not be looking for fixes to theoretical
problems. How much are -- and this comes down to
saying chilling effect and saying huge chilling
effect. We can put adjectives on it. But how much
are we seeing in the real world, people going
after individuals for repairing things versus,
yes, there is some competition over keeping
authorized service within the umbrella of an
overall business model.

The courts know how to deal with that.
That's been an issue for a long time under
antitrust law. It's been done in the context of
software service. It's been looked at by the
courts. That's a very well-developed body of law
and it's appropriately dealt with under
competition law. To bring it back in here and say
that it should be addressed through an expanded
fair use I think is fixing a problem that isn't a
problem.

MR. RILEY: So, can I ask -- can you give
us an example of one of your companies relying on
fair use? Is that something you have?

MR. COX: Well, they're not my companies. I think it's probably the case that all of the BSA members have relied on fair use at one time or another. They have to look at their competitors' products and they have to do research and they have to figure out how to compete. I can't give you a specific example. But I would expect that all of them think about it on a regular basis and have done things that they felt was relying on fair use.

MS. ROWLAND: Ms. Ailsworth?

MS. AILSWORTH: Yes. I was just going to speak to the actual changes that could be made to the Copyright Act. And so, the first one, again, just reiterating shifting the burden of the fair use from being purely a defense to having some kind of front-end analysis would be really useful.

But then also we are speaking about section 107. So in addition to the preamble language and mentioning interoperability and the need to reverse engineer for that purpose, if it's possible to add language specifically addressing interoperability -- it has been done in section 1201 -- I think it would be appropriate to do that
since section 107 was really drafted and put into place before the software issue became a real real-world reality. I mean, and you have the DMCA that was created obviously in response to software.

And so, there are provisions there and carve-outs there that could be brought back and incorporated into 107 that I think would be really useful because just for being able to rely on them in the 107 context -- I mean, in the 1201 context, and then when you go back to 107, you have to do the full four-step analysis and you have to fit it into one of the categories and the purpose of the use and whatnot. That's great. But it would be so much more clear if there was just the same thing as in 1201, just a very specific carve-out.

MR. DAMLE: And is it your position the case law on interoperability -- and Mr. Cox mentioned that there's been sort of cases that have now been around for quite a while -- is it your position that the case law is not sufficiently clear?

MS. AILSWORTH: I think the case law is sufficiently clear actually. But the problem is, is that the fact of when you have companies,
especially smaller companies that are having to operate in this space, and you really can't predict what a court's going to do and you never want to have to make that jump.

And if a company asks me, well can we rely on fair use in this case, the answer is always you could. But these are the penalties if the court were to find otherwise. And you never want to be in that situation where you're paying that much in damages. It would sink the whole business.

MR. DAMLE: Yeah. Well, I'm not sure we're going to be able to solve the question of legal uncertainty. I mean, that happens even with the explicit exemptions, other than fair use.

MS. AILSWORTH: But there is less when you have a specific language that you can point to and really present it in the court at an early stage and that can help hold off some litigation as well. Especially in bargaining, when you have a supplier or someone else coming to you and saying, well our copyrights are X, you can very clearly point to something and say, well, our rights to use it for this purpose are Y and Z.

MR. DAMLE: Okay.
MS. ROWLAND: Ms. Walsh?

MS. WALSH: Yeah. I think this has sort of led into something that I mentioned in the first panel, which is the idea that fair use is a really important backstop. It's sort of an important safety net. But it's not great as your first line of defense because it can be really expensive. It can be unpredictable. You can wind up before a jury with looking at pictures of, you know, artwork, in your case about APIs.

And I can imagine if the Congress adopted something saying you can't waive your fair use rights in a contract of adhesion, but the ability to enforce that as a contract were still present, you could be before a jury saying, look, they breached our contract with us. How can it be fair? Fair use assumes good faith and they breached our contract. So that's another reason why it's important to not permit those fundamental speech rights to be waived in a contract of adhesion.

I think for the most part we feel that the cases are pretty good. The places where they get attacked are people saying, well, it said that it was necessary in order to -- you had to make copies. It was necessary in order to reverse
engineer in order to get at those functional components.

