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FEDERAL TRADE COMMISSION

COMPETITION AND CONSUMER PROTECTION

IN THE 21ST CENTURY

Wednesday, October 24, 2018
9:00 a.m.

Constitution Center
400 7th Street, S.W.
First Floor Conference Room
Washington, D.C.

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FEDERAL TRADE COMMISSION

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

2 MS. MUNCK: All right, well, good morning.
3 My name is Suzanne Munck, and I am the FTC's Chief
4 Counsel for Intellectual Property and Deputy Director
5 of its Office of Policy Planning. Welcome back to the
6 Fourth Session of the FTC's Hearings on Competition
7 and Consumer Protection in the 21st Century, where we
8 are discussing innovation and intellectual property
9 policy.

10 Before we begin the substantive program, I'm
11 going to review a couple of administrative matters
12 from yesterday. If you need to evacuate the building,
13 please leave in an orderly manner through the 7th
14 Street exit. That's the main entrance where you came
15 in. After leaving the building, please turn left and
16 proceed down 7th Street, across E Street, to the FTC
17 emergency assembly area. Please remain there until
18 instructed to return to the building.

19 If you've received a visitor's badge, please
20 remember to return that. Please be advised that this
21 event will be photographed and will be webcast and
22 recorded with huge thanks to our amazing tech team.
23 By participating in this event, you are agreeing that
24 your image and anything you say or submit may be
25 posted indefinitely at FTC.gov or one of the FTC's

1 social media sites.

2 We're taking public comments on these
3 hearings. We hope that you will submit, and the
4 deadline for public comment on this particular hearing
5 on IP and innovation policy is December 21st.

6 With that, it is my extreme pleasure to
7 welcome Drew Hirshfeld from the PTO. Drew Hirshfeld
8 is Commissioner for Patents of the U.S. Patent and
9 Trademark Office. He was appointed to this position
10 in July 2015. As Commissioner for Patents, Mr.
11 Hirshfeld manages and leads the patent organization as
12 its Chief Operating Officer.

13 He is responsible for managing and directing
14 all aspects of this organization, which affect
15 administration of patent operations, examination
16 policy, patent quality management, international
17 patent cooperation, resources and planning, and budget
18 and administration.

19 I'm thrilled that we have the PTO at these
20 hearings because we have been very lucky to have a
21 good working relationship with PTO throughout our
22 exploration of IP issues, going back to the early
23 2000s and probably before that. So thank you very
24 much, and please join me in welcoming Drew Hirshfeld.

25 (Applause.)

1 USPTO REMARKS

2 MR. HIRSHFELD: Thank you, Suzanne. Thank
3 you to the FTC for having me and my colleagues here at
4 the start -- or at the second day of your two-day
5 hearing on competition and consumer protection. It's
6 my honor and pleasure to be here, and happy to be able
7 to share some words with you this morning before I
8 will join on the panel very shortly.

9 I thought this morning I would address two
10 questions that I know are central to these hearings.
11 One of those questions is what is the role of
12 intellectual property in promoting innovation. And
13 the second question is, is there a role for the
14 Government in advancing or supporting innovation.

15 So let me start with the first question, and
16 that's what is the role of intellectual property in
17 promoting innovation, and of course I'm going to focus
18 as Commissioner for Patents, I'm going to focus on
19 patents for my remarks. And I think we all recognize
20 that the patent system creates incentives for
21 inventors. You, of course, have your limited time for
22 a monopoly, where inventors can reap those incentives.

23 It is certainly my opinion, and I know it's
24 shared by many, that those incentives are what really
25 drive and foster innovation and hence competition that

1 goes along with it. Of course, the patent system
2 fosters disclosure as well, and that disclosure which
3 you get in return for your patent right, that
4 disclosure helps others see your invention and, of
5 course, that also fosters competition.

6 So I know I'm starting very basic, but what
7 I thought I would do is give an example of an inventor
8 who I ran into contact with on multiple occasions
9 actually in the last two weeks because I think this
10 inventor can best speak for themselves about the
11 benefit of intellectual property and, in particular,
12 the patent system.

13 So the inventor I'd like to mention is Dr.
14 Lonnie Johnson. Dr. Johnson was brought to USPTO by
15 Director Andrei Iancu as part of a series to educate
16 our own staff on the larger patent system and what
17 happens after patents are issued by the examiners at
18 the USPTO. And I found Dr. Johnson's story to be
19 very, very illustrative of the benefits of the patent
20 system.

21 So let me give a little bit of his
22 background, he is what I think you would define as the
23 classic tinkerer. He started in high school as a
24 student and started to make a robot out of his
25 sister's toys. I think he used her walkie-talkie to

1 get the antenna, and he even started a fire in his
2 kitchen when he was working with rocket fuel to do
3 experiments in his kitchen. And he tells a very funny
4 story about his father not chastising him for working
5 with the rocket fuel but chastising him for creating a
6 fire in the kitchen and asking him to use the rocket
7 fuel outside.

8 After he graduated high school, he went on
9 to get a bachelor of science in mechanical engineering
10 from Tuskegee University, went on, at the same
11 university, to get a master's in nuclear engineering
12 and an honorary doctorate degree in science. He then
13 proceeded to work for the Air Force and NASA's jet
14 propulsion laboratory, where he worked on space
15 nuclear power safety, non-nuclear strategic weapons
16 technology, and he helped develop some of the nation's
17 most advanced technological achievements, including
18 the Galileo Mission to Jupiter, the Mars Observer
19 Project, and the stealth bomber to name a few. More
20 recently, he has on his own created multiple companies
21 working on advanced battery technology.

22 So why am I talking about Dr. Johnson
23 related to patents? The reason is because Dr. Johnson
24 is a prime example of how the patent system has
25 fostered his own innovation, and he was able to reap

1 the benefits from his patents, fostering more
2 innovation by himself, fostering the creation of
3 companies and jobs alike, so it really is a wonderful
4 story.

5 He has currently issued to him over 100
6 patents. I know they range in technologies,
7 including, I believe, patents on topics related to
8 space flight, digital technology, as I mentioned, the
9 advanced batteries that he's working on, and his
10 actually most famous invention is the Super Soaker,
11 which I'm not sure if you all know what the Super
12 Soaker is, but if you've ever seen that high-powered
13 water gun that can really spray a huge amount of water
14 at once, he is the inventor behind that. That Super
15 Soaker actually was, I believe, in the '90s year after
16 year the top-selling or one of the top-selling toys.

17 So he's a wonderful example of a variety of
18 technologies ranging from high-tech to water guns,
19 where he has been able to achieve success in what he
20 is working on, all based on the patent system. When
21 he was asked recently when he was at USPTO, somebody
22 asked him about what was key and what role did the
23 patents play, and his response was the patents were a
24 key to his success and particularly his own personal
25 success and it had a huge financial impact, enabling

1 him to make further successes from that.

2 So it's a wonderful story, and to me it
3 really illustrates the tangible benefits of the patent
4 system, and, of course, if you're ever asked does it
5 take a rocket scientist to build a water gun, I think
6 now we know that the answer is absolutely, it does, if
7 it's going to be the top-selling water gun that there
8 is.

9 So, anyway, that's my story about Lonnie
10 Johnson. I think it's a wonderful story. I actually
11 struggled because in the last two weeks, I've run into
12 three or four people whose stories would have been
13 wonderful here to support the same concept, but Dr.
14 Johnson really stands out.

15 This brings me to my second question that I
16 told you I would address, is there a role for the
17 Government in advancing or supporting innovation. And
18 I, of course, believe that the resounding answer to
19 that is yes, there absolutely is a critical role
20 starting with the USPTO, whose mission is to foster
21 innovation in and of itself.

22 I wanted to talk today in the remaining few
23 minutes that I have about some of the ways we are very
24 focused on fostering innovation, and I want to share
25 some thoughts of Director Iancu, who is in his first

1 year at USPTO, who came in with a very laser focus on
2 a few items. At the top of that list, in my opinion,
3 is making sure that we have a narrative that is
4 directed to and focused on the great benefits of the
5 U.S. patent system and what it has done for this
6 country and how it has advanced this country.

7 And In my own personal opinion, what
8 Director Iancu is acknowledging is that while there
9 are challenges in the patent system, while it is very
10 complex, we can address those challenges. Challenges
11 are not new to the patent system. The challenges, of
12 course, change as we move on, but what is most
13 critical and foundational is to not lose sight of
14 those wonderful inventors like Dr. Johnson who advance
15 technology, who create jobs, who advance our country
16 and really move us forward in an unmatched way. So
17 absolutely part of our job in the Federal Government,
18 and particularly USPTO, is to make sure we are
19 educating and sharing those stories.

20 Some other areas that we are very focused on
21 are what we've been saying are three main priorities
22 right now at the USPTO. These are to address some of
23 the concerns that have been in the system to make sure
24 that we are able to focus on those great success
25 stories. One of those, and at the top of the list for

1 me personally, is regarding subject matter
2 eligibility. And I believe FTC is likely planning a
3 hearing on that coming up, and I know USPTO is
4 planning much in this regard.

5 There has been recent Supreme Court case
6 law. It has changed the landscape, so to speak, in
7 subject matter eligibility. USPTO has been working on
8 guidance to interject more certainty and reliability
9 in the decisions based on what is eligible and what is
10 not eligible so that we can all be on a better field.
11 So we have issued a couple memos that have come out.
12 If you get a chance to read those memos, one is on
13 Berkheimer and Vanda. I don't want to get too weedy
14 here, but I thought I'd mention the names.

15 If you get a chance to read those, I think
16 you will see we spent a lot of time to make sure that
17 what is in there for guidance is repeatable and puts
18 everybody on the same understanding of what decisions
19 will be made regarding subject matter eligibility.
20 We're also working on new guidance. I don't know
21 exactly when that will come out, but we are working on
22 new guidance with this same concept in mind, again,
23 making sure that decisions are all understood by
24 everybody and there is repeatability to that, adding
25 certainty into the system.

1 Another area, and I believe it will be a
2 significant topic of the panel to follow, regards the
3 Patent Trial and Appeal Board. I'm happy to have
4 Acting Chief Judge Scott Boalick here on the panel
5 with us. Suffice it to say, we are taking steps to
6 make sure we're addressing concerns that were raised
7 for the PTAB. Of recent, there was a notice on claim
8 construction. We've also taken steps with regard to
9 precedential opinions to increase the transparency and
10 improve the decision-making process in what is
11 precedential for the PTAB, and I'm sure there will be
12 steps on the horizon.

13 And the last of the three that I wanted to
14 mention, which is a central pillar of what a patent
15 examiner does, is the patent examiner search. We are
16 taking numerous steps to make sure that the best prior
17 art is in front of examiners as early as possible in
18 prosecution so that the best decisions can be made
19 regarding the patentability of any particular patent
20 application that they have.

21 Ranges of projects we're working on include
22 an electronic system that automatically brings in
23 prior art for the examiner based on related U.S.
24 cases. We actually released a notice yesterday to
25 announce the kickoff of this project. It is starting

1 in a small way and will scale up once we work out all
2 the details. This is an absolute win-win for not only
3 the Office but also the public, as many of the
4 public's duty-to-disclose requirements are met when we
5 already have the references.

6 We also have put into place in recent times
7 a global dossier, which is another way to look at
8 related foreign cases and the prior art that was in
9 them. We are kicking off a peer search pilot at USPTO
10 where examiners will work together, both searching a
11 similar application as a training tool, and a couple
12 other steps we're looking at are artificial
13 intelligence. I think that there is a very
14 significant future for artificial intelligence in
15 search.

16 We have 8,000-plus examiners, they're all
17 searching. We can take best practices and use that to
18 feed back into some type of artificial intelligence
19 system to make the prior art search better. We've
20 taken a number of steps for initial programs that I've
21 been able to see. They're not ready for release yet,
22 but they're certainly going in the right direction.
23 And in September, we had a request for information for
24 the public that was released on artificial
25 intelligence so we can gain much more.

1 So in any case, I know I am at the end of
2 the time for my remarks. I wanted to share those
3 three priorities with you, and my parting thought
4 before we move on to the next speaker is really all of
5 the goals that we have at PTO are to make sure we are
6 making decisions that are transparent and repeatable
7 and predictable. And we believe that will add a lot
8 of certainty into the system so people will know when
9 their patents -- how those decisions were made
10 regarding those and it puts them in the best position
11 to move forward.

12 So thank you very much again for having me
13 here. I'm looking forward to the panel after and have
14 a great second day to the hearing. Thank you.

15 (Applause.)

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1 PANEL 1: EMERGING TRENDS IN PATENT QUALITY

2 MR. DUBIANSKY: Thank you, Commissioner
3 Hirshfeld. I echo the sentiments of my colleague,
4 Suzanne Munck, that we are very happy to have both you
5 personally join us and also to have the involvement of
6 the PTO in our hearings this morning.

7 I am John Dubiansky, and I'm joined by my
8 colleague, Elizabeth Gillen, and we are both attorney
9 advisers in the Federal Trade Commission's Office of
10 Policy Planning. The first several sessions of
11 today's hearings, both this one and the following one
12 on litigation in particular, are a continuation of a
13 long history of the FTC's policy research and study
14 regarding the patent system.

15 As our panelists discussed yesterday, in
16 addition to our work enforcing Section 5 of the FTC
17 Act and the antitrust laws, the FTC has a long history
18 of promoting innovation and competition through policy
19 research and advocacy regarding the patent system.
20 This dates back to sessions and a chapter in our 1996
21 report on competition in a high-tech global
22 marketplace, reflecting the original Pitofsky
23 hearings, as well as subsequent reports, such as our
24 2003 "To Promote Innovation" report focusing on patent
25 quality and our 2011 Evolving IP Marketplace report

1 focusing on patent notice remedies. And those reports
2 are just part of a broader and ongoing policy and
3 research program regarding IP rights.

4 Today's panel in this first session will
5 focus on patent quality. And as we described in the
6 2003 report, patent quality can reflect, for example,
7 the fact that a poor-quality patent or a questionable
8 patent is one that is likely invalid or contains
9 claims that are likely overly broad. And today's
10 panel in particular will focus on a number of recent
11 developments that may inform patent quality, the most
12 notable of which is the September 2011 passage of the
13 America Invents Act.

14 The America Invents Act has several
15 provisions which may inform patent quality, such as
16 the institution of expanded post-grant proceedings at
17 the Patent Trial and Appeal Board, as well as the
18 shift from a first-to-invent to a first-to-file
19 system. And in addition to the AIA, there have been
20 other developments, including a number of cases handed
21 down by the Supreme Court, such as the Nautilus
22 opinion regarding claim definiteness.

23 So with that background, I would like to
24 introduce our panelists today. I think we've got a
25 great panel here assembled to discuss these issues.

1 Going down the line, we have Commissioner Drew
2 Hirshfeld, who is Commissioner for Patents at the
3 USPTO. Next to him is Professor Alan Marco, who is an
4 Associate Professor at the School of Public Policy at
5 Georgia Tech. And prior to joining Georgia Tech, he
6 served as the Chief Economist at the USPTO.

7 Next is the Honorable Scott Boalick, who is
8 the Acting Chief Judge for the Patent Trial and Appeal
9 Board. Next is Greg Reilly, an Assistant Professor of
10 Law at the Illinois Institute of Technology, Chicago-
11 Kent College of Law, where he teaches patent law.
12 Next to Greg is Saurabh Vishnubhakat, who is an
13 Associate Professor of Law at Texas A&M University.
14 He teaches patent law, and he also holds a joint
15 appointment as an Associate Professor in Texas A&M's
16 Dwight Look College of Engineering. And he was
17 formerly an adviser to the Chief Economist at the PTO.

18 And, finally, we have Professor Melissa
19 Wasserman, who is a Charles Tilford McCormick
20 Professor of Law at the University of Texas at Austin
21 School of Law.

22 Just one note, we'll have opening remarks by
23 Professor Marco, and they will be followed by a panel
24 discussion and questions. And during this panel, we
25 invite the audience to submit questions. Our

1 colleagues will distribute cards where one can write
2 down questions and they will be passed up to the
3 moderators and we will attempt, if there's time, to
4 field several of those questions.

5 And now I'd like to invite Professor Marco
6 to give an opening presentation on patent quality.

7 MR. MARCO: Thank you. It's great to be
8 here talking about a topic that is near and dear to my
9 heart, patent quality. So my job here is to -- I just
10 want to make some brief remarks that will hopefully
11 set the stage for the further discussion. And time
12 permitting, I'll talk about a couple empirical results
13 that may also inform the discussion.

14 So first, I'm going to claim that to
15 understand patent quality, you really need to
16 understand patent policy, and to understand patent
17 policy, you need to understand patent value, what
18 brings value to the patent. So one could argue about
19 a lot of different features, but I want to kind of
20 stick with these main features here. The classical
21 economic levers where you might affect patent value
22 are length and breadth, right, so what's the statutory
23 term and what's the scope of the patent.

24 Statutory terms can be affected by the -- or
25 the length of the patent can be affected by the

1 statutory term itself, by maintenance fees that we may
2 charge, by patent term extension or adjustment that
3 you may request in different circumstances. Breadth
4 is a little bit harder to think about how policy
5 impacts breadth, at least in a direct way. There are
6 statutory provisions about novelty and nonobviousness,
7 but it's a little hard to think about how we would
8 change that if we wanted to think -- in general, we
9 want to give patents broader scope.

10 So should we make them really nonobvious?
11 You know, would that give them broader scope? Would
12 that change in the statute -- change anything?
13 Changing the wording? Because the courts really
14 influence this on a case-by-case basis.

15 So again, from a policy perspective, it's
16 difficult to think about how we would broaden or
17 narrow scope in general, and of course the scope
18 itself is influenced by the examination process that
19 is subject to the statutes and to the courts. Of
20 course, if you have a patent that is long and broad
21 but not enforceable, it's still worth nothing, right,
22 so if you can't enforce this thing, everyone may
23 agree, oh, yeah, that's a broad patent, it's got broad
24 scope, it must be very valuable except no one is going
25 to pay you for it if you can't enforce it.

1 So enforceability is going to consist of
2 some things like error correction in there. If we --
3 well, I'll leave that for later. And then regarding
4 each of these, we want certainty. We want certainty
5 with respect to length, certainty with respect to
6 breadth, certainty with respect to enforceability.
7 And really that certainty or really the uncertainty
8 about those is about patent quality, so when we think
9 of patent quality.

10 So I want to sort of propose this potential
11 definition which is similar to what John had mentioned
12 for patent quality. What I want to propose is this,
13 so a patent is of high quality if it adheres to the
14 legal standards of patentability, that is, it's valid,
15 it claims a scope that matches the inventive step, so
16 it claims the appropriate scope. It could be broad,
17 it could be narrow depending on what the invention is.

18 And, of course, there's some tension between
19 one and two, right? There's some tension between
20 validity and scope in the sense that in a practical
21 sense, the applicant may want to intentionally narrow
22 scope to make it more likely that it's valid, or they
23 may be more willing to claim a scope that goes beyond
24 that and risk some invalidity in order to be able to
25 capture a little bit more market value. But there's

1 maybe some tension between these two if we don't have
2 perfect information because it's not just if the
3 patent is granted but what is granted. And there's
4 always going to be a tension between those two. You
5 can claim less and have a higher probability that it's
6 granted and a higher probability of validity.

7 But number three, I want to add this
8 feature, it should clearly articulate one and two,
9 right? So any patent should clearly communicate,
10 disclose, right, what the scope is, what the invention
11 is, and it should be very clear that this patent is
12 valid. And we tend to think of validity as binary,
13 it's either valid or it's not, it's either granted or
14 it's not, but I think we need to get beyond that,
15 right? There is a PHOSITA standard, the person having
16 ordinary skill in the art, and maybe that's the right
17 level for patentability, but that's a pass/fail. And
18 anyone who has taught or been a student knows that
19 there's a difference between passing and getting an A.

20 So it's okay to have patents passing, but
21 what can we do to think about not necessarily changing
22 the standards. But one can think about changing the
23 incentives to make sure that we're getting A papers
24 out there and not C papers, A patents and not passing
25 patents, because we can always improve that

1 disclosure, we can always improve the certainty around
2 the property right. And that's where I think patent
3 quality really comes in. We can think of something
4 that's valid, its scope matches the inventive step,
5 but it's even of higher quality if that's extremely
6 clear and obvious to the marketplace.

7 Okay, so next I want to turn to some policy
8 levers, specifically for patent quality. Right, so
9 there are institutional resources, and I'm thinking
10 about this as mostly the time we spend examining, the
11 resources we put into examination. How much time do
12 we have to spend on search, how much time do we give
13 examiners for determining the rejection or allowance?
14 Examiner and applicant incentives are critical in
15 this. Examiners may have incentive to do a certain
16 quantity of production during the year, and they have
17 incentives to do a certain quality of production
18 during the year. How are we balancing those
19 incentives versus quality and quantity? And how can
20 we use things like the count system at the PTO to
21 influence that?

22 Applicant incentives are also critical.
23 Applicants are influenced by the process, they may
24 have an incentive to claim as broad a claim as they
25 can to see what's whittled down and what's sort of the

1 just acceptable to the examiner, and also they're
2 influenced by fees, among numerous other things. But
3 thinking about those incentives can be critical for
4 thinking about patent quality.

5 Of course, we need some sort of error
6 correction, both pre and post-grant. So pre-grant, we
7 want to think about both sorts of areas, we want to
8 think was something allowed when it shouldn't have
9 been, was something rejected when it shouldn't have
10 been. And we have certain procedures for that that
11 have changed over the years.

12 Post-grant proceedings also are going to be
13 a type of error correction here, and the PTAB is one
14 of those mechanisms that's newly -- been newly created
15 by the AIA but there have been historically other
16 methods to do that. And in thinking about incentives,
17 I want to take a moment here as an example, if we
18 think about opportunities for applicants to make post-
19 grant amendments, to change the claims after the
20 patent is issued. So it gives us just an example of
21 how we might think about incentives here, right, so
22 what are the pros and cons of allowing this.

23 If we allow for these kinds of post-grant
24 amendments, then applicants have the benefit that if
25 there was some sort of mistake or small kind of error

1 on their applications, that that could be corrected.
2 We can fix that and it doesn't invalidate the patent
3 itself.

4 On the other hand, if we have significant
5 opportunities for amendments, post-grant, then does
6 the applicant have the same incentive for quality at
7 the front end? Will they put in as much effort on the
8 patent application itself? Or would they put in more
9 effort on the patent application if there was no
10 possibility of amendment post-grant?

11 So I'm not going to make a proposal here one
12 way or the other, but I'm saying that for each of
13 these kinds of incentives, we need to think clearly
14 and carefully about when we're changing one part of
15 the system, what incentive does that change in the
16 other part of the system.