So if it's not an absolute necessity, people try to get around the case law that way and unfortunately that's been rejected in the Ninth Circuit. But it's something that cropped up in the statutory exemptions in 1201, where there's some language it has to be necessary. You have to be doing something for the sole purpose of encryption research, for example. And that language is always a target of attack that undermines the utility when you try to build a carve-out.

If you have language that can be read as it has to be strictly necessary or you have to have just the sole purpose of doing one thing, then that really undermines the certainty that people can take from those exemptions. And that carve-outs like that are a step up from fair use in terms of certainty. They're a step down in terms of breadth. But there's a place for them in the regulatory regime, as long as it's clear if you're within the scope of this safe harbor, you're safe.

If you're outside of it, you still have your full scope of fair use rights. We're not
saying that this is the only time interoperability
is fair use. We're just saying we've figured out a
way to articulate something where we can have a
bright-line rule and give some certainty to people
who are doing this kind of interoperability that
you're not liable.

Of course, the best way to generate that
kind of certainty is by limiting the scope of the
rights to exclude in the first place or the
copyrightable subject matter. So during the time
when everyone understood that APIs were not
copyrightable, we got buy-offs. We got the C
programming language. And this demonstrates both
the general principle that limitations on the
exclusive rights give the best certainty to
innovators, but also the specific principle in the
API context, which is important for embedded
software.

Software devices, particularly the ones
that are pinging back to the server or talking to
other devices in the home, communicate via APIs.
And an important part of interoperability is the
ability to re-implement those APIs to create a
competing non-infringing product or to create
interoperable products that will work alongside it
in the home.

And in terms of the scope of the inquiry and excluding software that's not in embedded devices, I think the way that we've been approaching that is we're identifying things that are problems in the context of embedded software. Some of them are also problems in the context of other software or even non-software copyrighted works.

But we're focusing because of the thrust of this study on things that are salient problems for embedded software. And I hope that you will not exclude from consideration things that are also problems in other areas just because they are also problems in other arenas.

MS. ROWLAND: Mr. Liu?

MR. LIU: Oh, yeah. I'd just like to respond quickly to a point Mr. Cox made about distinguishing between -- or looking at the actual empirical state of who is getting sued. He mentioned that no one is actually going after individuals and they're focusing on things that actually might have a market impact.

Well, first I'd like to say that even if individuals aren't getting sued, they still have
to face the threat of litigation. I mean, they might get sued and the probability of that happening is not zero. And second, we still want to protect businesses as well. I mean, people should be able to start businesses that take advantage of fair uses. Connectix I think was one of those groups and the court found in favor of them porting all of the PlayStation’s functionalities onto a desktop computer.

And so, it's not just enough that the case law comes out in favor of fair use, at least in that particular case. The whole point of fact-dependence means that anyone can bring a suit and generally avoid frivolousness because every case has different facts.

And so not everyone has the money that Google has to defend suits. And so, you're hurting startups and other small business as well when you're just focusing on empirical impact on individuals. You have to think about the small businesses that can't defend suits.

MS. ROWLAND: Mr. Cox, do you have anything to say?

MR. COX: I think at the broadest level, the BSA thinks that fair use is one of a number of
important safeguards in the existing system that helps produce balance. And if the statement is somebody won, that's a vindication of fair use being an effective mechanism, but to say they shouldn't have to win or they shouldn't have to spend money for it and you should instead move the line way back I think is not a supportable argument.

MS. ROWLAND: Okay. I think with that, unless there's anyone else who has something to say -- okay, we will conclude this panel on fair use. And I suppose we will be back at 1:30, right? So, have a good lunch.

(Whereupon, the foregoing went off the record at __ p.m., and went back on the record at 1:43 p.m.)

MR. BERTIN: So this is our final session of the day. Our focus today is on sections 107 and -- 118 and 119 -- or 109 and 117, excuse me, which, in addition to 107, are of course the three statutory exemptions that we identified in our NOI as being of particular relevance to software-embedded devices.

One of the themes that we noticed from the comments -- at least I noticed -- is that, on
the one hand, certain commenters were observing that these statutory exemptions were fine and that no changes were needed. And then, on the other side, folks were saying that the statutory exemptions were also fine, properly interpreted, which at first blush sounds like everyone is on the same page. But when you look closer, there's some gap between in the middle.

And I wanted to go back to some of the comments that were made earlier this morning from Mr. Shore in particular. You said I think on at least two occasions that what we need are bright lines. So I would be curious to hear from you what do you think the lines are, where they should be and are they currently bright enough?

MR. SHORE: No, first. I think foundationally the problem is that -- again, that licenses have been expanded to subsume ownership. And so -- and licenses being an exception from the first-sale doctrine, if you license something, you don't own it. Therefore, it's not subject to first sale -- we have a problem.

And so, what ORI has proposed is a couple of things. One, our overarching view is, look, whatever rights that you took under the first sale
should transfer. However, we know that that might be difficult in the current environment. And so, we've proposed a modest step, working with bipartisan members on the Hill on YODA, which you guys are probably familiar with.

And YODA we think is pretty reasonable. In fact, we think that YODA addresses many of the concerns that the other side has laid out about issues with giving access to people for embedded software, security-type issues because YODA simply says that the first-sale doctrine applies, overrides the license for the purposes of security patches and bug fixes, or security updates and bug fixes. We think that's an incredibly modest step and actually, a very positive step because it ensures that as the physical good travels, that it won't be susceptible to security hacks.

So that's probably where we would start and at least give consumers and others some comfort in knowing that if you take a purchase or a gift in the second sale or the second transfer, that at least you can get security patches and bug fixes.

MR. BERTIN: Is it your view that YODA would benefit primarily the -- (off mic) -- back
on? Is it your view that YODA would provide those benefits to the consumer who would be receiving the device downstream or would it also be broad enough to allow security researchers to do research on bug fixes independently?

MR. SHORE: Yeah, that's not -- I don't believe that the -- (off mic).

MR. SHORE: To answer your question, I think as long as the possessor has taken lawful transfer subsequent to a first sale, whether it's a researcher or a consumer or a business, I don't think it really matters. We should be agnostic on that front. Did you have a second part to that?

MR. BERTIN: No. Thank you.

MR. SHORE: Okay.

MR. DAMLE: I mean, do you have -- so this goes back to one thing that we were discussing earlier about -- just to be frank, it's rare these days for Congress to act in the evidence of sort of very clear problems in the marketplace. They're sort of in a reactive -- tend to be in a reactive mode. So I mean, just in terms of the bug fix piece of it and security patches --

MR. SHORE: I mean, we've identified them...
in testimony. We've identified them. I mean, it's
the litany of the licenses and, I mean, there's --
this is a common question that comes up from the
other side in order to deflect from the things
that they actually are doing, which are to use
licenses to control downstream distribution, to
engage in things like market segmentation.

I mean, this is just a common canard that
they keep raising. But the evidence is there. And
frankly, I would ask them, I mean, if there is no
problem, why do all of their terms of their
websites -- why do their FAQs, why do they
constantly bring up these issues? You know? Do you
pose the same question to them?

MR. DAMLE: I mean, yes, and we are very
curious about that. But I mean, I have to say,
that in your -- again, in your submission, there
were -- the examples that we looked at, if I
looked at the Nest one, for instance, I looked at
that one and it didn't have any restrictions on --
at least I couldn't see a clear restriction on the
transfer of that device to a downstream purchaser.
And I'm not aware -- I mean, I looked on eBay and
I found used Nests for sale.

And so, again, just in terms of the --
MR. SHORE: Yeah, but there are common and regular examples of takedowns of all kinds.
And yeah, generally, a lot of it is in the non -- I mean, tech is everything. Tech is manufacturing.
We use tech interchangeably, and often in the wrong way.

But if you go on eBay, I mean, the largest manufacturer of paper towel dispensers is one of the most aggressive protectors of their IP and is constantly filing to have stuff taken down.
We -- it's a -- again, I find the question -- I can only present so much evidence so many times over and over without seeking the same sort of -- and seeking answers from the earlier side.

I mean, earlier today, somebody -- I think Mr. Riley -- was the notion about John Deere and people don't want -- John Deere doesn't want farmers repairing their tractor because they might do something to it, might damage the brand. And the question from you at the time was do you have any examples. And you asked Mr. Wiens. And I would ask John Deere, do you have any examples of where your brand has been damaged in actuality because somebody tinkered with the tractor.