17 Technology, right? So obviously I was
18 glad to hear what Commissioner Hirshfeld was saying
19 about the -- in their investigation looking into new
20 search systems, investigating machine learning and
21 other things and that because I think that's
22 absolutely critical, not just on the search but even
23 the patent -- the quality of the patent document
24 itself.

25 And I also want to hear about technology in

1 terms of data ingestion, right? Changing the way that
2 we collect the applications even at the PTO to make
3 sure that everything is text-searchable. Because
4 office actions and lots of information that's in the
5 file wrapper, the patent application, is prior art,
6 and if that's not searchable and easily identifiable
7 to folks, then it's going to decrease our quality.

8 There's, of course, statutory and
9 institutional reforms that I think a lot of folks here
10 will talk about. But -- and, of course, we have to
11 think about how are the courts going to affect things
12 because from a policy standpoint, it's difficult to
13 affect what decisions the courts are going to make
14 without clearly changing the statute in a way that we
15 can predict.

16 So before rules -- so oftentimes when I'm
17 talking to lawyers, lawyers like to think about rules
18 first, how are we going to fix this, will this change
19 the rule. But economists like to think about prices,
20 right? Before we think about changing the rules, we
21 can think about prices. So I want to talk about a
22 couple examples of that, and I'm going to skip the
23 first one that I have here. I'm just going to go to a
24 couple sort of empirical results from various papers
25 that I've worked on at different times to think about

1 incentives.

2 I'm going to focus on really just this
3 first one. So we find that applicants respond to
4 higher RCE fees, higher fees for sort of in-process
5 continuations, for continuing the patent prosecution
6 and examination process. They respond to these higher
7 fees by narrowing claims ex ante in the application as
8 they're filed at the PTO. There was a rules package
9 back in -- I think it was '07, '08 that was about sort
10 of limiting the number of times an applicant could do
11 an RCE. And there was a lot of controversy about
12 this, and eventually the package was dropped. But as
13 an economist, you think don't prohibit something, just
14 price it, right? You can just price it accordingly.
15 We don't want to prohibit smoking but we could raise
16 the price of cigarettes and that's going to decrease
17 smoking.

18 So with RCE fees, in fact, they did raise
19 the price of RCEs and raise the second RCE price more
20 than the first to add escalating RECE fees. So
21 applicants did, in fact, respond to that according to
22 our results, anyway, by narrowing the applications
23 when they were filed. So it's the kind of incentive
24 that we want to be thinking carefully about in a
25 systemic way in the whole patent system, the patent

1 examination system, as we go forward in thinking about
2 patent quality.

3 So I will leave it with this and say that my
4 one clear recommendation is that Congress should allow
5 the USPTO to continue with their fee-setting
6 authority. So I will make that statement very
7 clearly. Thank you.

8 MR. DUBIANSKY: Thank you, Alan, for both
9 your framing presentation and the interesting
10 empirical data.

11 I would now like to give our other panelists
12 an opportunity, both to react to the presentations by
13 Commissioner Hirshfeld and Professor Marco, as well as
14 to make some opening remarks. And I would welcome
15 your views both on the current state of the patent
16 quality landscape and on changes in particular
17 relating to the institution of the AIA and subsequent
18 judicial decisions.

19 So with that, I think we'll go down the line
20 and, Judge Boalick, if you'd like to give remarks, I'd
21 ask everybody to speak for about five minutes.

22 JUDGE BOALICK: Sure. Thank you, John. So
23 building on what Commissioner Hirshfeld said, the
24 Patent Trial and Appeal Board, although it had
25 predecessor boards, was created by the America Invents

1 Act, as well as the post-grant proceedings were
2 established, and so we were tasked with building
3 something brand new.

4 As with anything new, you know that it's not
5 going to be perfect when it is first formed, and so
6 we've always had the notion that there would be a need
7 to have iterative changes to get the proceedings
8 scoped, you know, and balanced correctly, but the
9 overall goal of the PTAB is to help achieve balance in
10 the system and to make sure that we have strong,
11 reliable, and predictable patent rights, and the PTAB
12 is a part of that, and it fits into the larger PTO.
13 We're all part of the same agency, we all have the
14 same interest in strong, predictable, and reliable
15 patent rights.

16 And so I'd like to note that under Director
17 Iancu, the PTAB has been taking many steps already to
18 ensure this and to make strides towards achieving this
19 balance. You have probably noticed, and it was
20 mentioned, that we have come out with a claim
21 construction final rule. It goes into effect November
22 13th of this year, and it's going to achieve greater
23 harmonization with the federal courts and the ITC and
24 will lead to greater certainty and predictability in
25 the overall patent system.

1 The Director has also mentioned that we are
2 working on motions to amend in the trials and looking
3 to make motions to amend more effective. We also have
4 recently issued new operating procedures. We issued a
5 standard operating procedure that really gives greater
6 transparency to how the PTAB had already been handling
7 cases, but it also is increasing transparency by
8 notifying parties if there is a panel change after the
9 panel has already been publicly disclosed so we'll
10 enhance transparency in that manner.

11 We also have another standard operating
12 procedure that changes the way that the PTAB does its
13 precedential opinions. It now has established a
14 precedential opinion panel, and two of the three
15 members are here on this panel, Commissioner for
16 Patents, the Chief Judge of the PTAB, and Director
17 Iancu are the three members of that panel who will
18 make precedential opinions for the PTAB that will bind
19 the PTAB and lead to greater certainty and
20 predictability.

21 And, then, finally I'd just like to add that
22 we have updated our trial practice guide, and we
23 anticipate that there will be another update to
24 reflect other developments in the law. So thank you
25 for the opportunity to give some opening remarks.

1 MR. DUBIANSKY: Thank you, Judge Boalick.
2 Professor Reilly?

3 MR. REILLY: Thank you. With my time in
4 the opening remarks, I'd like to make two points
5 related to the PTAB. The emergence of the PTAB is
6 what I think is the most significant trend in patent
7 quality in recent years. The first point is that we
8 largely -- we frequently describe the PTAB -- I'm
9 using PTAB as a general reference to the various
10 procedures created by the AIA.. We generally think of
11 the PTAB's function is correcting errors in patent
12 examination. That is that patents that should have
13 been issued, if the Patent Office was doing the
14 maximum effective job. There were errors.
15 Inevitable, there's going to be errors, and the PTAB
16 is there to correct them.

17 But I think we can think of the PTAB's role
18 slightly differently, and that is that the PTAB
19 reflects the dynamic nature of patent quality. We
20 often think of patent quality as being static, that
21 is, at the time the patent issues, a patent has some
22 level of quality, however we're defining that, and
23 that quality remains the same over time. But in
24 reality, patent quality is dynamic. Patent quality
25 can change over time, probably more so in some

1 industries than others, based on the actions of the
2 patentee and probably actions of the accused
3 infringers, too, as they interact with the patent.

4 Patent rights are malleable. Patent rights
5 can be changed over time. Patent claims can be kind
6 of stretched, shifted, et cetera, as patentees
7 encounter changes in the technological market and
8 changes in the competitive market conditions. And so
9 over time, the patent rights can shift. Patent claims
10 can shift in terms of their coverage and in terms of
11 their predictability, both because of the inherent
12 difficulties in translating inventions into words, but
13 then also because of our patent doctrines that allow
14 this type of malleability of patent rights.

15 So when we think of patent rights as
16 malleable, we can see how patent quality can change
17 over time. Most obviously scope can change over time
18 as a patentee attempts to stretch their patent to
19 capture changing technological conditions and changing
20 market conditions, but also the likelihood -- the
21 enforceability in terms of complying with the
22 statutory conditions of patentability, which is
23 directly connected to scope, and then last, also in
24 terms of certainty. The farther the patent is
25 asserted away from the disclosed embodiments, the

1 harder it is to predict the exact coverage of a
2 patent.

3 So if we think of patent quality as being
4 dynamic, then we can see another way of describing the
5 role of the PTAB, and that is it gives the Patent
6 Office the opportunity to reconsider its patent grant
7 in light of how the patentee is using the patent in
8 response to changing market and technological
9 conditions. It essentially allows the Patent Office
10 to ask the question, would we have granted this patent
11 if we knew this was the coverage that the patentee was
12 going to seek with that patent?

13 The second point I want to make about the
14 PTAB is that the PTAB is largely recognized as having
15 had a significant impact in terms of invalidating
16 patents. And the debate in the patent community is
17 largely whether that impact in terms of invalidating
18 patents is ultimately good -- positive or negative,
19 for the patent system. But I think there's another
20 question there, and that question is, why? Why is it
21 that the PTAB has been so impactful in terms of
22 invalidating patents?

23 To the extent that this question is
24 addressed, it's normally addressed in comparison to
25 litigation. Why is the PTAB more impactful in terms

1 of invalidating patents than litigation, and,
2 therefore, the natural focus is on differences between
3 the PTAB and litigation, primarily the burden of
4 proof, and up until recently, or up until I think it's
5 November, the claim construction, the difference in
6 claim construction standard.

7 But neither of these, I don't think, are
8 fully persuasive reasons for why the PTAB has been so
9 impactful because they were equally true of the
10 reexamination procedures that preexisted the America
11 Invents Act. So then the question -- I think the
12 better way of focusing on why the PTAB has been so
13 impactful is to focus on what's different about the
14 post-AIA procedures as compared to reexam. And I see
15 four major ones.

16 One is the difficulty in getting amendments
17 in the post-AIA procedures, which the Chief Judge
18 spoke about, though I question whether amendments is
19 really jiving the difference in impact. I think
20 there's reasons to doubt that, and that can be
21 discussed more.

22 The next is the effectiveness of threshold
23 screening. The PTAB denies about -- over 25 percent
24 of petitions it receives compared to less than 10
25 percent in ex parte reexamination.

1 The third is the increased adversarialness;
2 and the fourth is increased expertise in the decision-
3 makers. The decision-makers now are experts in both
4 poles of the patent system, the patent law and the
5 technology.

6 And the final point I'd make is that these
7 last three explanations -- effective threshold
8 screening, adversarialness, and expertise -- are
9 normally seen as positive values in institutional
10 design, which I would think is at least informative of
11 how we evaluate whether the impact of the PTAB has
12 been positive or negative.

13 MR. DUBIANSKY: Thank you.

14 Professor Vishnubhakat?

15 MR. VISHNUBHAKAT: Thank you. Good morning.
16 I would like to focus my remarks today on two features
17 of the Patent Trial and Appeal Board as well and, like
18 Professor Reilly, say a few words about the comparison
19 of the PTAB as a source of error correction with
20 respect to the courts.

21 So one of those two features is the intended
22 purpose of the PTAB as a substitute for the federal
23 court in patent error correction, and the other is the
24 current moment of institutional maturity that the PTAB
25 has now reached and what is the best way to put that

1 moment to use.

2 So when it comes to court agency
3 substitution, I think the PTAB represents a challenge
4 that in some ways simply cannot be avoided. We began
5 from the premise, and I'm perfectly satisfied to begin
6 from the premise, that if we had continued to rely on
7 the courts alone, it would be too hard, it would have
8 been too hard to revoke poor-quality patents, and so
9 we had to make it easier to revoke poor-quality
10 patents.

11 But making it easier to revoke poor-quality
12 patents necessarily meant that we had to make it
13 easier to revoke all patents. After all, if we knew
14 which patents were poor quality to begin with, PTAB
15 review would be unnecessary. And so now we have
16 administrative review that deliberately departs from
17 judicial process in important ways. And some of these
18 departures are, I think, well advised, at least in
19 principle.

20 For example, more lenient standing rules
21 means that more of the people who are subject to the
22 exclusionary power of the patent, which, of course, is
23 all of us, can hold that power accountable. It used
24 to be you had to have Article 3 standing to get into
25 court. Now, as I'm fond of telling my patent law

1 students, anybody with \$30,000 and a dream in their
2 heart can go into the PTAB and challenge a patent they
3 think is problematic.

4 Another example is that relying on
5 technically trained administrative patent law judges
6 rather than lay judges or juries in Federal Court make
7 it more likely that the relevant scientific detail
8 that bears on a patent's validity will not be obscured
9 or distorted. Right, so these features take aim at
10 who can challenge a patent and who gets to decide, and
11 they don't affect the substantive content of a
12 patent's validity. So to that extent, they don't
13 compromise the legitimate value of a properly issued
14 patent. They go after the poorly issued ones but
15 generally tend to leave the poorly issued ones alone.

16 Other departures from judicial process, I
17 think, are somewhat more questionable. And these
18 include discarding the presumption of validity,
19 failing to require invalidity to be proven by clear
20 and convincing evidence, which the Supreme Court as
21 recently as 2011 told us had to be clear and
22 convincing.

23 And then, of course, until quite recently,
24 the diversion claim construction standards that were
25 used as between the courts and the PTAB were another

1 source of inconsistency.

2 Now, I think I would agree that
3 inconsistency, as such, is not necessarily bad to the
4 extent that the courts were getting it wrong and,
5 therefore, the agencies should reach the inconsistent
6 and now correct outcome. But these procedural
7 differences that bear on the sort of substantive
8 content of validity, I think, are something that
9 undermine all patents indiscriminately, at least
10 somewhat indiscriminately, not just poor-quality
11 patents.

12 And so as a result, the sum of these
13 desirable and undesirable attributes is that the PTAB,
14 until now, has largely been a substitute of mixed
15 quality when it comes to improving on PTAB -- or
16 patent error correction.

17 Now, it's fair to say, I think, that only
18 some of these choices were made by the USPTO itself,
19 and a number of them were made by Congress in the
20 statute. And so to be clear, what I'm referring to is
21 the wisdom of the policy choices themselves, not who
22 makes the decision or who should be held to account.
23 The USPTO, for example, has changed course on claim
24 construction and is in the process of reconsidering
25 other doctrinal issues, and I think it's to be

1 commended for that.

2 The second point I want to make is just a
3 brief word about the growth of the PTAB as an
4 institution. At the outset, the Supreme Court and
5 the Federal Circuit early in the days of the PTAB,
6 I think, gave the USPTO fairly wide latitude,
7 particularly when it came to deference and discretion
8 in the PTAB. For example, the nonappealability of
9 PTAB institution decisions could have been limited to
10 just forbidding interlocutory review, but the Supreme
11 Court in the Cuozzo case read it to extend through
12 final judgment, gave the PTAB a lot more power, vis-a-
13 vis the Federal Circuit's power to review it.

14 The USPTO's power to intervene in appeals
15 could have been limited by Article 3 standing and
16 other doctrinal rules, but that power, too, was read
17 quite broadly by the Federal Circuit in the Knowles
18 Electronics case.

19 More recently, however, the courts have
20 started to retrench a little bit, and they've started
21 to constrain some of the USPTO's more expensive
22 positions. For example, the en banc Federal Circuit
23 held this year in Wifi I that enforcement of the one-
24 year time bar, which had previously been held
25 unreviewable, is subject to judicial review after all.

1 And, of course, the Supreme Court held this year in
2 SAS Institute that the PTAB has the power to institute
3 or deny petitions in full but cannot cherrypick some
4 arguments and reject others.

5 So I think these recent limits, more recent
6 limits that the courts have imposed suggest that the
7 courts see the PTAB as a more fully mature institution
8 that doesn't need more latitude any longer to get
9 itself up and running. And that maturity makes this a
10 particularly valuable occasion in my view to sort of
11 engage in some reflection and reform.

12 So as our discussion unfolds, I look forward
13 to exploring these themes further and, in particular,
14 sharing some empirical results about how the PTAB has
15 been fulfilling its intended purpose. And I want to
16 comment the Federal Trade Commission for convening
17 these hearings, and I look forward to our
18 conversation. Thank you.

19 MR. DUBIANSKY: Thank you.

20 Professor Wasserman?

21 MS. WASSERMAN: Yes. So thank you. I would
22 like to use my time today to talk about two future
23 reforms that I would like to see in order of what I
24 think would help increase patent quality. And so
25 we've had a lot of discussion about patent quality for

1 a while, right, on the quality of patents being issued
2 by the Patent Office, but we've actually had little
3 compelling empirical evidence to put forth that
4 there's any future of the system that's inducing the
5 agency or causing the agency to issue low-quality
6 patents.

7 And this is a problem, right, because when
8 we have policymakers who are trying to improve patent
9 quality, we're largely trying to do this in the dark.
10 We're not sure which features we should be focusing on
11 that would result in an improvement. So I'm hoping
12 that this is starting to change, right?

13 In the past few years, we've seen scholars
14 in the U.S. patent system publish a series of
15 empirical studies on the administrative process by
16 which patents are obtained after theorizing how
17 certain features of the agency may incentivize or bias
18 it towards allowing patents. These studies have used
19 a range of sophisticated empirical techniques designed
20 to show a causal connection between those agencies'
21 features and its granting practices.

22 So pulling on the scholarship, in part, is
23 work of myself and Michael Frakes, and I want to focus
24 on two reforms. So, first, I would love to see the
25 Patent Office consider changing its fee structure,

1 right? The agency is entirely funded through user
2 fees, but the overwhelming majority of its costs are
3 attributed to reviewing and examining applications.
4 The agency charges applicants fees to help cover those
5 expenses; however, those fees fail to cover even half
6 of the agency's examination costs.

7 And to make up for this deficiency, the
8 agency relies heavily on two additional fees that are
9 only collected in the event that a patent is granted.
10 And this is the issuance fee, right, that's paid at
11 the time of allowance, and renewal fees that are paid
12 over the lifetime of an issued patent so it remains
13 enforceable.

14 So one immediate concern of this back-end
15 fee structure is it creates a risk that the agency's
16 fee income will fail to cover its examination
17 expenses. So unexpected dips in renewal fees, for
18 instance, right, is going to result in a budgetary
19 shortfall for the agency. And an equally troubling
20 concern, I think, of this back-end fee schedule is
21 that if the agency finds itself in some financial
22 strain, they could attempt to increase revenue by
23 granting additional patents.

24 And there's some empirical evidence to
25 suggest that this -- that these concerns are

1 validated. When the agency is lacking -- or is
2 financially strained, they may be granting additional
3 patents as a result.

4 Second, I also want to suggest that I'd love
5 to see the Patent and Trademark Office increase the
6 time allocations it gives to patent examiners, right?
7 Right now, examiners have only on average 19 hours to
8 review applications, and because applications come in
9 presumed to be legally valid, right, if an examiner
10 doesn't have enough time to do a sufficient search and
11 who fails to explicitly set forth reasons for why the
12 application's rejected, they must grant the patent,
13 right? So if examiners aren't given sufficient time
14 to do their job, they may be allowing patents that
15 they otherwise would have rejected.

16 And, again, there's recent empirical
17 evidence that validates these concerns and suggests
18 that the time allocations are binding on examiners and
19 maybe inducing them to grant patents of low quality.
20 But I want to note, harkening back in part to what
21 Professor Marco suggested, that even in light of this,
22 there's open questions about whether we should
23 increase time allocations, right, because there's
24 another institutional body, the courts, that can also
25 remove invalid patents from the system.

1 And there, I think, has been a number of
2 scholars who have made this argument but perhaps most
3 famously by Mark Lemley, who argued that because so
4 few patents are litigated or licensed, it's better to
5 rely upon litigation to make detailed validity
6 determinations in those rare instances, rather than
7 increasing resources across all -- at the Patent
8 Office for all applications.

9 And he supported his thesis with a cost-
10 benefit analysis, where he concluded the costs of
11 associating doubling time allocations outweigh the
12 benefits gained by resulting in the decrease in the
13 number of invalid patents the Patent Office would
14 issue. So Michael Frakes and I have a recent article
15 that has revisited this issue where we're employing
16 new and rich sources of data, along with sophisticated
17 empirical techniques, to form novel empirically driven
18 estimates of some of the relationships that Lemley was
19 -- had to assume in his paper.

20 And armed with these, we actually come to
21 the opposite conclusion, right? That we would be
22 better off, right, increasing the time allocations at
23 the Patent Office than relying on ex post litigation
24 to weed out patents. I think that's -- my time's up.

25 MR. DUBIANSKY: Great. Thank you. And I'd

1 like to thank all of our panelists for their opening
2 remarks. Now I'd like to shift into some questions.
3 And, again, I invite our audience to submit questions.
4 Our colleagues are passing around cards to take them
5 in writing.

6 So, the first question I'll ask builds upon
7 the subject of the PTAB, which I believe everybody has
8 raised in their opening remarks. And my first
9 question is, of course, that the AIA has established
10 both the inter partes review, as well as post-grant
11 review proceedings conducted by the PTAB as a
12 replacement for the prior reexamination proceedings.

13 And what does the evidence say regarding the
14 effect of the PTAB in practice? Perhaps, Saurabh, if
15 you could start and, everybody else, feel free to join
16 in afterwards.

17 MR. VISHNUBHAKAT: So I think the place to
18 begin is the sort of baseline of federal court
19 litigation, and we know, for example, that the
20 procedural structure, the statutory structure of the
21 PTAB petitions and they sort of vary from IPR to CBM
22 and so forth. To the extent that the PTAB is supposed
23 to be a substitute for the court, it's interesting,
24 first and foremost, to see where are the petitioners
25 who seek to challenge a patent. In the PTAB, where

1 are those folks coming from?

2 And in recent research with my colleagues,
3 particularly Arti Rai at Duke Law School, what we
4 found is that the majority, 70 percent of petitioners
5 in the PTAB, have previously been sued on the patent
6 that they now challenge. They come to the PTAB in a
7 sort of defensive posture to try and have it out over
8 the validity of the patent in an expert tribunal,
9 rather than staying in a court where a judge or a jury
10 might be the one to decide.

11 That means that a substantial minority, 30
12 percent, are preemptively striking either because they
13 see the patent as a potential threat by their own
14 screening and vetting or because other rivals in the
15 market have been sued and they think, well, we might
16 be next, so let's strike first. So that being the
17 case, it's interesting next to look, I think, at what
18 the behavior of the courts is once that petition is
19 filed, because if the PTAB is simply one more place to
20 fight, it's not a substitute at all, right? At that
21 point, we're engaging in duplication, which is almost
22 certainly going to be wasteful. And particularly if
23 the forum where this should be playing out is the more
24 expert, cheaper, faster, more accurate forum, the
25 PTAB.

1 So, to look at the rate at which stays are
2 granted in the courts, the figures vary. They're as
3 low as 40 percent in the Eastern District of Texas,
4 for example, according to one recent study, or as high
5 as in the 70-percent range in the Northern District of
6 California. That variation is itself troubling. I'm
7 not sort of purporting to take a stand on what the
8 right rate of stays is, but surely the variability
9 suggests that the degree to which the PTAB is actually
10 serving as a substitute for the courts needs to be a
11 little more precise.

12 And I think the reason for that variation,
13 at least one substantial reason, is something that the
14 Supreme Court has only recently stepped in to fix, and
15 that was partial institution. So in a paper that I
16 now have coming out in the Iowa Law Review, I find
17 that although the rate at which cases of partial
18 institution were going down at the PTAB and have been
19 going down since almost the beginning, they began as
20 almost the large plurality of cases, now they only
21 account for something like 18 percent.

22 Less than a fifth of all the cases that go
23 to the PTAB are partially instituted upon as of the
24 SAS Institute decision. Fifty percent of all of the
25 claimed ground pairs, the sort of real workload of

1 adjudicating petition that comes to the PTAB's door,
2 is granted, and the other 50 percent is left out.
3 Some of that is full institution, and some of that is
4 full denial. And the rest is made up for by partial
5 institution and partial denial of the same petition.

6 So that 50/50 split has been remarkably
7 stable. It's been persistent since almost the
8 beginning of the PTAB. And what that means is that,
9 by engaging in partial institution, the PTAB, whether
10 advertently or inadvertently, was muddying up the
11 signal that it would send to the federal courts
12 regarding how much valuable information it would
13 really provide to the courts regarding a patent's
14 validity.

15 Now the partial institution is off the
16 table, I think the signal we are granting or we are
17 denying review will be much sharper in both
18 directions. And I think that's a salutary trend that
19 will help courts make more informed judges about when
20 to stay their hand. And that institutional structure
21 will go -- I think will do much to help the PTAB
22 fulfill its intended role as a substitute for the
23 courts.

24 MR. DUBIANSKY: Thank you. Would anybody
25 else like to chime in?

1 JUDGE BOALICK: Let me make just a few
2 points, and just as was observed, there does seem to
3 be a large overlap between the district courts and the
4 petitions in the PTAB. I would just add that
5 empirically in talking to some district court judges
6 after the SAS decision, they seem to be much more
7 inclined to stay, as well as the impending claim
8 construction rule where there will be fewer
9 differences. It seems to have helped some of them to
10 decide to stay their cases. Again, this is just in
11 conversations.

12 The other thing that I think I would just
13 like to mention briefly with regarding the PTAB
14 procedures replacing reexam is just to note that the
15 inter partes review replaced inter partes reexam. Ex
16 parte reexam is still conducted at the PTO, and so
17 there is still that proceeding, but that the various
18 AIA trials were meant to address some of the
19 shortcomings of the ex parte reexam process, which
20 could take considerably longer, so there are now
21 statutory deadlines.

22 There was an internal appeal to the former
23 Board of Patent Appeals and Interferences that added
24 some time to final resolution. So, there have been a
25 few things that were structurally changed in the inter

1 partes review from inter partes reexam.

2 MR. REILLY: One point I'd like to make is
3 that when we evaluate the effect of the PTAB and
4 particularly the question of balance that the Chief
5 Judge raised earlier, we frequently see kind of very
6 shocking numbers in terms of invalidation,
7 particularly those pushed by a certain point of view.
8 And I think it's important not to ignore the
9 effectiveness of the threshold screening.

10 So using the PTO's most recent number -- I
11 think most recent numbers -- in doing some back-of-
12 the-envelope calculations, when I considered all
13 decisions other than all claims -- I treated all
14 claims confirmed and -- or no claims invalidated and
15 petition denied as being favorable to the patentee
16 and treated all other outcomes as being adverse to
17 the patentee, so that includes settlements and things
18 like that that may not actually be adverse to the
19 patentee, what we see is more of like somewhere around
20 a 60/40 split in terms of 60 percent of decisions
21 being adverse to the patentee and 40 percent being
22 favorable to the patentee. And certainly, I mean,
23 that is different than outcomes in litigation.

24 Selection effects are different there as
25 well, but it's not as perhaps shocking as some of the

1 numbers you'll see put out there, numbers that are
2 ignoring that so much of -- that a significant portion
3 of petitions aren't even making it to the trial stage.

4 MS. WASSERMAN: Yeah, and I just want to
5 second Professor Reilly's comment.

6 MR. DUBIANSKY: Thank you. Well, does
7 anybody have anything further on this point? If not I
8 can move on to a related question.

9 So building on the previous question, are
10 there any procedural or structural aspects of the PTAB
11 that contribute to its performance as compared to in
12 particular the district court litigation or the
13 previous reexamination proceedings? And in addition,
14 building on this, are there areas of procedure today
15 that are creating inefficiencies or opportunities for
16 improvement?

17 Melissa, would you like to start?

18 MS. WASSERMAN: Yes, I'd love to. You know,
19 so, I mean, we all know that these PTAB adjudicatory
20 proceedings were designed to, right, create a faster,
21 cheaper alternative to district court litigation. And
22 in order to get that, right, they have each proceeding
23 provides third parties with this robust, streamlined
24 way to contest the legitimacy of an issued patent at
25 the Patent Office. And I think they share a lot of

1 features that make them legitimate alternatives to
2 litigation, and perhaps the most salient comparison
3 from the previous proceedings is they take place in
4 this adversarial, court-like hearing where the parties
5 have oral argument and discovery.

6 But I also think it's important to keep in
7 mind they are not civil district court litigation,
8 right? And a lot of times, I think some of the
9 concerns or the angst that I hear from the patent
10 community loses sight of that, right? And I think the
11 most appropriate comparison when we're thinking about
12 PTAB adjudication and its procedures are two other
13 agency adjudications. And in particular, I think they
14 fall on this idea where they have a hearing but
15 they're not something under administrative law, formal
16 APA-governed adjudication.

17 There's an ACA study that's come out that's
18 compared what are the best practices for agency
19 adjudications of the ones like PTAB proceedings, and
20 PTAB fares quite well. They come out having 16 of
21 those 20 best practices, which puts them well into the
22 top third, I think, of the agency adjudicators.
23 There's a couple areas that are pointed out where I
24 think they could do more. One I would consider is
25 doing a more robust or formal disqualification

1 mechanism for adjudicator bias. It's my understanding
2 they have that, but it's not as formalized as I would
3 like to see.

4 And another recommendation was to have some
5 higher level consideration. But I think, in part, the
6 changes they've made with how they're making
7 determinations about precedential decisions help
8 address that, and I thought that was a very positive
9 move that I saw from the PTAB.

10 So where are other areas that you could see
11 improvement? I think one has already been touched on,
12 which is this idea with stays in district court and
13 how much of this are we just sort of getting
14 duplicative litigation occurring in PTAB and district
15 court, which I don't think was the intention and
16 certainly cuts back on the sort of cost-effective
17 saving side associated with PTAB litigation.

18 Another thing that I wanted to point out,
19 and I know the PTO is doing some of this and I commend
20 them and would like to do more, is the feedback loop,
21 though, that occurs with these new PTAB adjudications
22 and patent examiners, right? So when patents -- when
23 you have a patent denial or an ex parte review, right,
24 the patent examiner is involved in that denial before
25 the PTAB. But in the patent grant side, right, if

1 you're using one of these PTAB new post-grant
2 proceedings, the patent examiner that issued that
3 patent is usually not intimately involved in that
4 litigation. You have two adversarial parties
5 litigating. And so I think there's room, right, for
6 sort of more feedback to patent examiners on sort of
7 best practices and things that are coming out of PTAB
8 that might also help improve quality.

9 And I know the Patent Office has had some
10 pilot programs associated with that. But I would love
11 to see more of that implemented.

12 MR. DUBIANSKY: Alan, go ahead.

13 MR. MARCO: Yeah, I just had one thing I
14 wanted to add in a more general sense in that when
15 we're evaluating sort of the impact of PTAB and the
16 effectiveness of that, everything that we're -- all
17 the numbers we're looking at so far -- not all -- the
18 majority of the numbers that we're looking at so far
19 on patents that were granted before the PTAB was
20 established, and when we look at the effect of any
21 sort of institutional change, right, the effect is not
22 going to be immediately obvious, especially in a
23 system where the patents can, you know, hang around
24 for a couple of decades.

25 So, we need to -- when we're evaluating the

1 institutional change, we really want to be, in the
2 end, looking at how the reforms affect new
3 applications and patenting as it's happening now.
4 That's harder. That takes more time. It requires
5 more data. But we can look to certain experiments
6 where we might be able to look at data and how
7 applicants change their claim-drafting procedures
8 after Supreme Court decisions like Alice, Myriad,
9 Mayo, because we do see that in the data. And so the
10 effect of PTAB on the claim-drafting procedures, you
11 know, we can look at, but it's a little bit more of a
12 difficult process.

13 MR. DUBIANSKY: Please.

14 JUDGE BOALICK: I was just going to note a
15 few of the other maybe procedural and structural
16 differences between the PTAB practice, reexam
17 practice, and district courts, and several of these
18 have kind of been touched on, so I'll just run through
19 them quickly, but one is the decision-maker in
20 district court. Of course, you have a generalist
21 Article 3 judge presiding over the trial there. In
22 reexam practice, you have an examiner with a
23 possibility of an appeal to the PTAB. And then in the
24 AIA trials, you have the three legally and technically
25 trained administrative judges conducting the trial.

1 The standards for institution are different
2 for all of these. The PTAB, AIA trials, it's either
3 reasonable likelihood for IPRs or more likely than not
4 for post-grant review and covered business method
5 reviews. When inter partes reexamine was going on
6 post passage of the AIA, it was also reasonable
7 likelihood. And then, of course substantial new
8 question of patentability as a standard for ex parte
9 reexam. And district court, it's just essentially
10 pleading.

11 Time for completion, of course, the AIA
12 trials have statutory deadlines. That's had a large
13 impact on the operation of the board, both the three-
14 month deadline for an institution decision after a
15 patent owner preliminary response and then 12 months,
16 extendable by up to six more months for good cause,
17 after an institution decision's made. Reexams are no
18 specific time limit, but they are conducted with
19 special dispatch. And there's no time limit in the
20 district court, but as we know, some districts pride
21 themselves on their speed.

22 Another aspect is, of course, discovery.
23 The AIA trials by statute have limited discovery.
24 They're in line with finding things that are useful in
25 trying to eliminate expensive fishing expeditions.

1 There was no discovery in reexam. Of course, district
2 court has much more fulsome discovery.

3 Claim construction standards we talked about
4 briefly. The AIA trials had been conducted under
5 broadest reasonable interpretations, shifting next
6 month to Phillips. However, I should note that for
7 expired patents, the construction standard has always
8 been Phillips. In fact, the Phillips standard was
9 used in reexam for expired patents. Reexam will
10 continue to use broadest reasonable. Of course,
11 district court uses the Phillips standard.

12 Amendments, there is a more limited right to
13 amend by statute in the AIA trials. Reexams, there
14 were amendments before final entered as of right, and
15 then there was, you know, an after-final practice.
16 And, also, you had an examiner search as part of the
17 reexam amendment practice. Of course, in district
18 court, there's no amendment.

19 And just I think, you know, areas of
20 potential improvement, really the only thing I would
21 add is just to say that the PTAB and the patent
22 organizations are, in fact, actively collaborating and
23 sharing information to feed that information back from
24 the AIA trials to the patent examiners, and maybe I'll
25 see if Drew wanted to add anything.

1 MR. HIRSHFELD: Thank you, Scott. I was
2 just going to jump in on the same point. So, first of
3 all, I agree with Professor Wasserman that the more
4 feedback we can give from PTAB to examiners is
5 important. And I think as the last few years have
6 rolled on, we have been certainly making progress in
7 this regard.

8 First, every examiner now has access in
9 their regular desktop to related U.S. -- or anything
10 that's in an appeal, they get -- they get those
11 cases if they have a trial. So -- I'm sorry, I'm
12 not being clear on that. So an examiner who has
13 a related case that's in a PTAB proceeding, they will
14 be able to have access to all of those papers and
15 documents so that they can review that. We also have
16 in each -- an examiner is even timed on their
17 production system to review those papers as well. So
18 I think that is a huge step.

19 And then we have in each area of the
20 technology centers, we have people who go through the
21 PTAB decisions looking for trends. You know, are
22 these a one-off decision that there's not a teaching
23 point, or are there trends or are there learning
24 points that we can get the feedback to examiners, and
25 we have staff doing that.

1 And I know Scott mentioned the precedential
2 opinion panel. I believe that will be very
3 instrumental in getting the Patent Operations Division
4 under me and the PTAB under Scott together on the same
5 page as we will both be on those panels with, of
6 course, the Undersecretary of Commerce, and I think
7 that is a very helpful step, and that is very recent.

8 And then we've also created a new position,
9 which we've never had before, which is actually being
10 currently occupied by our previous chief judge, David
11 Ruschke, whose responsibility is to be working on
12 issues of collaboration between patents and the PTAB.
13 So these are all steps, I think, that are taking us in
14 the right direction.

15 MR. REILLY: I just want to make one
16 additional point on the amendments question. I think
17 one of the things I know the Commission does is
18 investigate issues and try to develop information.
19 And I think one question is the role of amendments in
20 post-issuance proceedings. The most common outcome of
21 reexamination was amended claims, and that's a very
22 stark difference from the post-issue -- from the AIA
23 proceedings.

24 And I think it would be -- when you look at
25 some of the reports from reexam, there was -- kind of

1 from practitioners there was a sense that the
2 amendments in reexam weren't that significant a lot of
3 the time, that they were minor, that they could
4 actually be advantageous to the patent owner. So it's
5 not clear to what extent those were doing a lot of
6 work in explaining the difference in validation rates
7 between reexam and PTAB, but we need to know more
8 about what the amendments were like in reexam.

9 And then on the other hand, you see there's
10 -- according to the PTO's numbers, there's just not a
11 lot of requests for amendments in the AIA procedures.
12 Of course, that's potentially circular, because people
13 don't make requests because they think they'll be
14 denied. But it's also -- it also would be interesting
15 to know to what extent amendments that a patentee
16 would want to make -- of course, they might not want
17 to make an amendment because it would eliminate their
18 ability to prove infringement -- but to what extent
19 amendments applicants -- or patentees would want to
20 make would save the validity of patents in AIA
21 procedures.

22 MR. VISHNUBHAKAT: If I could sort of touch
23 on something that Professor Marco pointed out and then
24 make a related point. So the change in regime -- AIA
25 was widely touted, and I think correctly touted, as

1 the most substantial change to the patent law in over
2 half a century. And that's right, but it's not as if
3 the patent system, even in the decade or two preceding
4 the AIA, had not suffered substantial discrete shocks
5 along the way.

6 And one sort of interesting measure of that
7 is that inter partes review, being retroactively
8 applicable to patents that were issued prior to AIA
9 being enacted, at the outset, 100 percent of IPR
10 petitions were on patents that issued before AIA went
11 into effect. So retroactivity is almost sort of
12 tautological in that sense, but it's worth pointing
13 out, too, that 30 percent at the outset of the patents
14 that were challenged in inter partes review -- and
15 that number's been going down -- but 30 percent were
16 pre-inter partes reexam patents. So these were
17 patents issued prior to the American Inventors
18 Protection Act, which passed in 1999 and went into
19 effect in 2001. Right?

20 So what happened in that time? Well, a
21 number of important Federal Circuit decisions came
22 down. And certainly the Supreme Court had already by
23 that point begun what we now know was a very
24 substantial tetralogy of cases on Section 101
25 eligibility. So when we talk about the AIA and

1 particularly PTAB as a system for correcting errors in
2 patent examination due to resource constraints,
3 inadequate search, improper application of law to
4 fact, and these sorts of things, that is distinct in
5 kind from the problem of the law changing under our
6 feet, which happens commensurately and sort of
7 correspondingly highly.

8 And as a result of that, we need to be able
9 to disentangle them if we're going to engage in the
10 kind of evaluation that a substantial reform to PTAB
11 practice would really require. And I think in order
12 to do that, it's worth pointing out some of the data
13 that have already begun to use, the USPTO has put out
14 a large and very rich data set on office actions, and
15 the grounds on which patent applications were
16 rejected, and the prior art that was cited and all
17 these sorts of things.

18 So by applying that data set to the set of
19 patents that are being challenged in litigation, in
20 inter partes review or post-grant review, which is a
21 project I'm already undertaking, those sorts of more
22 specific questions can help us disentangle whether
23 it's really examination process that was to blame for
24 a patent that was issued and is now being invalidated
25 or simply a change in the law, which the Patent Office

1 can't do very much about at all, because it's the
2 courts who are ultimately responsible for that. So
3 that's the point about changes in regime.

4 Now, the related point is, I think -- and
5 this goes back to the original question that John
6 posed about structural aspects of the PTAB. I think
7 deference and discretion in the PTAB, it's an area
8 that's gotten some study, and I think it merits
9 further study, because the Patent Office historically,
10 of course, did not get substantive rulemaking
11 authority, was not on the receiving end of Chevron
12 deference like most other agencies in the modern
13 administrative state.

14 And there are, of course, reasons for that,
15 but to the extent that the PTAB now engages in what
16 might be termed formal adjudication, right -- yeah,
17 formal enough -- I think the fact that we still don't
18 see a lot of oxygen going to the issue of Chevron
19 deference is well summarized by my coauthor Arti Rai
20 in a paper from a couple of years ago that PTO could
21 ask for Chevron deference and it's choosing not to,
22 and that's fine.

23 But as I've discussed in recent scholarship
24 of my own, it's not as if they're not asking for
25 discretion or trying to immunize themselves from

1 interference from the courts because there is, of
2 course, this non-appealability provision. And Cuozzo,
3 at the outset, was the opening salvo. We think that
4 this isn't just a ban on interlocutory review; it
5 extends all the way through final judgment. That was
6 contested, and the Supreme Court told us the answer.
7 After that, there was the question of partial
8 institution. And along the way, there was a question
9 of the one-year time bar. Right?

10 So at each step along the way, further and
11 further expansive views of what non-appealability
12 covers and what non-appealability immunizes has been,
13 I think, an area that has not gotten a lot of
14 attention. And, ultimately, if the agency enjoys non-
15 appealable discretion to do whatever it wants, then
16 functionally I don't see any difference between that
17 and Chevron deference, because they're still doing
18 what they're doing without a lot of interference from
19 the courts. And that can be good or bad, but it needs
20 to be sort of better theorized and better understood.

21 MR. DUBIANSKY: Thank you. I think, in the
22 interest of time, we're going to move on to a few
23 other subjects. So my colleague, Elizabeth.

24 MS. GILLEN: So a few of you mentioned the
25 new claim construction role, and we want to shift

1 gears a bit and talk about the interpretation of
2 granted claims. We've had several Supreme Court
3 decisions in recent years, the 2014 Nautilus decision,
4 the Teva decision 2015. And so I'd like to hear the
5 panelists' views on what the implications of these
6 changes are both in district courts and PTAB
7 proceedings.

8 Maybe Professor Reilly can start us off.

9 MR. REILLY: Sure. So Nautilus, which made
10 it easier to prove indefiniteness of a patent claim,
11 and Teva, which gave deference to district court
12 findings on claim construction, to the extent they
13 were factual findings, the factual underpinnings of
14 claim construction, they were widely acclaimed as
15 significant decisions for patent clarity and patent
16 quality at the time. And by most reports they've had
17 minimal impact.

18 And the best conclusion is that they really
19 haven't had that substantial of an impact. And it's
20 easy to blame that on one of the two punching bags of
21 the patent system, either the Supreme Court or the
22 Federal Circuit. The Supreme Court in both cases took
23 a middle-ground approach. It clearly rejected the
24 Federal Circuit's approach, but it didn't go to the
25 opposite extreme. Instead, it took a middle road

1 where there has to be reasonable certainty for a claim
2 to be definite. And there would be deference but only
3 for factual findings.

4 And both of these standards are relatively
5 unclear and leave a lot of room for implementation.
6 And the evidence suggests that the Federal Circuit has
7 largely used that room for implementation to change
8 some of the language, change at the margins, but
9 largely follow its prior approaches before each of
10 those decisions.

11 But I think it's important to go beyond just
12 the easy targets of blaming the Supreme Court or the
13 Federal Circuit because I don't think either decision
14 was well positioned to have that significant an impact
15 on patent clarity or patent quality. And Teva is the
16 easiest example. And Teva, despite -- its claim
17 construction standard, despite its popularity in the
18 patent community, was never going to do that much for
19 patent quality or patent certainty.

20 And the reason for that is Teva only affects
21 what I'll call ex post certainty. It only affects the
22 likelihood that the claim construction will remain
23 after the claim has been construed in litigation.
24 Teva says it makes it more likely that that will stay
25 throughout the remainder of litigation. And that can

1 be important. That can reduce -- potentially reduce
2 litigation costs; it can encourage settlements, et
3 cetera. But Teva was never going to have any effect
4 on ex ante predictability of claim scope. It never
5 was going to have any effect on how a party before
6 litigation or before potentially infringing activities
7 could evaluate the scope of the patent claim. And
8 Teva wasn't directly about our method of claim
9 construction either, so it wasn't really going to
10 affect breadth.

11 Nautilus, one of the problems with Nautilus
12 is the court tried to resolve it and the issue was
13 posed for the court, the indefiniteness issue separate
14 from claim construction. And you can't really decide
15 indefiniteness without deciding claim construction.
16 Words in patent claims, like any other words, have no
17 meaning without context. They are neither definite
18 nor indefinite in the abstract. They only take on
19 meaning from context, whether that context be
20 extrinsic evidence of the use in the field or whether
21 it be intrinsic evidence in the document itself.

22 And claim construction is the process of
23 giving meaning from context. And so trying to resolve
24 the definiteness of a patent without also addressing
25 how claims are try -- are construed, how claims are

1 given meaning from context, was always going to be a
2 losing or at least minimally impactful proposition in
3 my view.

4 MR. VISHNUBHAKAT: So if I may, I have a
5 question for Professor Reilly. So I'm not sure that I
6 understand or agree -- it might be one or the other --
7 your point about ex post certainty, because it's
8 certainly the case that if a patent has been construed
9 or the claims of a patent have been construed and if
10 Teva had gone the other way, if it were de novo
11 review, right, and it goes up to the Federal Circuit,
12 they lay down what the claims of that patent mean. If
13 that's litigated again, there is ex ante certainty in
14 a dynamic sense. The first time it's construed, it's
15 not.

16 Now, the fact the Teva went the other way, I
17 think, has a substantial effect because the court was
18 much more concerned about vertical certainty. It's
19 less likely to change course from trial court to
20 appeal court and not very much concerned at all, it
21 seems, with horizontal certainty because inconsistent
22 claim constructions in two different district courts
23 on the same patent claim term are likely to persist
24 and not be overturned. Even though they conflict with
25 each other, on appeal, they're going to get that clear

1 error deference.

2 So it seems to me there is an effect on ex
3 post certainty as well as ex ante certainty in the
4 dynamic sense. Would you agree with that?