I mean, we really need some parity in
this debate. Remember, what *Kirtsaeng* was about, right? Remember what Breyer said in his opinion, that if *Kirtsaeng* had -- that if the outcome had gone the other way, that manufacturing would have -- for copyrighted goods would have completely shifted overseas, enabling the rights holders to claim Copyright Act did not apply, first-sale doctrine did not apply because the Copyright Act did not apply extraterritorially.

In response to your point earlier, where you said that you didn't think that studios would be knocking down people's doors after five years to get their movies back, that's exactly what *Kirtsaeng* was about, right? They went to Supap Kirtsaeng and they said, give us the books plus damages.

You can envision a world where the erosion of the first-sale doctrine leads to corporate counsels sending letters to places like Goodwill saying, hey, you need to pull every -- in a world where Kirtsaeng had lost or Wiley had prevailed, you need to pull every Mickey Mouse t-shirt that was manufactured overseas.

Well, if you've ever peeked in the back of a bin room at Goodwill or if you've ever
donated to Goodwill, which I'm sure many of us
have, you don't know where these things came from.

Often the tags are gone. So you know, we
need to sort of start to shift and equalize the
presumptions a little bit here in this debate and
know that to the extent that the other side is
constantly saying show us the problem, show us the
problem, the problems are real.

The problems are documented. We can only
document them so many ways. But we can talk about
the things, also very specifically, where the
rightsholders, for instance do bring suit and they
do force the other side to spend millions and
millions of dollars in defense of their rights,
oftentimes for businesses, dollars they don't
have.

So I'm kind of -- I apologize for my
exasperation. But we have been testifying ad
nauseam on this issue since 2013. And I have yet -
- I'll make one final point. I have actually not
seen any overt or public opposition to YODA. So
I've not seen a letter in opposition. I mean, they
may come and they may talk behind closed doors in
meetings and there may be a letter in such
circulation. But I have yet to see any actual
opposition to the bill.

So if it's such a threat, if it's such a law in search of a problem, why aren't they publicly opposing it? I'll defer to others.

MR. DAMLE: Sorry, you were going -- you were going to look into being able to discuss one of your clients. Were you able to get that?

MR. SHORE: They cannot get a hold of their attorney.

MR. DAMLE: Okay. That --

MR. SHORE: But I -- but I assume you'll have other opportunities down the road and I will work on it.

MR. DAMLE: Okay. Thank you.

MR. SHORE: Yeah.

MR. BERTIN: So obviously Kirtsaeng came out the other way --

MR. SHORE: Yeah.

MR. BERTIN: -- much to your clients' delight, I'm sure.

MR. SHORE: Yeah.

MR. BERTIN: In the wake of that decision, have you seen or are you aware of any move by rightsholders to obtain, through licenses or by contract, that which they would otherwise
have enjoyed under an interpretation of the copyright law itself?

MR. SHORE: Well, I mean, Lexmark is a patent case. But Lexmark is I think one could argue in very much the same vein --

MR. BERTIN: Are you talking about Lexmark today or from 2003?

MR. SHORE: The current Lexmark -- very much in the same vein, right? And so, I'm not sure that it's a question of any one particular tool. But it's that -- it's the opportunity, when you have very, very deep pockets, you can throw them at a lot of different channels. We, for instance, constantly see examples where goods are held at customs, right? Authorized goods -- I'm sorry, unauthorized but legitimate goods are held at customs. And the customs agent will call the rightsholder and say, we have a pallet of XYZ computers here. And the rightsholder will say, well, we're not so sure. We have to check the serial numbers. Oh, well can't you just check them right now? No, it'll take several days.

I mean, there are -- in sort of the real world, in the world where the rubber meets the road, there are a lot of nuanced things that the
rightsholders can and often do deploy, not just in
the legal system, to make it harder for people to
engage in legal, legitimate commerce with
legitimate goods that have gone through a first
sale.

MR. BERTIN: Ms. Sollazzo?

MS. SOLLAZZO: Sure. We agree with much
of what Mr. Shore has said. One thing I would
emphasize is the importance of being proactive
here in such a fast-moving tech industry. And no
one's denying that the software industry has been
innovative. But there's no evidence that this is
the optimal scheme or that we couldn't have had
more innovation with fewer copyright restrictions.

We would also support YODA, though we do
think it's a good and important step in the right
direction. Though we would say that it doesn't
necessarily address the entire problem, since YODA
really only deals with alienability and whether
you can transfer the device. And we would hope
that more representatives might step in to
introduce new legislation that might allow for
tinkering or modification for non-infringing
purposes.

MR. DAMLE: So I mean, is it -- one of
the things that the Second Circuit's opinion in Krause says is that the 117 right includes the ability to maintain the software in a working state but also to add improvements to make it more useful. Do you think that that's -- do you think that that's good enough in terms of being able to have some sort of right to repair in the software space? Do you think that 117 could -- that more could be done in that -- with that exception?

MS. SOLLAZZO: Right. Well, I think one of the big problems right now is that consumers aren't able to take advantage of the limitations in section 109 and section 117 because they aren't considered owners. So maybe that could be a way to actually bypass Congress altogether and just interpret the word "owner" in those sections to mean the owner of a copy of software contained within a device regardless of any license language to the contrary.

MR. DAMLE: And while one of the things that Krause says on the ownership point is that the license language is not necessarily controlling, that that's not the end-all, be-all of the analysis. Do you have a sense -- I mean, do you have an opinion on the Krause sort of test for
ownership?

MS. SOLLAZZO: Sure. So I think that could go a long way. And I think having official interpretative guidance coming from the Copyright Office saying that -- or interpreting the word “owner” in this way could be very powerful and could serve as a useful signaling function to courts as well.

MR. DAMLE: Okay.

MR. BERTIN: Ms. Walsh?

MS. WALSH: Yeah. I want to echo something that Mr. Shore said earlier about sort of evidentiary presumptions in making policy because, as I mentioned during the first panel, this is an area where some of the traditional justifications for copyright law don't apply. And I think it's dangerous to think of copyright as something where it's going to apply to the maximum possible extent.

It's going to cover this and this and this unless you can show some good reason why it shouldn't because copyright law is a regime that restricts speech and it restricts innovation. And the government can only restrict speech when there's a very good reason to do so.
And taking the approach that the default is we're going to have this speech-restrictive regime unless the proponents of speech are able to come up with reasons why they ought to be allowed to speak is backwards from a constitutional perspective and also outside of the speech context just from a good policy perspective.

We're talking about copyright is an exception to the ordinary functioning of the free markets, government-granted limited monopolies. And it needs to be justified with respect to some proven need to deviate from those basic principles.

MR. BERTIN: Sorry --

MS. WALSH: Yeah.

MR. BERTIN: Is it your view that alienating property should be viewed as speech or that repairing property should be viewed as speech?

MS. WALSH: I don't think either of those activities are inherently or always speech. However, I don't think you can deny that copyright law is a regulation of speech. And in the embedded software context, when you publish information about a security vulnerability, when
you publish code, which is speech, that may patch or add new functionality to the device, this is an arena, just like all other areas of copyright law, where speech is implicated by the regulation.

MR. BERTIN: But does copyright really reach those kinds of scenarios? I mean, if you're saying I'm a security researcher and I've discovered this vulnerability and here's, basically, here's the facts and here's my view on how you would fix it, I mean, isn't that covered by 102(b)?

MS. WALSH: In the -- are you saying --

MR. BERTIN: Well, I mean, you're talking about a fact and here is the process for fixing the problem that I have identified.

MS. WALSH: Yeah, so and that's actually the reason why reverse engineering and research has been consistently found to be fair use is because fair use is sort of the First Amendment -- one of the First Amendment accommodations of copyright law.

And so, it would not be proper, and courts have held that it is not proper, to restrict security research from a copyright point of view. Of course, in the 1201 context, you have
had discussions where disclosures of
vulnerability, like in the Corley case, 2600,
where you're sharing a prime number and the court
issued an injunction that keeps people from
publishing information about how to circumvent
technological protection measures.

So I wouldn't say that -- I wouldn't say
that because fair use exists as a safety net, you
can apply, willy-nilly, a broad regime of
copyright restrictions and just sort of count on
the courts to figure it out, in large part for all
of the reasons we've talked about where fair use
is expensive and unpredictable and it's not always
-- it doesn't always do as good a job as we would
like at protecting these fundamental rights.