5 MR. REILLY: I'd agree that -- yes. Once a
6 patent has been construed and gone to the Federal
7 Circuit, that will impose presumably some level of
8 predictability of claim scope for future activities.
9 I was focusing on before a patent is litigated. If I
10 am a party trying to decide whether I have the freedom
11 to operate in this area and the patent hasn't been
12 litigated yet, which I think is the most common
13 situation --

14 MR. VISHNUBHAKAT: Got it.

15 MR. REILLY: -- if I'm trying to evaluate
16 the freedom to operate, I need predictable rules of
17 claim construction. I can't -- I mean, we always
18 think of claim construction as a litigation thing, but
19 everyone in the patent system has to engage in claim
20 construction, right, to know what the scope of
21 coverage is. And if we have predictable rules of
22 claim construction, then it's more likely that my
23 evaluation, ex ante, will be the same as the court ex
24 post in litigation. And to me, I think that's much
25 more significant than predictability once a court has

1 construed the claims, because, A, very few patents are
2 litigated; B, a lot of the patents are litigated -- or
3 litigated patents are settled without a claim
4 construction; and, then, C, a lot of patents that
5 receive a claim construction, of those, only a small
6 number go to the Federal Circuit on appeal where Teva
7 would ever have an effect.

8 MR. VISHNUBHAKAT: Got you.

9 MR. DUBIANSKY: Great. Well, again, in the
10 interest of time, we'll move on to another question,
11 which is that the AIA authorizes the Director of the
12 USPTO to adjust or set patent fees, and how has the
13 Patent Office used this authority and how has this
14 influenced incentives to apply for and maintain patent
15 rights?

16 Actually, Commissioner Hirshfeld, I was
17 wondering if you could speak to that first and then
18 Professor Marco.

19 MR. HIRSHFELD: Sure, I'd be happy to.
20 Thank you for the question. So the USPTO, as was just
21 mentioned, does -- was given fee-setting authority,
22 and the irony now is we are currently in a fee-setting
23 making process, which I will explain in a minute, and
24 we're very close to but not having yet, I believe, an
25 extension to our fee-setting authority. It actually

1 did lapse, and the House and the Senate have passed a
2 bill to extend that, and I believe that is over to the
3 President for signature as we speak.

4 So how have we used this in the past and
5 since the AIA? We have used this to set fees where
6 needed. Historically before the AIA, fees would
7 change, but they would usually be cost-of-living
8 changes. What the AIA has enabled us to do is put
9 fees to how they should be used most effectively, so
10 we are still are cost recovery in the aggregate, but
11 we don't necessarily need to be cost recovery for any
12 particular item. So if we want to do -- make some
13 changes, we will.

14 As I mentioned, we are in a fee-setting
15 process right now, which, of course, started with our
16 -- with our authority. And one I'd like to mention
17 because it touches on a point earlier, and this is a
18 segue to incentives, is in the fee-setting process
19 now, we are looking at for the first time having a
20 surcharge for documents that are not filed in what we
21 -- DOCX, and that is intentionally an incentive so
22 that people will start filing in DOCX, giving us the
23 ability to make office actions and all documents text-
24 searchable, which was a comment that was raised
25 earlier. So it is fees like that that we could

1 change.

2 I also -- if you take a look at some of the
3 fees we are proposing, we actually are in the --
4 slightly moving some of the fees from the back-end
5 costs up front, although I -- which is a point
6 Professor Wasserman raised earlier, and I did want to
7 address that in the bigger picture as well since we're
8 talking about fees. The structure to the fees at the
9 USPTO is intentionally that the up-front costs of fees
10 are very low compared to the back-end costs.

11 The reasons for that are so that you're
12 incentivizing people to join into the patent system
13 and seek patent protection, and then those who are
14 successful, i.e., getting the patents and successfully
15 marketing those patents so they want to pay their
16 maintenance fees, subsidize the cost of all. That's
17 been the structure for as long as I'm aware of the
18 patent fees themselves.

19 So, I agree with Professor Wasserman that
20 there is a balance that is important to the front-end
21 and the back-end fees, and it's something we're always
22 discussing at USPTO. But the reason behind that again
23 is so that the successful people are subsidizing the
24 rest.

25 The comment about USPTO having an allowance

1 rate based on money, quite frankly, I do disagree with
2 that. I've been at the USPTO 24 years as an examiner
3 and virtually I've held every management position.
4 Not once have I uttered or seen an instruction to any
5 examiner to raise fee -- raise allowance rates for any
6 fee purposes. We want examiners making the decisions
7 for the right reasons.

8 The maintenance fees start at three and a
9 half years, and there's one at seven and a half years
10 and 11 years. If we needed fees down the road, we
11 would engage in the fee-setting approach, which would
12 be the most effective way to raise fees, if needed, as
13 opposed to changing the allowance rate. Again, we
14 want people to make the decisions for the right
15 reasons.

16 Last point on the fees is since we are in
17 the process, this process is a long fee-setting
18 process. We're actually setting the fees now for
19 2021. Our public advisory committee has had a public
20 hearing on the fees. They shortly will be issuing a
21 report on their views of our proposed fee-setting.
22 Then the next step to that would be USPTO receives
23 that report and makes a notice of proposed rulemaking
24 with a comment period so that all of you can weigh in
25 and everybody can weigh in on our proposed fees. We

1 would, of course, take those into consideration, and
2 then there would be a final rule upon the issuance,
3 and that is set for January 2021 at this point.

4 JUDGE BOALICK: If I could make just one
5 comment, you know, just to follow Commissioner
6 Hirshfeld for the PTAB/AIA trial fees. Those are set
7 to recover the costs using the best available data.
8 Of course, when we first stood up the trials, there
9 was no data. We used estimates based on other
10 proceedings at the office, and as data has become
11 available, we've used the data as best available to
12 set it at a reasonable cost recovery level. So I just
13 wanted to add that for the AIA trials.

14 MR. MARCO: Yeah, and so let me add just a
15 couple of comments about the fee setting. So -- and
16 having been involved in it, I guess, one and a half
17 times. It is a long process, and for an economist
18 certainly, that was a frustrating process because we
19 just want to change the fees, right? So -- and one of
20 the hard parts about it is that the fees -- because
21 it's a long process and because they haven't been
22 changed very frequently, it means there's not a lot of
23 data on how applicants can respond to those fees.

24 And this puts the PTO in kind of a bind,
25 because it says, well, we need to change the fees, but

1 if we wanted to sort of incentivize some applicants --
2 some applicant behavior or other behavior, it's hard
3 to know what the response is going to be, so --
4 because we don't have the evidence, it's hard to say
5 what the response of those is going to be, and so it's
6 hard to know how to change them.

7 So, I would say two things. So I am glad to
8 hear about the DOCX. I think that's fantastic. But
9 some people do argue about the Office using fees to,
10 you know, change or incentivize applicant behavior.
11 And I think this is something that we just need to get
12 past for this reason. The purpose of the patent
13 system is to create patent rights, right, that we're
14 giving for a purpose for progress in the useful arts,
15 right? It's for progress.

16 So the design of the patent system is for
17 that purpose, and so if the fees help us to accomplish
18 that purpose, right, the purpose -- the patents
19 themselves change behavior. They're designed to
20 incentivize behavior, right? So the fees themselves
21 are just part of that system. So, it's a -- they are
22 used to change behavior.

23 So one recommendation that I would make in
24 order to get more data is something that government
25 agencies have been doing a little bit more in the last

1 decade or so, is through experiments. Right? There
2 are some possibilities in certain areas where one may
3 be able to do experiments on, let's say, maintenance
4 fees. So you're granted a patent and it says,
5 congratulations, you've been given a 90 percent
6 discount on all your patent fees. And by looking at
7 how applicants respond -- you know, for a small
8 portion of grants, we could give -- we could give a
9 discount of some amount. And to see how applicants
10 respond to that can tell us more about the fees
11 without having a huge impact on revenue so long as the
12 PTO could have authority to actually run those sorts
13 of experiments.

14 MS. WASSERMAN: So can I just say a few
15 words? I want to follow up. So I think all of this
16 is great, and I definitely support the Patent and
17 Trademark Office extension and their fee-setting
18 authority and utilizing fees to help address applicant
19 incentives. I think -- I agree with that as well.

20 I just think it's important to keep in mind,
21 right, when we think of the fee structure, it's not
22 just applicant incentives but agency incentives as
23 well that can be -- that are created by the fee
24 structure. And so I agree there's wonderful reasons
25 to keep renewal fees, and we should definitely keep

1 them from a social welfare perspective, but there are
2 other agencies, for example, the European Patent
3 Office, right, that has renewal fees, but they are not
4 themselves funded off of those renewal fees. Some of
5 those renewal fees go to the national patent offices,
6 so there are ways to sort of decouple the incentives
7 that may be set up from agencies by the fee structure
8 and allow them to then just sort of utilize it to
9 maximize applicant incentives.

10 MR. DUBIANSKY: Thank you. Unfortunately,
11 looking at the clock, I realize we're about at the end
12 of our hour, and this has been a fascinating
13 discussion that could likely continue for days. I
14 would like now to give each of our panelists an
15 opportunity to make some final statements. I'd ask
16 you keep it to a minute or two just in the interest of
17 time. And perhaps let's go down the line.

18 So Commissioner Hirshfeld, if you could go
19 first, please.

20 MR. HIRSHFELD: Sure. Thank you very much.
21 Well, and, again, thank you to FTC for having this
22 hearing and including us at USPTO. I will just
23 reiterate some of the points that I tried to make
24 earlier, that I think the Patent and Trademark
25 Office's role is very critical. We can take a lot of

1 steps to make sure that the scope of patents is very
2 clear and those patents withstand challenges.

3 And you'll hear the words -- the phrase
4 "certainty and reliability" spoken by me and my
5 colleagues at PTO. That is our focus, to make sure
6 that as much as we can put certainty and reliability
7 so that when somebody gets a patent, they know they
8 can count on it. They know it will withstand a
9 challenge. When somebody is applying for a patent
10 application, they understand the guidance that is
11 going to be used by examiners to determine whether
12 that is deserving of patent protection or not. That
13 is our main focus and will continue to be so that we
14 are helping those great inventors move this country
15 forward.

16 MR. DUBIANSKY: Thank you.

17 MR. MARCO: Yeah, thanks. So, very briefly,
18 keep fee-setting authority with the PTO. Focus on
19 incentives and examination incentives. Examiners are
20 -- it's easy to count the amount of actions they do.
21 It's easy to count the production. It's harder to
22 identify -- estimate quality in the examination, the
23 quality of the examination itself, but there does need
24 to be a reward system in place that incentivizes the
25 quality as well as quantity and allows for a tradeoff

1 between those and the examination level that's hard to
2 do, but it's certainly worth continuing to work on.

3 Applicants are incentivized by fees, and I
4 think by thinking carefully about those incentives, we
5 can get to a place where we are incentivizing A-plus
6 patents instead of pass/fail kind of patents. Thank
7 you.

8 MR. DUBIANSKY: Thank you.

9 JUDGE BOALICK: So, as Commissioner
10 Hirshfeld mentioned, we are seeking balance in the
11 system to achieve strong, reliable, predictable patent
12 rights. As I mentioned in my opening remarks, the
13 PTAB proceedings in particular were meant to be
14 iterated. It was always contemplated that there would
15 be iterations in order to achieve this balance. We've
16 undertaken many such iterations. We're going to look
17 forward to the input of the public and look forward to
18 future iterations to achieve that balance. Thank you.

19 MR. REILLY: In speaking about the claim
20 construction issues, I suggested Teva and Nautilus
21 didn't have much impact on questions of patent clarity
22 and patent quality. And I did want to flag one issue
23 that I do think is worth addressing that would have an
24 impact on -- one claim construction issue that would
25 have an impact on patent clarity and quality.

1 And that's a persistent split within the
2 Federal Circuit as to the method of claim
3 construction, whether to -- essentially the role of
4 the specification, whether you start with some sort of
5 abstract ordinary meaning in the field and then only
6 look to the intrinsic evidence, the patent and
7 prosecution history for express disclaimer or
8 disavowal of -- or to clear definition, or whether you
9 start with the specification and develop a contextual
10 understanding from the document with limited reliance
11 on extrinsic evidence.

12 And Professors Wagner and Petherbridge
13 showed empirically before Phillips that this drove
14 most disputes on claim construction in the patent
15 system and importantly re-created that study several
16 years post-Phillips to show that Phillips didn't
17 address it. In fact, most disagreements in the
18 Federal Circuit and most disagreements between the
19 Federal Circuit and the district courts relate to that
20 -- to which of those two approaches to claim
21 construction to take.

22 MR. VISHNUBHAKAT: So, I'll close simply by
23 pointing to the sort of -- recalling the moment of
24 institutional maturity that I spoke about at the
25 beginning of my remarks. I think the way forward and

1 the way in which this iteration that Chief Judge
2 Boalick spoke about should proceed is something that
3 the Patent Office has already been doing I think an
4 excellent job of, and sort of two ways in which I hope
5 that they continue doing that is to continue to
6 publish data for use by empirical scholars and
7 policymakers to engage in, you know, exactly the kind
8 of rigorous examination that we would like the patent
9 system to use.

10 And then the other is bringing in experts
11 into the agency, which has been going on now for the
12 better part of this last decade, through programs like
13 the Edison Scholars, the chief economist visiting
14 speaker series. I think these are extraordinarily
15 helpful uses of human capital that the Patent Office
16 has taken, I think, very good advantage of. And these
17 are the ways in which the agency will stay connected
18 to a very rich ecosystem of expertise and opinion.
19 Thank you.

20 MS. WASSERMAN: Yeah, and I want to echo a
21 little bit of that. I think that when we move forward
22 with patent quality and we're looking to make changes
23 in order to improve it to the extent possible, it's
24 fantastic we can do so using empirical guidance in
25 those determinations. And I think both Professor

1 Marco's comment about experimenting would be a
2 fantastic way to get more information on that, and
3 then also, you know, commend the Patent and Trademark
4 Office who has -- is just released huge amounts of
5 data that I think has really resulted in a large and
6 growing number of scholars that are doing empirical
7 work in this area.

8 MR. DUBIANSKY: Great. Thank you. And I
9 appreciate our panelists keeping their remarks brief.
10 That actually allows us perhaps two minutes to field
11 one of the many wonderful questions we received from
12 the audience. And this is actually directed to
13 Commissioner Hirshfeld.

14 Could you speak to the use of artificial
15 intelligence and other resources during examination,
16 both on their impact and also on the time that it may
17 save examiners while they're conducting examination?

18 MR. HIRSHFELD: Sure. So right now I don't
19 think there is a significant use in practice of
20 artificial intelligence for examiners. That being
21 said, we have examiners and others working on
22 artificial intelligence tools to help us potentially
23 move forward. I actually saw a tool that was written
24 by an examiner on her own time to make her life easier
25 where she could highlight text. It would go to

1 databases and take her search areas into consideration
2 and rank results for her and give them back.

3 I've seen another tool that takes search
4 data that examiners and any particular art unit work
5 on and evaluates that data so that any subsequent
6 examiner can put in potential search terms and get
7 synonyms of those terms based on the particular
8 technology they work in. And then, of course, they
9 can rate the results of that so that it's learning for
10 future examiners to improve from.

11 These are all tools that are being discussed
12 and not in use yet, and they're being worked on. I
13 think the sky is absolutely the limit to this. I
14 mentioned our request for comments that came out in
15 September. That is -- we are hoping to get additional
16 feedback that we can -- and potentially more
17 information that we can use to further enhance and
18 accelerate our efforts to incorporate AI into the
19 examiner's search.

20 I personally feel it's like the -- just the
21 perfectly ripe place for artificial intelligence,
22 given that you have, you know, thousands and thousands
23 -- over 8,000 people -- doing searches. Now, they're
24 not all doing the same in the same technology, but
25 doing similar searches. You can learn having machine

1 learning best practices and looking at potentially
2 years of data to be able to figure out how to move
3 forward.

4 The second part of the question was about
5 time. I'm actually really happy you asked about
6 time. I don't necessarily foresee the artificial
7 intelligence taking time away from an examiner. You
8 know, Professor Wasserman touched on this earlier
9 about the constraints of examiner time. I also agree
10 that there are concerns about examiner time, so any
11 efficiencies we can gain, I think, are important.
12 It's not necessarily meaning we're going to take away
13 time and really in my opinion is likely not to take
14 away time from an examiner. Efficiencies can be put
15 back into the system is what I would think.

16 On the note of time, we are evaluating
17 examiner time, and that is something I think you will
18 see in the coming months. I mean, it's a system that
19 we're under, is ripe for change, and we are looking at
20 that now. And so that is likely to -- of course, all
21 the tools that we have now and in the future will play
22 into the amount of time examiners have.

23 MR. DUBIANSKY: Great. Well, I think on the
24 subject of time, it appears as if our hour is up. I
25 would hope that you could all join me in thanking our

1 panelists and my colleague, Elizabeth Gillen. I think
2 it's been a very productive conversation and really
3 appreciate your lending your expertise to our
4 hearings. Thank you.

5 (Applause.)

6 MR. DUBIANSKY: We are now going to take a
7 break, and we'll resume at 11:00.

8 (End of Panel 1.)

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1 PANEL 2: EMERGING TRENDS IN PATENT LITIGATION

2 MR. DUBIANSKY: Well, we are going to go
3 ahead and get started with our next session, which
4 will be taking place until lunch today. So our next
5 session is on emerging trends in patent litigation.
6 And building on themes discussed earlier this morning,
7 we are now going to discuss and receive testimony from
8 experts on recent trends and developments that relate
9 to patent litigation practice or that have an
10 influence on patent litigation practice.

11 Again, the passage of the America Invents
12 Act in 2011 had introduced measures such as change in
13 joinder roles. In addition, there have been
14 subsequent decisions from the Supreme Court such as
15 the TC Heartland decision involving venue and many
16 other developments that we will discuss today.

17 So, our panel today will consist of two
18 presentations, one from Shawn Miller from Stanford,
19 who along with two of his colleagues will present data
20 from the Stanford MP litigation database, and then a
21 second presentation from Professor Colleen Chien of
22 Santa Clara, and then we'll move into questions from
23 the panel and also again will invite the audience to
24 submit questions written on cards.

25 So, with that, I'd like to go ahead and

1 introduce the panel this morning. First, we have
2 Shawn Miller, who is an IP research fellow at Stanford
3 Law School, where he is managing the creation of the
4 Stanford MPE Litigation Database. Colleen Chien, who
5 is Professor at Santa Clara University School of Law
6 and a fellow of the Stanford Computational Policy Lab.
7 And she also served in the Obama White House as Senior
8 Adviser for Intellectual Property and Innovation.

9 Next is John Golden who is the Loomer Family
10 Professor in Law at the University of Texas at Austin
11 School of Law. Then David Schwartz, who is the
12 Stanford Clinton Sr. and Zylpha Kilbride Clinton
13 Research Professor of Law at Northwestern University
14 Pritzker School of Law, where he teaches patent law
15 and intellectual property. And then to his left is
16 Professor Neel Sukhatme, who is an Associate Professor
17 of Law at Georgetown University Law Center.

18 So, we're going to begin with two
19 presentations. And the first will be from Shawn
20 Miller and his students, Rebecca Weires and Joshua
21 Rosefelt. So if you'd please take the lectern. Thank
22 you.

23 MR. MILLER: Thanks, John, so much for
24 having us be part of these hearings. So, I'm going to
25 introduce a little more information about my two star

1 research assistants that I'm bringing with me today.
2 Josh Rosefelt and Rebecca Weires, both are future --
3 not too far in the future patent attorneys, who
4 summered at Fish & Richardson's Silicon Valley office
5 last summer. And Rebecca is actually concurrently
6 working on her master's in biomedical engineering, and
7 Josh was a patent examiner for two years. So, they
8 are -- I'm very lucky to have this caliber of research
9 assistants at Stanford.

10 And for the last two years, they've been
11 helping me build this Stanford MPE research data set.
12 And what that is is it's a five-year effort started by
13 Mark Lemley and myself to categorize patent plaintiffs
14 in every lawsuit going back to 2000 as either
15 practicing entities or as one of 11 types of
16 nonpracticing entities.

17 So the big reason that we started this
18 project is that we're convinced that -- how patents
19 are used in the system and how they're litigated
20 depends a lot on the type of patent owner and on the
21 business model. And so then if we're going to look
22 and try to figure out how different legal changes have
23 impacted the patent system, we believe that it's going
24 to depend a lot on who the patent owners are.

25 And so, for our presentation today, Becca,

1 Josh, and myself, we're using the data from the
2 Stanford MPE litigation data set, as well as
3 additional data from Lex Machina, and also we were
4 able to get some PTAB data from Unified Patents. And
5 we're going to give a brief descriptive survey of
6 changes in litigation around recent patent reform.

7 Becca.

8 MS. WEIRES: Hi. So as Shawn alluded to,
9 with our data set, we're able to look -- separate out
10 trends in litigation activity of practicing entities
11 and patent assertion entities, PAEs, and see how
12 they've responded differently to reforms that have
13 happened over the past eight years. So I'll start by
14 reviewing patent lawsuit filings since 2000 to just
15 give an overview of what's going on and with a
16 particular eye toward the AIA joinder rule. Josh will
17 present on the relationship between PTAB filings and
18 litigation; and Shawn will share how choice of venue
19 and total lawsuit filings have changed in the wake of
20 the TC Heartland decision.

21 So first, we'll look at the number of patent
22 lawsuits filed. We'll break that down by PAEs and
23 practicing entities to get some insight into whether
24 reforms were actually effectively targeting PAEs. So
25 here we have total lawsuit filings from 2008 to our

1 2018 projections from a 20 percent random sample of
2 our data set. Here, we note the stability of
3 practicing entity litigation -- that's shown in
4 blue -- and relative to the instability and
5 variability in PAE litigation. And so we see an
6 uptick in PAE litigation before the AIA, and that
7 also increased following the AIA joinder rule in
8 2011, to peak in 2013 to 2015 and a decline since
9 then.

10 And so narrowing in on 2011 and 2012, we see
11 an increase in the number of lawsuits filed, and
12 that's pretty consistent with our expectations about
13 the AIA joinder rule. Of course, we can't totally
14 isolate those effects because of all the changes that
15 happened around the same time, but we would expect
16 that the joinder rule, because it essentially split
17 these large multidefendant suits into multiple
18 lawsuits, we'd expect an increase in the total number
19 of lawsuits, and we'd expect a bigger effect for PAEs
20 because they were the ones that were bringing these
21 multidefendant lawsuits in the first place.

22 So that previous graph presents sort of a
23 skewed view of the overall patent litigation activity
24 because the joinder rule itself affected the size of
25 each lawsuit, so here we look at defendant lawsuit

1 pairs, so we looked at a lawsuit that has ten
2 defendants here is plotted as ten separate disputes.
3 And this we get a good picture of the effect of the
4 joinder rule here. We see, again, an increase in PAE
5 litigation activity from 2007 to 2011, a major upswing
6 there, but in contrast to the last, we don't see
7 continued increases following the AIA and the
8 subsequent reforms.