MR. DAMLE: So I mean, just to be clear
we were talking about the first-sale doctrine and
117, and a lot of which hinges on this question of
ownership.

And I guess the point is if the court --
if the courts are kind of getting those questions
generally right in terms of like what the scope of
the first-sale doctrine is, what the scope of the
117 right is then I'm just -- I'd be curious to
know whether there's evidence that notwithstanding
-- like, that either courts are getting it wrong -- and maybe Vernor -- I'm sure, from your point of view, Vernor is an example of that. But then we have Krause in the Second Circuit.

But to the extent that the courts are getting it wrong, that that's causing A, that courts are getting it wrong and, B, that's causing problems for consumers --

MS. WALSH: Yeah. I think Krause did a good job with section 117. I think when I think of 109 and a court getting it wrong, I think of ReDigi, where there was an attempt to create a market for used works, which is the norm that the court decided was not within the scope of 109. I think that that is less of a problem in the embedded software, though it depends on how you think about embedded software.

So if you have sort of a one-to-one, this is the software, this is the device, that I'm always sort of transferring them together, then I think even the ReDigi court would have no problem figuring out that that's a fair use. One question is when you have embedded software --

MR. DAMLE: Sorry, that's a fair use or that's --
MS. WALSH: That's first-sale. Thank you.

MR. DAMLE: Yeah, okay.

MS. WALSH: Yeah.

MR. DAMLE: That the person owns that software because it's embedded in the device, that's --

MS. WALSH: Right, that when you transfer the physical copy that you own --

MR. DAMLE: Right, right.

MS. WALSH: -- that you're engaging in a first-sale-protected act. Now I've lost my train of thought.

MR. DAMLE: Sorry. I apologize.

MS. WALSH: No. Thank you for the correction. That's the correct -- oh, so the other -- so I was talking about embedded software that's sort of one-to-one, maps onto the hardware. And it might be a different question where you have a software-enabled consumer product where you can get apps or something to install on it. And you say, "okay, I want to resell my app and send it off to someone else's Android phone."

Then that's the kind of place where the ReDigi error would enter the world of embedded software and it would require either judicial --
going back to the judicial doctrine of first-sale or congressional action to clarify the scope of 109 to include cases where you are -- excuse me -- transferring digital property and you delete your own copy and there's only one copy out there.

MR. BERTIN: Mr. Shore?

MR. SHORE: So I wanted to go back to your question about bright-line rules. And I just wanted to articulate why it's important to have those rules. I mean, it may seem obvious.

   But businesses -- my members crave certainty. And while they would like certain outcomes obviously, I think having certainty is as critical as getting the outcomes that we desire so that they don't end up in court, right, so that they can make decisions that they can hold up against a piece of paper and say, “okay, if we do this, we're going to be fined or we should be fined.”

   One of the biggest problems in the three-year anti-circumvention review is not the substance of the review but the review itself because nobody plans a business on three years, right? Nobody would ever wake up and say, you know, I'm going to sell a product that you can
unlock today because -- and I'll go buy 50,000 units of it and plan to put my kids through college on it, knowing that it may go away in three years.

And so, those are the -- and I know that's not -- you just do the work, right? I'm not putting that at your doorstep. But I mean, those are the real challenges when you don't have certainty. Those are the challenges when you have things like fair use, which is, as Ms. Walsh said earlier, a great backstop and a critical backstop.

But it doesn't engender certainty for businesses that need it in order to make decisions and hire people and grow and expand and all of that stuff. So the outcomes are as important, I think, as having some direction.

MR. BERTIN: Well, there's also a risk though. I mean, anytime you're creating a certainty for one particular model or product as it exists today -- six months or a year or five years from now may seem quaint.

I mean, you think about the exception that was put in, I think, section 110 for the DVD player that would allow you to skip over the parts of the video that you find objectionable.
At the time, the Office said, well, this is really not something that copyright protects or touches because you're not creating a derivative work. But nevertheless, the owner of that company felt that there was a need for a statutory fix.

MR. SHORE: Yeah. And look, the more granular you get, the more problematic it is. But there are broad brush strokes you can take. You can change the presumption for the review, right? You could -- instead of having a de novo review every time, you could make the presumption rebuttable.