9 And then, of course, things like
10 macroeconomic trends are going to affect both PAE and
11 practicing entity litigation. So to get a better idea
12 of the effect of reforms that target PAEs, we look at
13 the share of total lawsuits brought by PAEs. And here
14 again, we see a general upward trend from 2007 to
15 2011. We see that more recently PAE litigation
16 accounts for pretty much as much of litigation
17 activity as practicing entity litigation, but that
18 that upward trend has really leveled off since the
19 AIA.

20 So, overall, we've seen since the mid-2000s
21 to 2011 an increase in PAE activity. That's leveled
22 off in light of the joinder rule change and subsequent
23 reforms. But we see that through all of those reforms
24 practicing entity litigation has been fairly stable.
25 So I'll pass this off to Josh to talk about the PTAB.

1 MR. ROSEFELT: Thank you, Becca. So, as she
2 just stated, I'm going to talk briefly about the
3 impact that PTAB has had on patent litigation. We'll
4 primarily be looking at whether the availability of
5 post-grant proceedings had an effect on the overall
6 number of patent suits, that is, whether it decreased
7 the number, and also whether the availability of post-
8 grant proceedings disproportionately affected PAEs and
9 pharmaceutical patent owners. We would expect that
10 the availability of post-grant proceeding would reduce
11 the amount of PAE litigation because it is a cost-
12 effective tool to help eliminate low-quality patents.

13 So, here, this graph shows the total number
14 of lawsuits, the total number of PAE suits, the total
15 number of PTAB petitions, and the total number of
16 petitions filed against PAEs since the formation of
17 PTAB in 2012. First focusing on the period between
18 when PTAB was formed and when the Alice decision came
19 out, focusing on the light-colored lines, that light
20 blue line that represents the number of PAE lawsuits
21 remained relatively flat as the light orange line,
22 which represents the number of PAE PTAB petitions,
23 steadily increased. Interestingly, however, post-
24 Alice, the number of PTAB petitions filed against PAEs
25 stopped increasing while the number of PAE suits

1 appeared to decrease.

2 Next, we show the percentage of suits filed
3 where a patent has been the subject of a PTAB
4 petition. That is either an IPR or a CBM. And as
5 this graph shows, between 30 and 40 percent of recent
6 lawsuits involve a PTAB petition, indicating the
7 important role that PTAB now plays in dispute
8 resolution.

9 And here we break down the lawsuits with
10 PTAB challenge patents by industry. Over the entire
11 period, we see that 74 percent of the lawsuits with
12 PTAB-challenge patents are from the high-tech
13 industry. Think of this as computer science,
14 electrical engineering, stuff that comes out of the
15 Silicon Valley. Twelve percent are from medical
16 technology, and 14 percent are from other areas of
17 technology.

18 And although it's not surprising to see a
19 high number of PTAB-challenge patents from the high-
20 tech sector, as this graph shows, it's also clear that
21 medical technology is also being challenged. And as
22 this next graph indicates, interestingly, we see that
23 the percentage of ANDA involved suits and non-ANDA
24 involved suits with PTAB petition occur at similar
25 rates.

1 Finally, we had time for a cursory look at
2 the impact of PTAB petitions on litigation outcomes.
3 Focusing first on the duration and settlement boxes,
4 we see that lawsuits with PTAB-challenge patents last
5 longer and settle less frequently, regardless of
6 whether they're ANDA or non-ANDA patents.

7 Regarding the lower settlement rates, we
8 think that this may be capturing the fact that patents
9 that are both subject to the litigation and PTAB
10 petitions are potentially of either higher value or
11 have more validity issues. Additionally, we're going
12 to refrain from interpreting the summary judgment in
13 the trial win rates outcomes since there are various
14 interpretations based on selection effects. More
15 research is needed to determine how PTAB has impacted
16 litigation success. However, we do want to note that
17 the trial win rates are pretty similar, both before
18 and after PTAB was formed.

19 So in sum, PTAB post-grant review
20 proceedings -- I'm sorry, post-grant proceedings may
21 have dampened the number of PAE suits. They appear to
22 have been used against ANDA patents and non-ANDA
23 patents in similar rates. And they also appear to
24 increase the duration of suits involving both ANDA and
25 non-ANDA patents.

1 Now, I'm going to hand it off to Shawn, who
2 will discuss the impact of venue on impact litigation.

3 MR. MILLER: Thanks. Thanks, Josh and
4 Becca. So, the impact of venue in May 2017, we had
5 this big Supreme Court decision TC Heartland vs. Kraft
6 Foods, and we're going to take sort of a surface-level
7 look at the impact of that decision on changes and
8 where patent cases are filed and also whether or not
9 we think there's indication that there is a large
10 increase or decrease in the number of lawsuits because
11 of the decision, and also again, using our MPE data
12 set sort of compare the impact on PAEs against
13 practicing entities.

14 And here we look -- we've already seen this
15 chart showing the relatively stable filings for
16 practicing entity lawsuits versus highly variable
17 changes in PAE filings with what I like to -- I've
18 affectionately started to think of as the Alice crater
19 centered around 2014. Here we have TC Heartland
20 pointed out, though. And one thing that I think is
21 interesting is, so we had all these changes between
22 2011 and 2015, and the last couple of years, it looks
23 like there's actually been an uptick in practicing
24 entity litigation, and also that PAE litigation has
25 started to stabilize a bit.

1 And so perhaps there hasn't been a big
2 change in the number of lawsuits filed due to TC
3 Heartland. However, there's clearly a big change in
4 where suits are filed. So we see here what I'm
5 looking at is the before and after, so nationally and
6 then for the busiest patent districts, how many cases
7 were filed the calendar year before TC Heartland and
8 the calendar year after. And we see nearly a 70
9 percent decline in filings in the Eastern District of
10 Texas. And then in green-shaded, big declines in
11 several of the busy districts that tend to be the ones
12 where lots of companies are located, of course, or in
13 the case of Delaware, incorporated. And we see that
14 Delaware has been -- it appears to be the big
15 beneficiary of TC Heartland with year-over-year gain
16 of about a third of the Eastern District's loss.

17 And so one of the things -- so, again, this
18 idea, and I jumped a slide too quickly, but what we
19 saw in the previous slide is that the Eastern District
20 of Texas lost 1,100 cases or had 1,100 fewer cases the
21 year after TC Heartland as compared to the year
22 before. Nationally, we had 500 fewer cases the year
23 after than the year before. So, this might beg the
24 question whether or not we think there are lots of
25 patent claims that would have filed in the Eastern

1 District of Texas in the absence of TC Heartland but
2 then are not filing at all because that's no longer an
3 available option with more restrictive venue.

4 And here, I'm just pointing out, going back
5 four years before TC Heartland, it looks like the year
6 before, the year before TC Heartland, Eastern District
7 of Texas had lost about 500, had about 500 fewer cases
8 than the prior year. So it's possible that the --
9 that a big chunk of the loss in the Eastern District
10 of Texas that we observed the year after TC Heartland
11 is due to these other changes like Alice and the
12 availability of PTAB.

13 So now looking at some of the busiest
14 districts, breaking down the changes before and after
15 by practicing entities and nonpracticing entries,
16 first of all, at the top, looking at the whole
17 country, and I'd ask you to focus on the totals in
18 parentheses, that practicing entity litigation has
19 been pretty stable throughout the country, whereas PAE
20 litigation, we saw there's about 25 percent decrease
21 in litigation the year after TC Heartland.

22 Eastern District of Texas, sort of the
23 reverse, not that there was a lot of practicing entity
24 litigation going on in there in the first place, but
25 about 70 percent less PAE litigation the year after.

1 Delaware and Northern District of California saw about
2 -- about, I think, three -- an increase in about three
3 times as much PAE litigation the year after with, of
4 course, Delaware starting from a larger basis.

5 And so this is another part of my current
6 research on venue, looking at the impact of cost and
7 convenience. And one thing I think I'm seeing here is
8 potentially a tendency for some plaintiffs' attorneys
9 that are in PAE-heavy districts, including the
10 Southern District of Florida and the Eastern District
11 of Texas, shifting towards neighboring districts post
12 TC Heartland.

13 And so, finally, what we're seeing so far is
14 that we've had a dramatic decrease in filings in the
15 Eastern District of Texas, big changes across the
16 country in where patent cases are filed. However --
17 with the biggest winner being Delaware, however, it's
18 quite possible that TC Heartland has not had that big
19 of an impact on total filings.

20 Thank you so much.

21 MR. DUBIANSKY: Thank you. And if you'd
22 join us in thanking both Shawn and also students
23 Joshua and Rebecca.

24 (Applause.)

25 MR. DUBIANSKY: Now we'll hear from

1 Professor Chien.

2 MS. CHIEN: Thank you. It's an honor to be
3 here today, and I have to say, I remember early in my
4 career attending hearings at U.C. Berkeley School at
5 Haas School in the audience. It could have been the
6 Pitofsky hearings actually because I went to school
7 back that long ago in 2002. I remember thinking when
8 I was in the audience what they're doing up there is
9 really cool. I'd like to do that someday. So I'm
10 just warning you, if you're in the audience and you
11 feel the same way, you'll probably be here on the
12 podium in a much shorter time than it took me, but I
13 hope that people enjoy the presentation today.

14 So, this is a presentation that I worked on
15 with my students, Nicholas Howkowski, Marvin Ricotto,
16 and Pria Voss (phonetic). And we decided to sort of
17 complement the work of the Stanford group and look a
18 little further into not only the filings but what was
19 actually being filed, so the complaints themselves and
20 applications, and really get to this overall question
21 of policymakers are not making changes just to sort of
22 shift around where cases are being filed, but they're
23 trying to increase the quality of the patent system
24 and help it serve the constitutional purpose more
25 fully.

1 So we want to really look at is quality
2 improving even if quantity is going down? So just
3 this is a picture of the team, just so you know who
4 are here. And most of these folks are in an
5 artificial intelligence class that I teach. We did
6 some work with AI, which didn't make it into the
7 presentation, but this is just to say that this is an
8 ongoing project and we're excited that we can just be
9 part of this conversation.

10 So, a number of these folks are also
11 machine-learning kind of data science people that are
12 not in the class, but it was a fun opportunity, and
13 for those of you who are professors to do sort of
14 interdisciplinary work together, these kinds of
15 opportunities are very welcome. And a number of these
16 folks have deep experience in prosecution and doing
17 work.

18 We also got a lot of help from open data
19 from the courts and the PTO, but that was supplemented
20 by sources. So there was already reference to Lex
21 Machina and Unified Patents. We also were able to
22 work with Harrity, LLP for access to a tool for
23 analyzing patent traits; TurboPatents and AskAlice.
24 TurboPatents actually is created by a Santa Clara alum
25 as well. They're AI-based systems. We didn't have

1 time to integrate those results, but we'll seek to
2 release those later.

3 So, again, my focus since I was looking
4 particularly -- our focus since we were looking
5 particularly at applications, patent applications
6 submitted to the Patent Office as well as complaints,
7 we were less, I think, focused on things like joinder
8 or TC Heartland. We were looking at really what's
9 getting impact, what's getting filed, the bread and
10 butter of what's being put together by litigators, by
11 prosecutors all over the country as they're writing
12 now their documents and thinking about the changes in
13 the law.

14 So most of these changes are clustered in
15 the 2014 to 2016 period. So even IPR, even though it
16 was introduced earlier, it didn't really reach steady
17 state until 2014. We had the Octane Fitness fee-
18 shifting cases, cases in 2014. Alice was decided in
19 2014. We had Teva, Williamson, and also the Form 18
20 change happen in 2015. So we thought, well, we can
21 kind of look at this period of time and try to
22 concentrate on what happened before and after it.

23 And as was I think sort of maybe the
24 methodology that Shawn and his team were working sort
25 of on as well, we were a little more explicit here and

1 wanted to talk about using a differences-in-
2 differences approach to looking at whether or not the
3 policy changes did bring about causally changes in the
4 environment. Now, that analysis is always very
5 challenging and it's hard to do it. So we're going to
6 just show you our results.

7 But the idea is, if you have a child who's
8 sick and you give them some cough medicine and they
9 get better, you might say, well, yeah, well, the cough
10 medicine made them better. But you can't really be
11 sure unless you actually give their twin who also has
12 the same illness and is in other ways completely
13 similar to that kid that had the treatment, and you
14 also don't treat that kid and you see how they do
15 themselves.

16 If they both get better, then it wasn't
17 really the cough syrup that made that first child get
18 better. It's just something else. Maybe they were on
19 their way up, the weather got better, et cetera. So
20 we want to look for control groups that don't have a
21 treatment or that were not targeted by the policy
22 intervention and just see how they're doing in
23 comparison. And, again, Shawn's team already referred
24 to that, and we have very similar priors in terms of
25 what ways to control.

1 So we do look at these periods pre and post,
2 before 2014 and then after 2016. And we try to use
3 our control by thinking about, well, what were the
4 reforms about. They were really about trying to
5 target abusive litigation, so litigation that was sort
6 of based on the economies of scale and the cost of
7 defense by MPs based on software patents in
8 particular.

9 So we looked and tried to then say, well, if
10 those are the target of some of the reforms, how do we
11 then try to develop controls. So we control by
12 technology looking at peer software versus a random
13 sample of patents that weren't peer software. And
14 chemistry patents were the most stable in there. We
15 also controlled by plaintiff. And here we mostly
16 relied on Unified Patents codings, but those only
17 start in 2015.

18 So we developed another kind of coding,
19 which is high-impact patent, which is a patent that's
20 been asserted more than ten times, and that's just a
21 small cluster of patents, kind of in terms of
22 proportion of overall patents, but they correlate
23 highly with PAEs, and you can think about the
24 economics as being what's important anyway, even if
25 there is a entity that may be practicing but then

1 asserting and asserting, asserting one patent.
2 They're more likely to tap into the cost of defense
3 and the economies that come from economies of scale.

4 So we looked at two types of inputs or I
5 guess products in our patent system -- complaints, as
6 I mentioned before. And here we wanted to look for
7 quality primarily by looking at are they more
8 detailed? Are they conveying more information so that
9 the parties can get to a meeting of the minds more
10 quickly? And we had certainly in mind Form 18 change,
11 and so we looked for the presence of claim charts and
12 we also looked for specific product details like
13 screenshots and accused product descriptions.

14 And the first one, we could look at the
15 entire set of complaints, all of the complaints filed.
16 For the second one, we had to do hand-coding, so we
17 had a smaller sample. For patent applications, we
18 then also wanted to see are there more details there?
19 Is there more technical information? Is there more
20 narrowness in what's being applied for post-Alice and
21 post-Williamson, et cetera.

22 So we looked the total words in an
23 application. You know, there could be a lot of
24 boilerplate in that, though, so we wanted to also look
25 at unique words, and so we looked at unique words in

1 claim 1. Again, not perfect measures. We used a lot
2 machine-based techniques here, so it did allow us to
3 get a large volume. Hand coding might result in more
4 fine-grained analysis.

5 So let's just first go to this kind of first
6 assertion about a flight from quantity, and again,
7 Shawn's team nicely cued up this -- and has already
8 reported findings on this already. So I want to just
9 kind of show a very high level, though, if we take
10 away sort of this idea of patent assertion and MPE, if
11 we just look at, again, the economics of who is a
12 high-impact patent asserter, who's serving a patent
13 that's being litigated many times, we do see that
14 there was a rise and then a fall among those patentees
15 in the red as compared to the non-high-impact patent
16 on the bottom. So, those have been down since their
17 peak in about 2012 or so.

18 One thing that wasn't addressed by Shawn's
19 presentation, he focused on PAEs, is what about non-
20 PAE NPEs? What about individuals? What about small
21 businesses who are not practicing the patent but are
22 asserting it? How are they doing? I thought it was
23 really important to look at their impact as well
24 because I don't think that the reforms were as
25 targeted towards individuals or small entities or

1 small businesses but really focused on the PAES.

2 So here again because the data is from
3 Unified Patents, it doesn't show a really good
4 pre/post. I only have it from 2015 on. But what I
5 think is interesting is to contrast in the red the PAE
6 share which has declined and the orange kind of NPE
7 non PAE share. So they both kind of convert -- they
8 were both at a similar point in 2015, but they take a
9 similar trajectory downwards, which suggests that even
10 if you're a non PAE NPE, you have also been affected
11 in a way that's different than operating companies.

12 And, again, this is data that I think we can
13 probably look at Shawn's data to kind of confirm
14 whether or not he sees the same trends, since he has
15 all the granular breakouts, but I think it's an
16 important thing to consider as well.

17 So focusing, though, on the kind of newer
18 findings here about the flight to quality, again we
19 looked to complaints first. And we tried to look at
20 their length. Again this was a hand-code. I think we
21 can actually do this with machine work, but so it's
22 about 526. We don't have a great huge set here, but
23 we did see that there was the change in the law in
24 2015, the end of the year that Form 18 was abolished,
25 and you did see at that point in coincidence an

1 increase in the number of pages in complaints.

2 We found this to be the case across all
3 groups we looked at, but, again, because our end was
4 only 520 or so, you know, it was hard for us to do a
5 lot of meaningful, fine-grained analyses.

6 Now, we were able to do the claim chart
7 analysis across all complaints. And, interestingly,
8 we saw that claim charts also became much more common.
9 And that's partly because we had such a low baseline
10 to start with, almost -- like 1 percent or less than
11 that was being filed in the 2010 to 2015 period or
12 2014. And then you start to see an increase, and it's
13 dramatic, right? In 2018, if we look at the
14 complaints filed this year, we see a rate that's
15 closer to 15 percent. That means that if you are on
16 the receiving end of a lawsuit or you are initiating a
17 lawsuit, you're going to have to do -- you have much
18 more information at the outset of the suit than you're
19 used to.

20 So I can't tell you how many people I've
21 talked to who said, you know, I got this complaint,
22 and I really have no idea what exactly they're
23 accusing me of and which products are at risk. And
24 that makes it hard for me as a business because I
25 don't know what I can manage, what I might be able to

1 kind of change the product or negotiate on because I
2 don't know how much my revenue is exposed by this.

3 So when you have a litigation and a
4 complaint that's filed that's vague and very high
5 level, that can put an entire company at jeopardy
6 unnecessarily because it really implicates, you know,
7 potentially the whole amount of product and revenue
8 stream. So when you have this detail, which we're now
9 seeing in these claim charts, where it shows exactly
10 the language of the claim and exactly which elements
11 of a product are being implicated, that provides a lot
12 more certainty to the market about what's actually at
13 stake. So I think this is a good development.

14 We also saw that product details were much
15 more common. So we looked here particularly for
16 screen shots, for claim charts that were embedded
17 inside the complaint. Also for actual product
18 descriptions and links to an actual product, so you
19 can see here on the right, for example, this was an AR
20 technology, and they actually put in Pokemon Go, and,
21 you know, showed exactly what they were talking about
22 and kind of mapped those two things together.

23 So, again, going back to the claim chart,
24 the greater increase in claim charts, I wanted to also
25 look briefly at whether there were effects by

1 district. And we saw that there were, you know,
2 again, if you look at all and non-EDTex -- or it's
3 probably just most important just to look at non-EDTex
4 and EDTex. In 2015, you see this increase, but then
5 you see a decrease in the Eastern District of Texas
6 with respect to claim charts.

7 Now that could be technology-related or
8 something else. We do need to try to do more work
9 here. Again, this is a complete set, so we can
10 probably do some additional controls here. But it is
11 interesting and notable that EDTex kind of takes a
12 different direction with respect to claim chart detail
13 and whether that is needed or at least the
14 complainants perceive that they need to provide that
15 up front.

16 The same is true, and here we see, sorry, a
17 variation with respect to the PAEs and also the non-
18 PAE NPEs. So, again, looking at -- and, again, this
19 is a truncated data set, only 2015 on -- but if you
20 look in particular at NPEs which are in blue and you
21 look at PAEs which are in orange, you see that PAEs --
22 they're both filing less than OpCos in terms of claim
23 charts. They're not filing as many. And, again, this
24 could be a technology -- there could be a technology
25 explanation, but you do see that non PAE NPEs are --

1 you know, sort of have continued to have a higher rate
2 than the PAEs. But, you know, again, there's not a
3 lot of -- there still needs to be some control work,
4 so this is more suggestive, I think, than conclusive
5 of anything.

6 Briefly, let's just talk about patent
7 applications because we are considering Alice and some
8 of the other decisions that took place. Here, we
9 could see -- again, we were able to look at all the
10 applications filed in these particular art units,
11 which are defined in the appendix. And, you know,
12 don't kind of -- I think the scale here goes from 60
13 to 90. So if it were actually spread, you would see
14 that there's not a huge change. But you can see that,
15 again kind of the pre and post-idea that there has
16 been a change in pure software patents, that the
17 unique words are being added to a larger degree than
18 they were for pure software, and this happened around
19 the Alice decision. It's about a 14 percent
20 difference in terms of the initial claims that are
21 submitted.

22 Specifications are also becoming longer, and
23 here we looked at software versus non-pure software.
24 So red, pure software; blue is non-pure software. And
25 we looked at chemistry again as the control, and we

1 saw a difference of about a thousand words. So, again
2 here is where you could see that the software
3 specifications -- software prosecutors are working
4 harder, they're writing longer specifications, they're
5 putting in more unique concepts and ideas, using
6 longer ideas. And so, again, I think I would argue
7 that that is a good thing for the patent system, to
8 have more detail in patents. If the problem was low-
9 quality patents, flimsy patents, that you couldn't
10 tell what they actually covered, now we are seeing
11 more quality there.

12 So in conclusion, what we're seeing, then,
13 overall in terms of a flight from quantity that there
14 are fewer scale assertions, right, of the ten-plus
15 variety. There are also fewer PAE as well as non-NPE
16 assertions. That's the suggestion from the data. We
17 also are seeing more detail in complaints,
18 particularly claim charts, and also more unique words
19 in claims and in the specs. Thank you.

20 MR. DUBIANSKY: Thank you for that
21 presentation. I think now we'll move on and invite
22 our other panelists to give brief opening remarks of
23 about five or six minutes. I invite them to both
24 react to the presentations we've seen earlier this
25 hour, as well as to offer their views in particular on

1 if there's anything, any changes in the patent
2 landscape, particularly beginning with the AIA and
3 subsequent Supreme Court decisions, that have
4 influenced litigation today.

5 So with that, John, if you would begin.
6 Thank you.

7 MR. GOLDEN: Okay. So I think as you've
8 seen partly through Colleen and Shawn and Joshua
9 and Rebecca's presentations, there have been a
10 multiplicity of changes that have tended to kind of
11 raise costs of litigation in some ways, lower expected
12 rewards from patent assertion, partly through greater
13 opportunities to challenge patents, say, through PTAB
14 proceedings.