You could change the presumption in the first-sale doctrine that ownership lays over license, not the other way around. I mean, there are things that you can do that don't speak to we're going to write a statute that talks about DVD players when I don't -- I'm sure my kids don't even know what a DVD player is anymore. There are other things you can do to create certainty that don't have to be so granular and so specific.

MR. BERTIN: So speaking of granularity, one sort of peculiarity of 109 and 117 is that 109 talks about the owner of a “particular copy,” whereas 117 just talks about the owner of a
“copy.” And in, I believe it was either Vernor or Krause, the parties -- the court raised the question and the parties sort of agreed -- that, well, the word “particular” is meaningless here, so no need to get into it. Do any of you have any views on whether there is a difference between a “particular copy” versus the owner of a “copy?”

MR. SHORE: Do you want to -- do you have views on this one? Okay. I -- so I'm going to speak personally on this one, not necessarily the coalition I represent. And this might color -- this will actually be contrarian to most of my positions earlier. So prepare to be surprised.

I actually do believe that technology has some role to play in that issue. For instance -- and I don't know if it was raised in ReDigi, but I'm going to apply it to ReDigi. I think to the extent that you can't identify the copy as that copy, you can't be particular about that copy, you have a problem in then transferring it.

And I think the challenge for a platform like ReDigi is that they couldn't say, “yeah, that's the copy that Andrew downloaded from iTunes and that he's going to then transfer.” Now, I do believe that as technology catches up in these
areas and that we can with particularity point to
the copy and say it's extinguished here, it moves
on here, that we should revisit some of that. But
yeah, I mean, I think “particular” does have
context. Particular -- particularly, right, sorry
-- in a more ephemeral environment where things
sort of float in the ether and they're not as this
is my phone and I can bang it on the table.

MR. BERTIN: Ms. Walsh?

MS. WALSH: So I think that the ReDigi
court actually sort of took it for granted that
ReDigi's technology that was designed to make sure
that you uploaded your thing and then they would
verify that only one copy existed at the end, they
sort of -- the court said “let's take all that as
true.” But the problem here is in the way that
109 is drafted to only relate to distribution,
whereas technically what's happening was a copy
and then the original is destroyed.

So even though from a market
functionality standpoint, it looks exactly the
same as transferring a copy, it implicates a
different exclusive right. And the ReDigi -- that
was, I think, the reason that the ReDigi court
found that it wasn't enough as opposed to -- as
opposed to concluding that you couldn't verify
that what ReDigi said was taking place was
actually taking place. But I don't -- I have not
given thought to and don't have an opinion on the
distinction between "particular copy" and "copy"
in the two sections.

MR. SHORE: I mean, I think it's to our
benefit -- to the benefit of my members to be able
to have -- to be able to lean on the word
"particular," regardless -- I mean, that is how
they used it, now that you've refreshed my memory.
And I think it's helpful because we are often
identifying specific products with specific serial
numbers and saying these are legitimate goods. We
should be able to transfer them.

MR. BERTIN: Open-source software 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. Would YODA or an amendment like YODA
affect the development and use of open-source
software?

MR. SHORE: I mean, would it have gone
through a first sale? Because YODA applies to -- I
mean, often, my understanding of open-source --
and I'm not a deep tech guy -- but open-source is
often stuff that's given away freely. That's the
whole point, right? So it never actually went
through a first sale. So I'm not sure. But I mean
--

MR. DAMLE: Yeah, it is subject -- I
mean, there's open-source licenses, which could --

MR. SHORE: Okay. Well, then I --

MR. DAMLE: Yeah.

MR. SHORE: -- I'll defer to someone on
the panel.

MS. WALSH: Yeah, I think that the open
source licenses typically trigger when you are --
when you're implicating the derivative work right.
So if you're a person who wants to make a
derivative work of something that is GPL-ed, then
the license requires that you share back your
contribution.

So the derivative works right is sort of
not -- is not one that we have been talking about
in the context of a first sale. Yeah, if there --
are there particular open-source license
provisions that might be implicated by first sale
that you have questions about?
MR. DAMLE: Well, I guess the question is just generally about the GPL and the ability to -- I mean, it sort of relates to 117, right? I mean, if you've made a modification or an improvement relying on the 117 right, which includes the right to create adaptations, right, that although the transfer might be under a GPL, that if it's a transfer of ownership, then you might say, “well, I'm not bound by the terms of that license.” And so therefore the expectation that those kinds of adaptations would be shared back to the community are not fulfilled.