15 And we might expect these changes to have
16 been particularly important for assertions that are or
17 were likely to be recognized as having been relatively
18 ill prepared or relatively low quality. And it's
19 reassuring to see that there's some data indicating
20 that when you make legal changes like this, they can
21 actually have some sort of effect, so it's a sort of
22 good story for policymakers that they're not totally
23 helpless in the face of a litigation system that might
24 have some problems.

25 But, you know, I do think overall, it can be

1 difficult to evaluate where we are and what we've
2 accomplished with regard to the ultimate aims of the
3 patent system, which are looking to promote innovation
4 in the spirit of the title for this hearing, perhaps
5 to sort of promote healthy competitive and diverse
6 environment for technological innovation. And you
7 might even say partly to help support the foundations
8 of a healthy democratic culture.

9 So for that, we probably, and it should be
10 sort of a next step maybe, to try see if we can drill
11 down further to see how these impacts might have
12 differed across different types of actors in the
13 system. To what extent have, say, mid-size or smaller
14 firms had different experiences or similar experiences
15 in comparison to large firms? What had been the
16 impacts on any individual inventors who remain out
17 there or university innovators and their licensing
18 programs?

19 So it's always easy to ask for more, but I
20 do think that might be the next step to see to what
21 extent at least we're supporting kind of a diverse
22 environment and ecosystem for innovation, which I tend
23 to think is the healthiest sort of environment for
24 innovation. And of course, ultimately, you'd like to
25 connect this to the kind of fundamental goals of the

1 patent system of promoting technological progress. So
2 with that I'll turn it over to Dave.

3 MR. SCHWARTZ: So I appreciate the
4 opportunity to provide my views here today on patent
5 litigation. I wanted to make kind of two brief
6 comments about the data and then one more broader
7 institutional comment. First, I want to just second
8 something that Colleen said, like, it's useful. I
9 thought that the presentation that Shawn and Rebecca
10 and Josh did was really interesting and really useful.

11 I think that an enhancement would be to try
12 to separate PAEs into some other more finely granular
13 definitions. And so one thing that, like, I've done
14 in my work is you could separate -- and to stop for a
15 minute, Colleen used, like, NPE and sometimes used --
16 and I think Shawn used PAE. I think sometimes those
17 are a little confusing on what people mean. And so
18 just to be explicit, I would say that you could
19 separate out patents that are enforced by the original
20 owner, which include individual inventors and failed
21 businesses and maybe universities and some other folks
22 on the one hand. And on the other hand, kind of what
23 I call speculators, people are buying patents from
24 others, and I just would be interested in, like, if
25 there's any differences if we did that.

1 The second data point I want to talk about
2 is the limits of the available data about patent
3 litigation. And that's partially due to selection
4 concerns, but I think it's a little deeper than that.
5 So as we all know, most patent lawsuits settle. Most
6 of the settlements are confidential. And so the win
7 rates on the cases that go to trial are important, and
8 they tell us something, but they might not tell us the
9 whole story. And so I've heard anecdotal stories, not
10 data-driven stories, that accused infringers like more
11 recently are less willing to offer meaningful
12 settlement offers out of the belief that the law is
13 very favorable and that they're likely going to win or
14 that the delay in the case is going to be substantial,
15 such that the plaintiff will eventually give up.

16 And it may be that the underlying
17 negotiating position between the parties has changed
18 such that like the filing rates and the win rates and
19 the summary judgment rates don't tell the full story.
20 And there's very little known about these settlement
21 dollars because they're all confidential.

22 Separately, but relatedly, we know very
23 little about pre-litigation activity, demand letters
24 and licensing, outside of litigation. I commend the
25 FTC who did a 6(b) study a few years ago on PAE

1 activity, looking at these kind of confidential -- or
2 at least confidential to the public -- information.
3 And I raise this really just to encourage others to
4 research this, where I understand it's hard to find
5 data, but I just think we should be cautious in
6 extrapolating too much from the available data that we
7 have.

8 So, finally, I want to just note some of the
9 institutional issues that are going on with patent
10 law. And so we've had a large number of changes to
11 the patent laws. I think that John pointed them out,
12 Colleen pointed them out, the Stanford presentation
13 pointed them out. That includes the AIA which brought
14 us IPRs, Supreme Court decisions on Alice, fee-
15 shifting, venue, willful infringement, Federal Circuit
16 decisions on damages, changes in the rules of civil
17 procedure, as well as PTAB changes, including notably
18 that the claim construction standard will be changing
19 in the PTAB.

20 Those changes, for the most part, and John
21 noted this, have made it more difficult and more
22 costly to enforce patents, but that's not why I'm
23 mentioning them. I'm mentioning them to highlight all
24 the different institutional players involved in those
25 changes. So we have Congress, the Supreme Court, the

1 Federal Circuit, the Patent Office. That's a lot of
2 cooks in the kitchen, in a small period of time,
3 adding a lot of different ingredients.

4 The patent system is complex. And, you
5 know, maybe to mix metaphors a little bit, it's more
6 like a boat than a car. And I mean it takes a while
7 for things to turn. And so we have so many changes in
8 such a short amount of time. There's a concern that
9 there's going to be both unexpected and unintended
10 consequences and that we're not at steady state and
11 you need to let things settle.

12 And so as I think about those different
13 actors that are involved in making these changes. The
14 Federal Circuit, you know, has the difficulty of only
15 hearing the cases that the parties bring to it. And
16 really, you know, the parties have very personal
17 reasons for advocating different positions. And it's
18 hard for it to be in like a kind of a policy mindset.

19 Congress is different, right? Congress can
20 take testimony from others. The Supreme Court gets
21 amicus briefs, and the Patent Office has the
22 opportunity to, like, take testimony and hear from
23 both patent owners and others affected by the system.
24 And so I just, you know, want to note all of the
25 changes that have happened and think that we want to

1 get to steady state or, like, think about things
2 carefully as we're thinking about exchanges going
3 forward.

4 MR. DUBIANSKY: Thank you
5 Neel.

6 MR. SUKHATME: Great, thanks. Thanks for
7 inviting me here. So my background is I'm an
8 economist by training and also a patent attorney. And
9 so, you know, as an empiricist, I really want to thank
10 Shawn and Mark Lemley and the students at Stanford for
11 the Stanford MPE data set. It's really very useful.
12 It's something that I've used in my research. And
13 I'll, you know, talk a little bit about that right
14 now, and I think probably later on I'll sort of go
15 into maybe the details.

16 But I've recently written an empirical
17 analysis of the effect of TC Heartland. And, well,
18 first, a few things to note, right? So the question
19 is what's the long-term impact of TC Heartland going
20 to be. And so what we do in the paper is we use
21 something called an event study methodology around the
22 date of TC Heartland to see how investors responded to
23 the change in patent term rules, right -- oh, sorry,
24 the change in venue rules.

25 And so what we find is that folks, firms

1 that are incorporated in Delaware in particular were
2 quite happy about this change. And, again, I'll go
3 into the details of that. But what I want to sort of
4 cover is venue clearly mattered to patent litigants.
5 It seems like the TC Heartland decision is going to
6 have an enduring impact in terms of where suits are
7 filed, right? They were filed largely in the Eastern
8 District of Texas. We see them moving en masse to the
9 District of Delaware, as Shawn pointed out.

10 And I just wanted to sort of highlight and
11 sort of -- you know, what was actually going on there
12 in Texas beforehand was this notion of form-selling
13 right? Texas had sort of -- had these rules in place,
14 discovery rules, rules that made it difficult to
15 transfer cases, made it less likely to grant summary
16 judgment, which encouraged the filings there in the
17 first place.

18 And the reason why Texas was able -- the
19 Eastern District of Texas was able to track these
20 suits in the first place is because plaintiffs had
21 complete choice of where they could file suit. Really
22 what the defendant's preferences were were not really
23 part of the equation at all. And I think a way of
24 thinking about TC Heartland is that it changed the
25 dynamic. Now, where a defendant is incorporated or

1 where it does business is highly relevant in terms of
2 where it can be sued.

3 And so a broader point to take away from TC
4 Heartland, right, and this applies outside, even
5 outside of patent law, is that by giving defendants
6 some choice of -- some choice of -- over where venue
7 occurs, right, essentially allowing both parties to
8 have a say over where lawsuits occur, we can end up
9 with better results. And I say better because, as
10 I'll probably mention later on, my empirical results
11 suggest that firms are quite happy, especially
12 Delaware firms, about this shift to Delaware that's
13 occurring. And to the extent that the interested
14 firms are opposing to those of patent assertion
15 entities, that suggests that TC Heartland will have an
16 enduring impact on patent assertion entities going
17 forward.

18 MR. DUBIANSKY: Great. Well, thank you, and
19 I thank all of our panelists for those statements.
20 Now we're going to move into questions. And, again, I
21 invite the audience as well to submit any questions
22 that you have on the cards being distributed by my
23 colleagues.

24 So with that, I think Elizabeth will ask the
25 first question.

1 MS. GILLEN: So both Shawn and Neel have
2 talked about TC Heartland, and we've seen some data on
3 the number of lawsuits that have been filed after the
4 decision and where. And Neel has another perspective
5 on it, but I'm wondering if the other panelists have
6 any thoughts on how TC Heartland has influenced
7 litigation behavior, perhaps in a more qualitative
8 way.

9 MS. CHIEN: I actually have a question, and
10 this would be more, you know, to ask if there's
11 unreported research or you are -- this is ongoing, but
12 I think in particular I'm really interested in the
13 question of the non PAE NPEs, so thinking about small
14 businesses and individuals, and I'm just wondering if
15 some of these shifts mean that they're not bringing as
16 many suits or they're also moving to Delaware as
17 asserters.

18 So I just didn't know if you had unreported
19 data or looked into those issues, either of you. I
20 think you have the data, but I don't know if you
21 looked at it yet.

22 MR. SUKHATME: So I'm sorry, what particular
23 kinds of suits are you --

24 MR. MILLER: Small entities that aren't
25 PAEs.

1 MS. CHIEN: Yeah, non -- so, you know,
2 thinking about folks who could bring a suit in -- not
3 even in Texas but in New York because that's where
4 they're based, instead of having to go to the
5 defendant's home turf in California, which is a lot
6 more of a burden to them. So if you think of a small
7 business which has a patent that they want to assert,
8 that's a lot harder now potentially to have to go to
9 the defendant's venue.

10 And I'm just wondering if that is reducing
11 the number of suits by these entities. We saw that
12 those were going down on overall, at least as
13 expressed by the Unified Patents data, and I wondered
14 if TC Heartland was part of that story. Again, in the
15 data that I showed, it didn't look like there was a
16 particular steeper decline or anything, but I just
17 didn't know.

18 MR. MILLER: Nothing directly on point. So
19 my TC Heartland project that I'm working on right now
20 is actually not really a TC Heartland project. It's
21 looking at the importance of home court advantage for
22 choice of patent venue, and so ideas of whether or not
23 parties think that there might bias towards local
24 parties, and also, cost of convenience concerns.

25 And one thing that I'm seeing, so I've

1 broken it down again by PAEs like I did here, which
2 combined both those categories of PAEs that Dave
3 talked about, the ones that are started by the
4 inventors of patents and those that acquire patents
5 and then also practicing entities. And the one thing
6 you're seeing is so before TC Heartland, and this
7 might be a surprise, it might not be, but a very large
8 percentage of the cases were filed in the plaintiff's
9 home court where their principal office is. And the
10 big change that I've observed so far is after TC
11 Heartland there's not an increase in filing in the
12 defendant's -- where a defendant's principal offices
13 are, but there is, of course, a decrease in filings in
14 the plaintiff's home court. But so what they're doing
15 is they're moving to neutral sites, right? Primarily
16 Delaware.

17 And I've thought about that. I think that's
18 an important extension is to think about, you know, so
19 my results are suggesting that parties do care about
20 being close to home. And you would expect that
21 smaller entities would probably care more insofar as
22 cost is an issue.

23 MS. CHIEN: I will comment that when Michael
24 Risch and I did our study before TC Heartland to look
25 at the dynamic impact potentially projected, we did

1 not think that small entities would be hurt that much
2 because they weren't necessarily filing
3 opportunistically in Eastern District because that's
4 too far themselves. They were filing closer to home.
5 And so it depends again if they're located mostly
6 closer to Delaware or Northern California, then, you
7 know, it depends a lot on the relative position of
8 them to those locations of interest.

9 MR. MILLER: There could also -- I would
10 just add real quick, there could also be correlations
11 between small entities tending to be from different
12 industries, right, where it's possible that small
13 entities, typically you're seeing some types of
14 practice entities, while -- they tend to sue their
15 neighbors, right? So if you're a machine shop or some
16 sort of -- I'm trying to think like a -- an importer
17 of some good, you're suing another importer of a
18 similar good that also happens to be in LA, right? So
19 maybe then there's not as big of an impact on cost for
20 those smaller entities.

21 MR. SUKHATME: Yeah, I wouldn't expect a
22 huge effect on those entities because the folks who
23 really were taking advantage of the Eastern District
24 of Texas were the patent assertion entities. And also
25 another important thing to keep in mind here is that

1 TC Heartland, you know, the venue statute has got
2 these two prongs, right? So the Supreme Court
3 interpreted where a corporation resides is no longer
4 where it's subject to personal jurisdiction, right?
5 It's not just you committed an act of infringement.
6 What they said -- "resides" means where you're
7 incorporated. However you can still be sued anyplace
8 you commit acts of infringement, and if you have a
9 regular and a -- quote, regular and established place
10 of business, right? So we've seen some litigation
11 since then in the Federal Circuit to try and interpret
12 what that means.

13 But it's important to know that TC Heartland
14 doesn't sort of limit you if you're a Delaware
15 corporation to suit in Delaware, but it certainly
16 makes it impossible essentially for you to be sued
17 everywhere unless you have facilities everywhere. And
18 that's what I was sort of referring to earlier in the
19 sense that now under the current -- the new system,
20 right, both plaintiffs and defendants essentially
21 have control -- some control over where lawsuits can
22 be filed, right? Because defendants, where they
23 decide to actually establish their regular and
24 established place of business and where they're
25 incorporated, those are essentially the choice set

1 from which plaintiffs can pick where they're going to
2 file suit.

3 MR. GOLDEN: I just want to jump in just to
4 sort of reinforce Colleen's question. I guess we're
5 both sort of concerned about this. I mean, I think if
6 partly part of the concern is these sort of gross
7 statistics may not reflect what might be a relatively
8 small percentage of litigation overall that's filed
9 by, say, these small or mid-sized companies but might
10 be very significant to those companies with their
11 business model.

12 And this relates to some work that I did
13 years ago looking at patent infringement injunctions
14 where it turned out if you looked at who's getting
15 these patent infringement injunctions, they're these
16 kind of niche companies with technologies that
17 wouldn't be so prominent or high-tech, or you wouldn't
18 think necessarily were so valuable, like a sort of tub
19 for a veterinarian to use for a dog or something as
20 being -- or there's, you know, a coffin design which
21 I'm not sure that patent should have been issued. But
22 it was very important for this company that apparently
23 sells something like 50 percent of the coffins in the
24 United States, at least at that time.

25 And so I think this is part of our concern,

1 that the concern that Colleen raised and was something
2 that I referred to in my initial remarks is that
3 you might need to look at things more -- in a more
4 granular way, to get at what might be kind of
5 middle-level companies for which patents are
6 disproportionately important.

7 MR. SCHWARTZ: Yeah, and just to reiterate,
8 I mean, I guess I have the same reaction Colleen and
9 John have that it just seems like a fairness issue
10 when it's a small plaintiff suing a large defendant to
11 have to litigate in the defendant's home court. There
12 was also a fairness issue when large plaintiffs were
13 suing small defendants and they were suing them in the
14 plaintiff's home court. That also seemed to be a
15 fairness issue.

16 MR. DUBIANSKY: Great. Well, thank you. I
17 think we'll move on to another subject, which is the
18 PTAB. In our previous panel this morning, we've heard
19 a lot of discussion regarding the implementation of
20 the PTAB. And I would like to ask this panel as well,
21 I guess from a litigation perspective, how has the
22 creation of the new proceedings at the PTAB influenced
23 the litigation practice?

24 Perhaps, Dave, if you could speak to this.

25 MR. SCHWARTZ: Okay, great. So I want to

1 make two points. One has to do with the delays and
2 the kind of effects on small business owners that are
3 patent owners; and then the second has to do with this
4 kind of oncoming post-grant review PGRs. But before I
5 do that, I just want to say that I do think that a
6 fair and balanced post-grant proceeding to effectively
7 remove invalid patents is both appropriate and
8 necessary because patent litigation is very expensive.
9 It's expensive for plaintiffs; it's expensive for
10 defendants. And there are practical limits to the
11 thoroughness that the PTO can conduct its initial
12 examination.

13 But one thing to keep in mind is the delay
14 caused by an IPR. And so the Stanford folks had some
15 data that there is a delay in cases that have a patent
16 IPR, you know, it makes sense because the process
17 takes time. It generally takes about 18 months from
18 petition to decision. And if you had a Federal
19 Circuit appeal, that might take another year.

20 And there was also some data I think Saurabh
21 was talking about on the last panel about stays. And
22 so stays are somewhat common, although not guaranteed,
23 when there is an IPR. Stays and delays in litigation
24 are not neutral, and so the kind of conventional
25 wisdom in civil litigation, it's not a patent

1 litigation issue, is that delays harm the plaintiff,
2 and especially smaller plaintiffs, and benefit larger
3 defendants.

4 And it's especially true, where the
5 plaintiff -- a smaller plaintiff needs either the
6 recoveries for some business reason, or in order to
7 obtain financing through alternative litigation
8 financing or trying to entice an attorney to accept
9 the representation on a contingent fee representation.
10 And so making the litigation substantially slower and
11 riskier, but really slower is enough, it just makes it
12 harder for those smaller patent owners to enforce
13 their rights. And for sure this had an effect and
14 maybe an intended effect on the kind of PAEs that are
15 speculators, but it also has a similar effect on
16 smaller businesses that aren't, you know, speculators
17 but they're actually just small businesses.

18 And so I just would balance this against,
19 you know, the concern that speedier resolutions
20 increase the risk that there's settlements in cases
21 that are actually weak or very -- very questionable on
22 the merits. And so this is all like a very delicate
23 balance.

24 The second point I want to talk about is on
25 post-grant reviews. And so there aren't very many --

1 there haven't been that many post-grant reviews
2 conducted. Those are limited to patents that are
3 filed under the first file provisions of the America
4 Invents Act. But over time, we expect there's going
5 to be more patents that are eligible for post-grant
6 review, and, therefore, there will be most -- there
7 will be more post-grant reviews. And we don't know
8 whether in the future those will substitute for the
9 roles that IPR plays today.

10 We can look at trademark oppositions, which
11 is, actually, I think, relatively well used, although
12 trademarks have kind of different characteristics
13 where it's easier for companies to identify marks that
14 might be potentially problematic in the future. I
15 don't know if the same would hold true for patents.
16 We could look at European patent oppositions, but the
17 truth is we don't know yet how extensive the use of
18 PRGs will be and whether that will reduce the use of
19 IPRs in the future.

20 And so I raise this point merely to say
21 that we have some changes that are already kind of
22 in the works that haven't gone fully into effect, and
23 so we might not be at steady state yet with the
24 system.

25 MR. DUBIANSKY: Thank you. Anybody else

1 care to weigh in?

2 MS. CHIEN: I think from talking to people
3 there's kind of two different opinions about IPR. One
4 is, oh, IPR is awesome, we are able to challenge
5 patents that are weak, and we can get a settlement
6 that's a fraction of what we used to have to pay for a
7 claim that we don't think is very strong. So and
8 that's going to be on the defendant's side.

9 And then I hear something litigators and
10 more people who are with plaintiffs say it hasn't
11 changed really anything because now all that's
12 happening is people are adapting. They're asserting
13 more patents in every litigation because you can't
14 file an IPR in all of them, you're complicating things
15 because even if you're giving an initial decision
16 determination and you're also giving more data in
17 terms of the court's outcome, I'm sorry, the PTAB's
18 outcome, the PTAB is not knocking out the patent which
19 would be a disposition that would be, in theory,
20 earlier potentially than a court.

21 You've just made the parties not actually
22 have more of a meeting of the minds. They're just
23 going to sort of get more entrenched in their own
24 position. The patentee is saying, look, you know, my
25 patent withstood the PTO, let's settle now; and the

1 challenger saying, well, no, I'm just going to, you
2 know, take another gamble at trial, like we're not
3 going to accord that any deference, and, plus, you
4 know, there are other defenses we have.

5 So I've heard -- and what I thought was
6 really interesting about Shawn's data is that he
7 showed that again in this very small selected tip of
8 the iceberg, right, people who have patents that are
9 both worthy of an IPR assertion and a court assertion
10 and I think it was also those who had gotten pretty
11 far along with both of them, I wasn't sure what was
12 represented. It was only filed in those two?

13 MR. MILLER: Only --

14 MS. CHIEN: You were looking at the
15 resolution rates?

16 MR. MILLER: Yeah, so no.

17 MS. CHIEN: Yeah, looking at the time to
18 resolution. But -- and you had to get to a
19 resolution, right?

20 MR. MILLER: So it was comparing ANDA -- so
21 ANDA, well, and it's ones that had a concurrent IPR,
22 ones that did not.

23 MS. CHIEN: Okay.

24 MR. MILLER: And then the third group was
25 actually looking at earlier lawsuits, looking at the

1 time determination for earlier lawsuits before IPRs
2 came online.

3 MS. CHIEN: Okay, and I think it was -- you
4 were cautious, but I wanted to ask you again, like, do
5 you think those two narratives, IPRs just made things
6 more expensive and complicated versus IPRs really
7 allowing us to get to a quick -- a cheaper way of
8 getting to a merits-based resolution? Do you think
9 your data conclusively points to one or the other, or
10 do you think it's just too selective?

11 MR. MILLER: Yeah, no, I don't think it -- I
12 wouldn't want to conclude anything on that right now,
13 no.

14 MS. CHIEN: I think that's an open question,
15 right?

16 MR. MILLER: Yeah.

17 MS. CHIEN: You hear both stories. I mean,
18 I don't think IPR is going away, but these are -- I
19 think that's the important question, of like do we
20 think IPR's a good thing, or has it gotten us, you
21 know, the efficient process that we think we want, or
22 is it really just making things more expensive and
23 complicated?

24 MR. SUKHATME: Yeah, I think the IPR -- I
25 mean, I think overall, you know, it makes sense, it's

1 a good development to remove bad patents. You don't
2 want to do all of this ex ante. You can't expect
3 probably the Patent Office to be able to catch it all,
4 and it makes sense to have this review process after
5 the fact.

6 What strikes me, though, it seems to me kind
7 of inefficient because you're allowing these multiple
8 petitions -- like, what's the point of litigating the
9 validity of the patent so many different times, right?
10 Multiple petitioners can sort of come and challenge
11 the same thing. You can have the same thing going on
12 in federal court. I don't understand exactly what
13 this redundancy buys us.

14 And, you know, that's never -- that's
15 something which I really have never quite understood
16 about the system. I mean, I know why it's there
17 legally, but to me, it seems that that is an easy way
18 in order to improve the IPR process, because the one
19 thing is if you have property rights and you don't
20 know, you know, property rights or pseudo-property
21 rights, whatever you want to think patents are, if you
22 don't know whether they're going to be valid and
23 there's no finality in it, that's hard for businesses
24 to rely on this. You know, how are you going to know
25 whether this patent actually protects your business?

1 And, ironically, it's going to be harder for
2 firms that really actually need that underlying
3 invention, for whom the patent is actually valuable.
4 For the ones who are just sort of, you know, doing an
5 arms race and getting patents for reasons that are
6 more strategic, maybe they don't care. So you're
7 actually hurting the ones that actually need the
8 patent protection the most. And that, to me, seems
9 potentially problematic.

10 MR. GOLDEN: So on IPRs, I think -- I also
11 think that the basic idea makes sense. There are
12 obviously some aspects of the design, particularly, I
13 think, the interaction with ANDA litigation, which
14 Congress probably didn't anticipate quite how it's
15 worked out, that that's going to require some tweaking
16 or adjustment by Congress, hopefully sometime.

17 I do think related to this idea of expense,
18 I do think it's disappointing that the IPRs have ended
19 up being, I think, as expensive as they have been,
20 although that's probably predictable if you think
21 through their substantive nature. But they haven't
22 been a truly extremely low-cost option where spending,
23 you know, typically people are spending, I think,
24 \$100,000 or more just in the early stages, relatively
25 early stages of the IPR process.

1 So it's not a truly cheap alternative to
2 litigation, which can be frustrating for presumably
3 some challengers, also for some patentholders who feel
4 they're being dragged into this proceeding and
5 potentially if they do want to actually enforce their
6 patent rights, then, of course, they're going to have
7 to go back to District Court.

8 And so, you know, it could be something
9 where you do want to consider some other options,
10 perhaps relating to David's remarks, if you had a
11 patentholder who really wanted quick action and was
12 willing to kind of give up some potential forms of
13 remedies as a result, maybe you could have something
14 like a small claims patent court. You'd have to get
15 the defendant to also acquiesce to that as well, but
16 in some cases, maybe a defendant seeing how much
17 they'll save on litigation costs might accept that.

18 Some coauthors and I have another proposal,
19 which is for it to sort of layer on the front end of
20 patent litigation, a kind of quick look administrative
21 review process which could help both patentees as well
22 as defendants by identifying some areas, say, where
23 the patentee is most likely going to win and there
24 doesn't seem much of a case for the defendant. So
25 there might be some alternatives to help add even

1 cheaper front-end or alternative path for patent
2 dispute resolution.

3 MS. CHIEN: I just will mention two ideas
4 that I think are interesting to consider when we look
5 at European opposition, which is more like PGR in
6 terms of the time frame, but, you know, it's been in
7 process, I think, it's trusted and well understood.
8 And I have a forthcoming paper with Christian Helmers
9 and Alfred Spigarelli who used to be at the EPO about
10 how to sort of look at the European experience, both
11 with respect to opposition as well as German
12 nullification proceedings, and what those can teach
13 IPR, just because they've been around longer.

14 And so two ideas that we came up with were,
15 one, allowing patentees to amend their claims is
16 something that is done routinely in opposition and
17 allows the patentee just to keep a little more
18 certainty and control over what happens in the post-
19 grant proceeding. And it's paced well in Europe, and
20 it's done and it's -- you know, the parties seem to be
21 okay with how it proceeds, so that's one thing to
22 consider. The mechanics, I'm sure, are complicated
23 and have to be executed correctly, but that's one
24 thing to consider with respect to IPR.

25 And another is consolidation of the suit, so

1 kind of going back to Neel's point. You know, it's a
2 little different obviously because opposition is a
3 nine-month window, so all the challenges come in at
4 once or they have to come in through that window and
5 then they get taken together. But if there are some
6 incentives for those who might have existing
7 challenges or instead of -- incentivize them to join a
8 current IPR rather than to file their own in a serial
9 manner, those are things to consider as well.

10 MS. GILLEN: So I want to, in the interest
11 of time, switch gears just a bit and go back to
12 Colleen's presentation, which touched a little bit on
13 the recent changes we've seen in complaint length.
14 And I'd be curious to hear if there are other ways
15 that the amendment of rule -- of Form 18 have
16 influenced litigation behavior and whether there are
17 other procedural changes, such as the amendments to
18 discovery rules, that have had an effect.

19 Colleen, do you have any --

20 MS. CHIEN: Oh, yes. So I haven't had -- I
21 haven't been able to look into discovery changes as
22 such. Again, I think the bigger question from a
23 quality perspective is, and that's something we didn't
24 just -- we just ran out of time -- is we were looking
25 at whether or not having the complaint data be more

1 robust in terms of having a claim chart whether that
2 led to a faster merits-based resolution as well. So
3 the parties might have settled faster, or the
4 resolution rate was more -- you know, there was more
5 meeting of the minds, because, again, the kind of
6 dynamic you hear is like they put this vague patent
7 complaint out, I have no idea what it involves, so we
8 have to go through back and forth, and there's a lot
9 of kind of noncommunication that then culminates in a
10 lot of extra expense.

11 But if you have the claim charts up front,
12 it's not clear to me whether it just makes it shorter
13 or it actually makes it more efficient because you
14 have, you know, like ITC, where you get clarity much
15 more quickly, but it's still quite expensive. So I
16 think the overall question for me on the complaint
17 side -- maybe on the discovery side as well -- is,
18 again, does the quality translate into a cheaper
19 merits-based resolution. And to me, that's the right
20 metric.

21 MR. GOLDEN: I'll kind of -- maybe this is
22 getting ahead to what I was partly going to say later
23 in relation to Octane Fitness and attorney fees, but,
24 you know, some of the changes that Colleen is seeing
25 could also reflect the move toward a somewhat more

1 robust, although still exceptional, on a space,
2 attorney fee-shifting system, because certainly --
3 certain attorneys, you know, looking through cases,
4 have gotten the impression that courts are more likely
5 to shift fees against you because you -- require you
6 to pay the other party's fees if it looks like you
7 didn't have your case kind of together up front and
8 you're presenting new theories later on.

9 Whereas if you do have something more in the
10 nature of what Colleen is describing, with your claim
11 charts in order, specification of products you're
12 looking after, a description -- going after a
13 description of them, then my guess is the attorneys
14 will feel the perception is you're less likely to have
15 that kind of sanction or remedy at the end of the day.

16 So this is another example of the situation
17 where you have reforms, going to David's point,
18 reforms going along different tracks, and it can make
19 it a little difficult to disentangle whether a
20 particular effect is reflecting one reform or some
21 combination of them and to what extent, which of the
22 reforms has been most influential.

23 MR. SCHWARTZ: So to chime in a little bit
24 on this Form 18 complaint change, and let me actually
25 just kind of to keep it all in perspective, before I

1 tell what you the comment is, I think that Form 18 is
2 not a big deal, especially relative to, like, IPRs,
3 which I think are a big deal. And I think Alice in
4 many fields is a really big deal. I think that Form
5 18 is just not going to be of the same order of
6 magnitude.

7 The thing that I've heard, and I've heard
8 this from a federal judge, is that she now sees a lot
9 more motions to dismiss and complaints about the
10 pleadings that she didn't see before in patent cases.
11 And she sees these in other areas of law, she just
12 used to not see them in patent cases and now she sees
13 them in patent cases. And these require amendments
14 that just kind of add more detail.

15 None of that's really related to the merits
16 of the case, so it adds more money, it makes patent
17 litigation more expensive, but it doesn't get quicker,
18 at least it doesn't seem to get quicker at the
19 underlying resolution of the validity issues or the
20 infringement issues.

21 MR. DUBIANSKY: Great. Well, I'll actually
22 build on some of John's comments, which are regarding
23 fee-shifting and, in particular, the Octane Fitness
24 decision.

25 My next question is what has been the impact

1 of Octane Fitness in practice, and I guess more
2 broadly, do you have any views on the merits of a
3 shift to a "loser pays" approach in the U.S.? And
4 perhaps, John, you might want to follow up on that.

5 MR. GOLDEN: Okay. So, right. So I have to
6 say, I haven't compiled data on this myself. But, you
7 know, looking at data compiled by others, including
8 partly some of the data presented by Colleen earlier,
9 we do have some evidence that the Octane Fitness
10 decision, which moved us away from the prior Federal
11 Circuit quite structured approach to when attorney
12 fees would shift to a more open, although on its face
13 still limited, exceptional circumstances approach.
14 This shift has resulted, as you might expect, in sort
15 of some more success in motions for fees, and
16 particularly in motions by successful defendants who
17 have been defending against charges of patent
18 infringement.

19 And as I indicated in my earlier remarks,
20 it's possible that this change is also correlated with
21 some of what -- well, it's probably correlated, it
22 might actually help explain some of what Colleen is
23 seeing in terms of the greater preparation being put
24 up front into litigation, whereas when I was in
25 practice many years ago, of course, you are preparing

1 up front because you were worried maybe about a Rule
2 11 motion and now maybe an additional thing attorneys
3 are thinking of, well, if we don't prepare as much up
4 front, there may be a greater likelihood of attorney
5 fees being awarded against our client.

6 So, now, what's most difficult perhaps to
7 disentangle from the data we've seen so far is, well,
8 to what extent has this attorney fee-shifting actually
9 discouraged some weaker suits, because going back to
10 David's remarks and mine to some degree, we've seen so
11 many changes it's hard to tell, and so many changes
12 within a short period of time, it can be hard to tell
13 which has, you know, which has been most -- has
14 contributed to this decline, particularly when you
15 have some other changes like Alice or whatnot, on
16 subject matter eligibility, that seemed likely to have
17 had a very substantial role in declines.

18 Okay, then going to the second part of
19 John's question, should we go further, well, this is
20 something we've seen people push for a long time and
21 push far outside of patent law. It's been a favorite
22 of tort reform proponents in this country for many
23 years to argue that we should move to a more European-
24 style rule with regard to attorney fees where you
25 could have a general rule that at least some of the

1 fees are going to be shifted in every case and have a
2 basic "loser pays" principle in place.

3 That's -- many theoretical studies have
4 suggested that would tend to promote higher quality
5 litigation. It's commonly been resistant in this
6 country because of a concern that it really raises
7 very substantially the risk for many plaintiffs who
8 may be pursuing sort of meritorious and, you know,
9 other areas of litigation like civil rights
10 litigation, maybe somewhat new forms of arguments,
11 trying to push the envelope.

12 So in this context, we might not be so
13 concerned about people pushing the envelope, but we
14 might be concerned about patentholders who are
15 relatively less well capitalized and are risk-averse.
16 And I recall, it's now probably about a decade ago or
17 so, but once I was trying to look into sort of patent
18 litigation insurance. And I was thinking of patent
19 litigation insurance for defendants, so I started
20 doing these searches for this. I found what I thought
21 was going to be a great European report on patent
22 litigation insurance, and it was actually about patent
23 litigation insurance for plaintiffs because there was
24 actually a concern that they weren't getting enough
25 patent assertion by people who had meritorious patent

1 claims because they were scared about the prospect of
2 having to pay these -- the attorney fees for the other
3 side.

4 And so that's a potential warning about one
5 of the dangers of making a very large shift to a true
6 "loser pay" system, and it's one reason I myself have
7 tended to feel more comfortable with incremental
8 change in this area.

9 MR. SUKHATME: So just one small point. I
10 think a lot of the changes that we're talking about
11 might sort of interrelate with one another, right? So
12 I kind of view Octane Fitness as kind of a delegation
13 of authority to District Court judges. Essentially
14 instead of saying you have this rigid test, you have
15 more sort of ability to award attorney's fees to shift
16 fees when appropriate. And you have to think about
17 that as compared -- you know, bringing back to TC
18 Heartland, right? So to the extent that which now
19 it's -- you know, pre-TC Heartland, you actually could
20 kind of know which judge you were going to get,
21 depending on where you filed. I think Greg Reilly and
22 Jonas Anderson and others have really written about
23 this.

24 And that kind of makes it -- to the extent
25 judges have predictable practices in terms of how they

1 would be likely to award attorneys' fees, you know,
2 then the Octane Fitness in that realm would be very
3 different than in the realm now that we have where
4 it's not as clear which judge -- there's not going to
5 be as much of a concentration of patent suits in one
6 particular court or another.

7 And so the unpredictability of that, I
8 think, it magnifies in a way the effect of Octane
9 Fitness. So I think it's important to think about all
10 of these developments as they relate together. And
11 it's also important when we're doing empirical
12 analysis because what when we think we're measuring
13 the effect of one event is really actually many times
14 building on a lot of interrelated events that are
15 occurring approximately contemporaneously.

16 MR. SCHWARTZ: To build upon, like, the
17 complexity of patent litigation, when I think of the
18 days before Octane Fitness, the kind of perception
19 was that the main or primary way that an accused
20 infringer could recover its attorneys' fees was via
21 proving that there had been inequitable conduct in
22 obtaining the patent. And so that put a lot of
23 pressure on accused infringers to assert and allege
24 inequitable conduct, so much so that the Federal
25 Circuit said a few times that it was a plague on the

1 system, and then that spilled over into prosecution
2 practice. And I think that the Octane Fitness rule,
3 which seemed sensible to me, that if a judge who knows
4 something about patent cases thinks it's, like, far
5 out of the ordinary or out of the ordinary, that seems
6 like a candidate for fee-shifting. That seems like a
7 sensible rule.

8 We don't have as much pressure on
9 inequitable conduct if it's really weak on the merits
10 on infringement or on validity, then that seems like a
11 candidate for fee-shifting. And so there's maybe a
12 relationship between, you know, changes in doctrine on
13 fee shifting and other litigation defenses.

14 MR. DUBIANSKY: Great. Well, looking at the
15 time, I think we've just got about enough time to have
16 everybody provide a brief closing statement. And I'd
17 ask if you speak for probably two or three minutes,
18 and we'll just go down the line, so we'll start with
19 Shawn. Thank you.

20 MR. MILLER: Thank you. Thanks again for
21 having me, John and Elizabeth and Suzanne. So I
22 really liked Dave's -- his metaphor of too many --
23 maybe too many cooks in the kitchen with patent reform
24 over the last eight years. And I think -- so my
25 research, a lot of my research for the last eight, ten

1 years really has been looking at patent trolls and
2 software patents. And I think we had issues with
3 software patents that we had these uncertain property
4 boundaries, providing opportunity for people to claim
5 more than they had actually invented. And I do think
6 there have been issues with patent assertion entities,
7 you know, using, taking advantage of the cost of
8 litigations in order to gain nuisance value
9 settlements and these things.

10 Awful lot of these changes that we've had
11 the last eight years have been targeted directly
12 towards these types of patents and these types of
13 plaintiffs. And so I think I agree with all of my
14 copanelists. I think that the idea that a lot of
15 these things are going to be interacting with each
16 other, a lot of these changes, and I think at this
17 point we really, you know, we do want to see how
18 things play out for a little bit and see if we haven't
19 -- there haven't been unintended consequences that
20 have severely impacted maybe good patents and the
21 types of assertions that we actually want to
22 encourage.

23 And then I think, you know, part of what we
24 need to do is those up here and then also the FTC
25 hopefully help with additional research efforts, to

1 try to really tease the hard problem of teasing out
2 impacts of individual reforms on some of these metrics
3 like who's able to sue and outcomes. So I think a lot
4 of these changes have been positive and I'm looking
5 forward to studying whether or not I'm wrong about
6 that in the coming years.

7 MS. CHIEN: I think I'm probably a lot more
8 sanguine about the impact of the reforms. The reforms
9 were targeted at dealing with abuse of patent
10 litigation, and I think by a lot of metrics that we
11 didn't talk about, I think there have been a success.
12 So if I consider an article I wrote in Patently-O
13 about patent assertion entities by the numbers, you
14 know, it was a question of how many public companies,
15 how many public PAEs are there, public companies, if
16 you look at how those companies are doing, like, there
17 are a lot fewer of them, they may mostly be -- no
18 longer that being an important business model as it
19 had been.

20 I went back to a number of venture
21 capitalists that I talked to before who were really
22 upset about the patent system and really felt like it
23 needed drastic reform at the time. And they've said
24 no, our companies are much more able to deal with
25 issues that come up, and we don't see sort of the

1 negative challenges that we had dealt with before on
2 acquisition, with having to change business models.

3 Now, I still actually am hearing from some
4 folks who are getting sort of the very meritless or
5 that consider themselves -- right, these are people
6 who are users of technology, I'm still getting calls
7 from people who are getting hit with suits, so it's
8 not to say that behavior does not exist, but it's a
9 much smaller footprint, I think, on our innovation
10 ecosystem. And I frankly think those assertions were
11 really giving the patent system a very bad name
12 nationally, and there's just not as much attention
13 paid to the patent system. And I think the attention
14 before was negative attention, so I think that's a
15 good thing.

16 Now, again, still dealing with and
17 calibrating the changes that have happened, to ensure
18 that we're striking the right balance remains a
19 challenge, and we have to continue to use different
20 levers. What I think is really interesting about the
21 Form 18 findings, which really surprised me, that
22 there was so much more use of claim charts, much more
23 detail.

24 I disagree with David that those are minor.
25 Even though they don't make headlines, they are

1 increasing the quality of what's being discussed at
2 the front end. Again, it's a lot of stuff you cannot
3 see that there's more certainty, there's less risk to
4 companies because they have a sense of what it is --
5 what they're dealing with early on. I think that's
6 hugely important. That goes across the entire system
7 and not just looking at IPR.

8 You know, most of the litigations do not
9 have a parallel IPR. They just happen day-to-day.
10 They're challenges that companies bring and they fight
11 it out. And so that's an impact across the system.
12 And so I think that these are positive changes and
13 that they, you know, need to be -- again, we need to
14 think about IPR and how to kind of calibrate and deal
15 with it.

16 But, overall, I would say that if the
17 problem was really dealing with -- patent reform was
18 really targeted at abuse of litigation, that there has
19 been positive reform. Now, the one thing I will say
20 at the end is that, you know, we think about what
21 Congress and what the courts do. Where there has
22 been, I think, what we've talked about today on this
23 panel, there has been a lot of significant impact from
24 sort of design decisions.

25 So little changes that or little sort of

1 implementation decisions that the PTO has made,
2 they've done a great job of coordinating with district
3 courts so the district courts will stay the litigation
4 and we don't have duplicative, you know, IPR and
5 district court in most case. We have stays happening.

6 That's not the case in Germany, for example,
7 where if you have a nullification, the court still
8 does its thing, you have two cases going on full
9 bore, often you'll have an invalid but infringed
10 finding at the end of the day, because the injunction
11 is issued before the patent is even litigated. We
12 have a more coordinated system here. That's a good
13 thing, and that's a decision that's an implementation
14 outcome -- that's an outcome that comes from a good
15 implementation.

16 The same thing with Form 18. It seems like
17 a trivial change, but in my mind it's improved the
18 quality of patent litigation across the board. It
19 didn't take Congress to do that; it didn't take the
20 Supreme Court to do it. It's administrative actors
21 taking sensible steps. And so, again, I think these
22 design choices can have a big impact and potentially
23 bigger than those of the high court.

24 MR. GOLDEN: Okay. So, yeah, I mean, I
25 think -- I mean, I may not be as enthusiastic as

1 Colleen about the changes, but I think we have seen a
2 number of sensible changes and tweaks to the system.
3 I remember once presenting a paper to my faculty at
4 the University of Texas. And one of my colleagues,
5 when he was hearing about the percentage of cases
6 being brought in the Eastern District of Texas and
7 before just a single judge, Judge Gilstrap, was like,
8 well, clearly there's something wrong with this, you
9 don't really need to know anything more about this.

10 So there have been certainly some
11 idiosyncratic aspects of the way the system was
12 working and bad practices, which a number of these
13 reforms have helped address. I do feel that there are
14 fundamental aspects of the system, that it doesn't
15 seem these reforms are addressing and that are
16 problematic or at least present great challenges for
17 the system, are going to be great challenges for the
18 system over the next few decades.

19 One is just the interaction between the
20 numerocity of patents and patent applications -- of
21 issued patents and patent applications, in combination
22 with the limited resources that almost all the
23 relevant actors have to deal with, whether it's the
24 PTO, whether it's sort of private parties looking to
25 try to obtain a valuable patent and then be able to

1 enforce their patent rights, or, you know, potential
2 or alleged infringers or people who may be worried
3 about being alleged infringers who have difficulties
4 sort of navigating the sea of patents in a way that
5 gives them security and a feeling that they've
6 achieved patent clearance.

7 So it's not clear that the sum of these
8 changes is helping really to address that sort of
9 fundamental challenge which is going to remain with
10 the system over the next couple of decades. And then
11 still there's, as I said, sort of high litigation cost
12 and the fact that IPRs, although I think they have
13 been a very positive reform from my perspective for
14 the system overall, although they've had negative
15 impacts for some players, have ended up being somewhat
16 more costly than we might have hoped, and what can we
17 do still to try to make litigation sort of less
18 expensive, so that we can reduce the incentive for
19 abusive use of those costs by patentholders and at the
20 same time allow, to the extent we think the patent
21 system is serving any good, you know, patentholders
22 who do have valid patents that are being infringed
23 more effective access to the courts.

24 MR. SCHWARTZ: So thanks again to Suzanne
25 and Elizabeth and John for the invitation. I want to

1 talk just really briefly about predictability.
2 Companies and lawyers value predictability in the
3 patent system, and while bad rules can be problematic,
4 there's also just a cost in switching rules,
5 especially if it's done frequently. Unpredictability
6 makes it harder for lawyers to advise clients on the
7 proper course of action. It makes it harder for
8 companies to plan ahead in terms of their long-term
9 plans such as commitments to R&D.

10 And so I place a high premium on
11 predictability in the patent system, and for that
12 reason, as well as the point I raised at the beginning
13 about the maybe too many cooks in the kitchen, I just
14 suggest some caution among, like, the institutional
15 actors before making more large-scale changes to the
16 system. The patent system is complicated, and I'm not
17 sure if it's yet at equilibrium or steady state.