So I mean, and so, there is some concern I think there that we may be unwittingly undermining the open-source kind of system, particularly since open-source software is very common in these types of embedded devices. I mean, we talked about in the 1201 hearing about how GPL software is being used in smart televisions, for instance, and in fact the Free Software Foundation came in and said it's very important for us to be able to assert the rights that the license gives us.

I mean, this sort of goes to Mr. Cox's point that sometimes licenses give the users more
rights than they might ordinarily have and puts on
them some obligations as well in exchange. So I
guess that's sort of in a nutshell the concern I
guess.

MS. WALSH: Yeah. I think for the most
part, the open-source communities are quite
comfortable with the idea that if you're doing
something that's a fair use or that is not an
infringement of copyright or is a 117 right, that
those are your rights and they're not trying to
sort of enlarge the scope of what they're able to
restrict beyond copyright law.

I do appreciate the concern about
recognizing the value of licenses that require
that you share back to the commons the
improvements that you make. That's something that
we have traditionally seen -- the places where the
open-source communities really want to enforce
that is where someone commercializes the product
and makes improvements and wants to keep them
secret. And that's the target of the open source
licenses.

I think if we saw a world where we're
talking about individuals or noncommercial users
who found themselves facing a burden of sharing
back to the commons whenever they did sort of ordinary repairs or tinkering or patching, that that is a place where the licenses might be less vigorously enforced.

Again, we have what is the concern here. The concern is about the thing getting exploited, taken out of the commons, which is the open-source version of getting competed with, like Mr. Cox's someone sells is going to build a competing router. And so, I don't think the open-source community would be upset if we had something like the carve-out for noncommercial or for low commercial uses that we were discussing earlier.

MR. BERTIN: Mr. Shore?

MR. SHORE: Yeah. I was struck by Mr. Cox's statement that licenses sometimes give more rights than ownership. I'm inserting that word. I don't think he said that they give more rights.

And I've struggled to find examples because ownership is very finite, right? I own it. I can do with it as I will. A license still requires sort of a bilateral agreement. I don't know if they've provided you any examples.

MR. DAMLE: Well, I mean, I think the right to -- even in a world where you own a copy
of software, that doesn't necessarily give you the right to make derivative works.

    MR. SHORE: Yeah.

    MR. DAMLE: And so, the GPL is an example where I can -- by purchasing that software, it comes with the right to make those derivative works. So that's an example I think.

    MR. SHORE: Okay. Were there others?

    MR. DAMLE: That seems to be an important example, but yeah.

    MR. SHORE: Okay.

    MR. BERTIN: So section 109 is expressly framed by the Congress as a limitation on the distribution right and 117, interestingly, is not. It just applies to 106 broadly. And then 106(3) -- the distribution right itself -- states that it gives copyright owners the right to distribute copies or records of the copyrighted work to the public by sale or other transfer of ownership, and then there's the second clause, or by rental, lease or lending.

    I would appreciate hearing your views on whether licensing broadly stated, where in that provision does licensing fit in? Is it a part of sale or other transfer of ownership or is it on
the rental, lease, or lending side of that
statement, of that clause?

MR. SHORE: I mean, I put it in the
second part of the clause. But it's been a while
since I've looked at the specific language of the
statute.

MS. WALSH: Yeah. I think if you sell
someone a copy of a work and it's a refrigerator
that has software in it and you purport to attach
a license to that, that's on the sale or other
transfer of ownership side of things. You have
sold them a copy of that work, even if you are
attempting to restrict what they can do with it.

MR. BERTIN: So it's a sale but
restricted by contract essentially. Is that what
you're saying?

MS. WALSH: If the contract were
enforceable, then yes.

MR. BERTIN: I think that that concludes
this panel. We'd like to open the floor up to any
other members of the audience who might like to
offer remarks. Hearing none, we will declare this
roundtable at an end, and we thank all of our
panelists for their comments and their enthusiasm
for the topic. And we are adjourned.
MS. WALSH: Thank you.

MR. SHORE: Thank you.

(Whereupon, the foregoing adjourned.)

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