18 MR. SUKHATME: So it's convenient that my
19 notes here say stability and predictability is what I
20 wanted to talk about, and we only have a minute left
21 here. I think that the issue of patent assertion
22 entities, right, I think it gets -- it's sort of a
23 flashy issue, it's gotten a lot of press. I think
24 it's going to fade. I think it already is fading over
25 time. I don't think it's going to be as much of an

1 issue going forward. I think the changes that we've
2 talked about here are going to -- you know, it might
3 be a death by a thousand paper cuts, but I think it's
4 going to become less salient over time.

5 I'm echoing what Dave says here because I
6 think stability and predictability is something which
7 I don't think has really improved over this time
8 period. And a lot of it relates to something we
9 haven't really talked about much, which is patentable
10 subject matter. I think it's -- you know, Alice and
11 Mayo, you can decide whether something is going to be
12 patentable or not. But it seems kind of crazy to me
13 that one day something is patentable, the next day
14 it's not, the next day it might be, right?

15 So it seems to me if there's going to be
16 stability and predictability, we need to kind of come
17 up with a rule, whatever that rule might be. And in
18 order to get it, I wouldn't even say right, just get a
19 rule that's sort of clear and sort of stays stable, it
20 might be necessary for Congress to step in to do this
21 because it seems like right now that issue is just
22 bouncing around so much that it's very hard for
23 businesses to plan and figure out what to do.

24 MR. DUBIANSKY: Great, well, thank you. I'd
25 like to thank all of our panelists, as well as their

1 colleagues that joined them today, and if you would
2 join me in doing so, and then we'll take a break and
3 return after lunch at 1:30.

4 (Applause.)

5 (End of Panel 2.)

6 (Lunch recess.)

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1 So with that, I would like to introduce
2 Tahir Amin, who is with the Initiative for Medicines,
3 Access, and Knowledge; Patrick Kilbride, who joins us
4 from the U.S. Chamber of Commerce; Barbara Fiacco, who
5 joins us from AIPLA, the American Intellectual
6 Property Law Association; Hans Sauer from Bio. And I
7 also am getting a flashback to about ten years ago
8 when Hans and I were on a similar panel looking at
9 biologics issues. And Matthew Schruers from the
10 Computer and Communication Industry Association.

11 So thank you all for your time today. And
12 I'd like to begin with a presentation by Tahir. Thank
13 you.

14 MR. AMIN: Thank you. I'm going to speak
15 today with respect to the pharmaceutical sector. So
16 I've just been following some of the panels earlier
17 today and yesterday, and we've heard a lot about --
18 and I'm sure we'll continue to -- what I would call
19 innovation welfare or the welfare of innovation, but I
20 want to address it from what about the consumer
21 welfare when it comes to intellectual property and how
22 we can have competition which is not entirely focused
23 on just IP.

24 So I'm going to look at the role of patents,
25 or patents -- I'm from the U.K., so we say patents --

1 and the problem that we have in respect of what I call
2 overpatenting. So what we have done is looked at the
3 top 12 drugs sold in the United States, and we looked
4 at the data in terms of number of applications filed
5 and the numbers granted, but we also looked at the
6 prices that have happened over the last six years with
7 respect to those patenting trends.

8 But just to give you some context, and as I
9 said, I'm going to come from a more consumer welfare
10 perspective because that's also the FTC's role in this
11 conversation, one in four Americans are having
12 difficulty filling their prescriptions in the United
13 States. The drug pricing issue is the number one
14 issue for the electorate, and that's not usually the
15 case; it's usually the economy. And this has been
16 going on for the last year. So that's just to give
17 you some context to the data and the issues that I'm
18 going to address.

19 So as you see with these slides, the drug
20 pricing is set to double by 2025, so this is going to
21 be an ongoing problem. Now, of course, we need
22 innovation, and we need new inventions to bring new
23 medicines to the market, but at the same time, with
24 this balance, this delicate balance that we try to
25 achieve with IP, we need competition. And it's self-

1 evident that with more competition you bring prices
2 down.

3 Now, what we did was to look at the top 12
4 drugs in the United States, the top 12 drugs that are
5 being sold. And what we found was an enormous amount
6 of patenting activity that is going on in the name of
7 innovation. And many of these patents are well beyond
8 the 20 years, or many of these products are providing
9 potential exclusivities up to nearly 40 years. Now,
10 after these drugs are on the market, I believe only
11 three actually have competition, to date.

12 So, we've seen a 68 percent price hike over
13 this period, and many of these drugs have been on the
14 market for 15 years and more, and yet we've seen over
15 100 attempted efforts at getting a patent.

16 Now, particularly, I'm going to drill down
17 on Humira because a lot of people have been asking us,
18 well, you know, what does this data mean and more
19 specifically, more granularly. And we looked at
20 Humira, and one of the arguments that is often made by
21 industry is that many of these patents are filed
22 before the product is approved. So we thought, okay,
23 well, let's have a look at that.

24 And what it shows is 89 percent of the
25 patents are filed after the first approval. And then

1 with the case of Humira, which is a real poster child
2 for the kind of behavior that's going on, we have 49
3 percent which are filed even after the first expiring
4 of the first patent. Now, it would be coincidence to
5 say that this is not some kind of strategic behavior
6 that is going on by companies in order to preserve
7 their franchises and their life cycle management of
8 products. When we compare it to what's happening in
9 the United States with Humira as to Europe and Japan,
10 we see a far fewer number of patents being issued.

11 Now, is Europe more stringent than the
12 United States when it comes to patents and innovation?
13 That's a debate to be had. But what we're seeing is
14 some of the patenting practices and the procedures
15 that are available at the USPTO seems to encourage
16 this excessive behavior of patenting, all in the name
17 of innovation.

18 Now, there's been a lot of debate about the
19 PTAB, and I just want to touch on a few points here.
20 The PTAB, when it started, did show that there was
21 some correction that was going on. And you see this
22 is slightly out of date in terms of the periods, but
23 initially, there were -- and with respect to Orange
24 Book patents, you had 64 percent of petitions being
25 instituted.

1 Between February and August, we've seen that
2 drop significantly to 27 percent. And the same trends
3 show also in terms of getting claims removed. Now,
4 whether you agree with the PTAB or not, I think it's
5 fair to say there's been a chilling effect around the
6 PTAB, particularly following Oil States, the case that
7 was taken to the Supreme Court, for any of you that
8 weren't following that. And, really, with a number of
9 the industries who, what you might say, were from the
10 pro-patenting side or the pro-innovation side, really
11 lobbied hard to make the PTAB corrected. And this is
12 the effect that we're seeing with this correction. In
13 fact, the PTAB, in my opinion, and we can talk about
14 this later, hasn't had the chance to settle.

15 So in view of all these trends, we believe
16 that there needs to be some reform. We believe that
17 we really need to revisit what is inventive. I think
18 the language of innovation is important, but I think
19 invention and innovation are two different concepts.
20 I'm not going to get into that abstract debate now,
21 but it's something we can talk about.

22 We need to really reduce and, I think,
23 eliminate continuation application because many of the
24 patents we're seeing stockpiled are because of these
25 continuations, and these are strategic measures that

1 companies use to keep competition at bay. We need to
2 improve the existing IPO system. Unfortunately, as I
3 said, forces have whittled it down, and we are seeing
4 it being narrowed more and more.

5 And we've seen the success of pre-grant
6 oppositions in other countries. I think this can
7 actually encourage competitors to come to market
8 earlier and let the problem solve itself afterwards,
9 rather than the other way around, where we have
10 litigation to solve these issues and people are not
11 getting the medicines that they need.

12 And then, finally, specific to the Orange
13 Book, I think there could be some tailoring there.
14 Companies are well known to be listing patents on the
15 Orange Book just to extend litigation. And I think we
16 need to have a bit more of a transparency around this
17 patent dance that happens with biosymbolism and
18 biologics. Thank you.

19 MS. MUNCK: Thank you very much.

20 I think next we'll hear from Hans Sauer.

21 MR. SAUER: Good afternoon. On behalf of
22 Bio, I want to thank the FTC and its staff for the
23 opportunity to participate in this hearing. Bio is
24 the nation's largest trade association for the biotech
25 industry. Our industry is largely an industry of

1 small and mid-sized development stage companies, and
2 much of it is not visible to consumers. The vast
3 majority of our members have fewer than 50 employees
4 and no marketed products yet, and most never will
5 because product development failures are frequent,
6 they're almost the rule, and the path to market is
7 long.

8 Emerging companies hold more than 70 percent
9 of the clinical development pipeline for future drugs.
10 Roughly 43 percent of emerging company clinical
11 programs are partnered with larger pharmaceutical
12 companies, and that demonstrates, I think to us daily,
13 the importance of licensing and the importance of
14 relatively clear IP rights for the transfer and
15 orderly dissemination of intellectual property as is
16 relevant to our industry. This is really like a
17 hallmark of how we develop products, like we do it
18 very much in our industry through partnering and
19 licensing and tech transfer.

20 And this, in fact, is the predominant way in
21 which patents and IP instruments are being used in our
22 industry. It is not to litigate against people, but
23 it is at the early stage of drug development to be
24 able to attract capital and disseminate technology
25 among different entities in the value chain that are

1 best able to share the burden of cost and risk in
2 product development.

3 Between one-half and two-thirds of new drug
4 applications and biologics license applications
5 submitted to the FDA have small company involvement.
6 The cumulative likelihood -- I told you about the risk
7 of failure. The cumulative likelihood that a new
8 clinical development candidate will eventually receive
9 FDA approval is less than 10 percent. Clinical
10 testing and regulatory review consume close to ten
11 years on average, and out-of-pocket expenditures
12 exceeding \$1.3 billion.

13 So despite unfavorable odds and long
14 investment horizons, the U.S. biopharmaceutical
15 industry, however, is highly productive on an
16 international comparison. This is shown in the pie
17 chart by one measure -- more new medicines originate
18 in the United States than in the rest of the world
19 combined over the last decade and a half.

20 Although projected returns on R&D investment
21 in the biopharmaceutical industry have been on the
22 decline -- they're currently measured at around 4
23 percent per annum -- the U.S. biopharmaceutical
24 industry is -- this is my proposition to you, by and
25 large, doing an effective job at creating new

1 medicines and treatments. We believe this to be
2 attributable to at least a number of factors such as
3 these listed here.

4 Competition in the industry takes many
5 forms. Emerging companies, long before a drug is
6 approved, compete for access to capital and for the
7 attention of development partners. That, too, is
8 competition. Experimental drugs that undergo clinical
9 development compete with each other for scarce
10 clinical resources, for the ability of clinical trial
11 sites, or patients who could be recruited into trials.
12 That, too, is competition.

13 And marketed original drugs compete with
14 each other both on value and on price. Many of the
15 products that Mr. Amin showed you earlier actually
16 compete against each other, and at least one had
17 already two biosimilar competitors in the market. So
18 there's a lot of competition going on that takes
19 different forms.

20 It is often actually competition with other
21 branded products that drives innovators to add
22 additional features, indications, and clinical studies
23 to their own brand products in an effort to
24 distinguish these products in the marketplace and
25 compete and provide more clinical value to patients

1 and providers and have a distinguishable product in
2 the market.

3 Branded products also compete with each
4 other on price, discounts, and rebates, but to be
5 clear, that kind of competition is between different
6 innovative products that have their own IP portfolios
7 and that have their own patents and that have
8 distinguishable values in the marketplace. It's not
9 competition between ever cheaper copies of the same
10 product.

11 That kind of competition is a special
12 feature of the Hatch-Waxman Act, which regulates the
13 approval and market entry of generic drugs. When
14 generic drugs enter the market -- you see this on the
15 left-hand diagram, this has been studied -- the impact
16 on the original product is profound. Today -- and
17 this is the lowest line you see on the left --
18 innovator market share erosion of 80 percent or more
19 within three months are the norm, with eight, ten, or
20 more generic entrants vying for a share of the market.

21 Ninety percent of prescriptions in the
22 United States today are generic. This is the highest
23 generic market penetration rate in the industrialized
24 world. And U.S. payors pay among the lowest generic
25 drug prices anywhere. This form of competition works

1 incredibly well for consumers and payors, so
2 complaints are not that there isn't enough of this
3 kind of competition or that it doesn't work.
4 Complaints are usually about when that competition
5 comes, right? It's the timing and when it occurs.

6 That, too, has been studied. Over the past
7 20 years, innovator drugs that experience generic
8 entry -- this is kind of funky to read, but if you
9 focus on the black line, for example, you will see the
10 black line is the number of innovator drugs that
11 experience generic entry in any given year. And the
12 percentage it shows is how many of these innovator
13 drugs that have generic entry actually had an
14 affirmative patent challenge and patent litigation, a
15 challenge to their patents before there was generic
16 entry, a so-called Paragraph 4 challenge, which is
17 unique form of patent validity litigation in the
18 pharmaceutical space.

19 So these patent challenges, as you see from
20 that line, have become increasingly more frequent and
21 come earlier in the market life of the innovator drug
22 over the past 20 years. We've gone from about 10
23 percent of innovator drugs who experience generic
24 entry after an affirmative patent challenge in
25 District Court, this litigation, and we've gone to

1 about 80 percent in 2014. Right, so the number of
2 patent challenges has gone up, and these challenges
3 come -- and that's the other line -- much earlier in
4 the life of the innovator drug. So generics are
5 challenging patents much more often and much earlier.

6 What this diagram doesn't tell you -- though
7 it tells you something about litigation behavior, it
8 doesn't tell you about when these generics actually
9 come on the market, just like patent numbers don't
10 tell you about how long they stay off the market.
11 That, too, has been studied.

12 The empirical time to generic entry actually
13 has been investigated by several different groups. In
14 this 2015 study, the innovators looked at originator
15 drugs that experienced generic entry over a 12-year
16 period. And consistent with other studies, they
17 report an effective period of market exclusivity of
18 12.5 years for all agents. The time is somewhat
19 longer for pioneering drugs and tends to be shorter
20 for other kinds of products like second or third-in-
21 class molecules or drugs that are merely, if you will,
22 new formulations.

23 Again, these types of studies are limited in
24 that they don't tell you about the mechanisms that are
25 in play. So, for example, from these numbers, we

1 don't know if it's attributable to patents or
2 regulatory exclusivity or technical or market factors.
3 The only thing this counts is the day when a new
4 innovator drug enters the market, and then it counts
5 the days until it experiences generic competition.
6 That's how you get to 12.5 years.

7 MS. MUNCK: Hans, if I could just say --

8 MR. SAUER: Yes?

9 MS. MUNCK: -- two things. One, I think we
10 know you have two more slides, so we want to let you
11 keep going, but the second is when we're talking about
12 the past few slides, we're talking about small-
13 molecule drugs, right? Just a point of clarification.

14 MR. SAUER: Yes, and I need to make that
15 clear, right, because this is the area where it's been
16 best studied and where behavior is best understood.
17 And I hope to get to that maybe later. It's not about
18 biosimilars. I think those deserve a different
19 conversation. But you're right in pointing that out.

20 MS. MUNCK: Okay, thank you.

21 MR. SAUER: Good. Okay, let me move on and
22 say a few things about patents. On the topic of
23 patents -- now, where was I? The number of patents
24 are best understood for small molecules where they're
25 listed in the Orange Book. The number of patents that

1 innovators use to shield generic competition also has
2 changed over time, just like you saw the patent
3 challenge behavior changing over time in the earlier
4 slide.

5 We know that today pharmaceutical innovators
6 do list more patents in the Orange Book. That's a
7 listing of, like, the relevant patents that cover the
8 drug or methods of using it. I think they list more
9 than twice as much as they did in the 1980s, but the
10 absolute numbers are still small. The reported
11 number, the median number of patents that are listed
12 in the Orange Book for new chemical entities is four,
13 but the average number is about five, five and a half.

14 It used to be only one to two drugs -- to
15 two patents in the 1980s, so that has increased, but
16 the absolute numbers are still small, and it's not
17 hundreds of patents. And while the Orange Book
18 captures different kinds of patents than what I-MAK
19 may have captured, the big difference in numbers is
20 still perplexing and we're still trying to understand
21 how these stark differences could arise.

22 For us, it's been difficult to understand.
23 I think some of the data that have been put out,
24 knowing that patent numbers are what they are, at
25 least in the small-molecule space in the five to six

1 patents per drug range.

2 Okay, finally, time to generic entry. This
3 is another study. It looks not just at average
4 numbers over a 12-year period. This actually measures
5 over time drugs that receive generic entry or
6 experience first generic entry over different time
7 cohorts. You see this on the X axis. And so what the
8 system produces, the Hatch-Waxman system, has been
9 over the past 20 years -- ever since people started
10 measuring, there's a very actually surprisingly
11 consistent period of 13.5 years for new chemical
12 entity drugs from the time they first enter the market
13 to the time when they experience generic competition.

14 And interestingly and perhaps surprisingly,
15 the time has been stable, despite so many other
16 changes in corporate and litigation behavior. What I
17 told you about the fact that there are more patent
18 challenges now than there were 20 years ago, that the
19 challenges come earlier. I told you that innovators
20 list more patents than they did in the past, but what
21 the system produces in terms of market exclusivity has
22 been surprisingly stable and hasn't been subject to a
23 lot of change.

24 It's 13.5 years for small molecule drugs.
25 That's what it's been. It hasn't changed. It's not

1 48 years. It is what it is. We could have a policy
2 debate over whether that time is still appropriate or
3 not, but I want to ground all of us, I think, in this
4 kind of horizon of competition and periods of market
5 exclusivity that the system seems to have produced.

6 On the topic of biosimilars, I think it's
7 very different and too early to say, and I'm going to
8 finish that because I'm not going to go into it. I
9 just want to leave you actually with a reminder that
10 this doesn't tell you much about competition in the
11 biologic space, but it's the best data set we have on
12 small molecule drugs and the behavior of medical
13 innovators.

14 So thanks for that, and we're going to do
15 the rest in discussion.

16 MS. MUNCK: Terrific. Well, thank you very
17 much and, again, sorry to interrupt, but we want to
18 make sure we have enough time for everyone.

19 So next we'll turn to Matthew Schruers.

20 MR. SCHRUEERS: Thanks. No slides for me, so
21 I'll just present from here. Thanks. I want to say
22 thank you to our host. We appreciate the FTC bringing
23 folks together today to talk about these critical
24 issues. Happy to have the opportunity to explore
25 them.

1 CCIA represents companies that are some of
2 the largest users of the intellectual property system.
3 Worldwide rankings of research and development show
4 U.S. ICT firms having five of the top five slots for
5 R&D spending. It's on the order of \$70 to \$80 billion
6 a year, depending on when you account, and a
7 considerable amount of that R&D yields patents, making
8 our constituents some of the biggest users of the
9 patent system. They're also some of the most
10 recognized brands in the world, some of the most
11 trusted institutions among Americans, in fact.

12 And that, of course, has great impact on the
13 brand value, so our constituents also care greatly
14 about trademark. And as many of us probably consume
15 content that's produced or distributed at least by
16 some of the firms we represent, and so I'm happy to
17 say that our constituents care greatly about copyright
18 as well.

19 In short, ICT firms are rightsholders. They
20 are economically significant rightsholders, and they
21 want an IP system that encourages and promotes
22 innovation. So with that in mind, I've got three, I
23 think, pretty brief points that I'll try and stick to
24 here and explore the rest in discussion.

25 The first is that the legislative and

1 judicial changes that have happened in the patent
2 system in recent years have improved the innovation
3 landscape. They have not solved problems, but they
4 have improved conditions. Objections to these reforms
5 are not particularly well founded. And, three, more
6 needs to be done to promote IP certainty, both in the
7 context of patent and copyright.

8 So, on the first one, the first item, these
9 reforms have made differences. The availability of
10 IPRs under the AIA and recent federal court
11 jurisprudence, primarily Alice, were both warranted
12 and actually overdue. The Supreme Court reining
13 things in via Alice had a very positive impact on
14 research and development in the software and internet
15 sectors. We saw it grow at 27 percent, which was
16 greater than the growth of all other industries.
17 That's research and development spending for software
18 and internet in the year after Alice.

19 And the suggestion that Alice had any
20 negative impact at least with respect to the software
21 industry is difficult to reconcile with the stats on
22 so-called unicorn IPOs. These are firms that --
23 startups that IPO for greater than a billion dollars.
24 That number exploded in 2014 and then doubled the
25 subsequent year in 2015.

1 There's also data that supports the impact
2 of IPR. Since both the AIA and Alice, the AIPLA
3 economic survey shows that the cost of patent
4 litigation has declined substantially. And if you
5 look at copyright and trademark litigation as not a
6 perfect control, but a control, that does tick down
7 slightly, but not nearly at the rate that we saw the
8 cost of patent litigation fall.

9 And if you compare the amount of work that's
10 being done in IPRs relative to patent litigation, some
11 rough math could lead to estimates that we've made
12 that over \$2 billion in litigation savings have
13 occurred by adjudicating issues in the IPR format.
14 And so based on that data, I think we can clearly say
15 the reversing course on these reforms would negatively
16 affect the industries that depend on this regulatory
17 regime and that have seen the benefits from these
18 recent reforms.

19 So my second point that the critics'
20 arguments are not particularly well founded, there's a
21 narrative that the courts have gone after the patent
22 system. And it is true that particularly in the area
23 of 101, the Supreme Court has cut back on excesses
24 that have originated largely with the Federal Circuit,
25 but for every case, you can find where there have been

1 judicial reforms of the patent system. You can point
2 to cases like SCA Hygiene on laches or Halo on
3 willfulness as to Berkheimer, where wins for
4 plaintiffs have strongly given an advantage in the
5 litigation context.

6 And so it's not accurate to paint the recent
7 developments in case law as painting -- narrowing
8 patents. Like any area of the law, we see wins and
9 losses that benefit both defendants and plaintiffs.
10 And that's totally appropriate.

11 There is independent research that shows
12 that patent valuations and secondary markets have
13 remained largely unchanged after Alice. I know we
14 have a representative here from the Chamber so that
15 they can respond to my -- Patrick can respond to my
16 criticism here. But the Chamber has a study which
17 ranks the U.S. patent system as 13th in the world now,
18 behind Italy, which appears to be largely based on the
19 assessment that having a meaningful 101 and the
20 institution of IPR under the AIA was a bad idea.

21 It cites high volumes of IPRs. As some of
22 the scholars on the first panel this morning noted,
23 that's misstating the frequency at which patents are
24 invalidated by the PTAB. And, in fact, several EU
25 countries, which outrank the U.S. in the Chamber

1 study, invalidate or modify patents at a higher rate
2 than the PTAB does. So, the notion of a regulatory
3 system that's going after patents without cause is
4 highly overstated.

5 In short, I'd say the impact of the reforms
6 we've seen is overstated and, in fact, more needs to
7 be done. Suzanne asked about what we might have taken
8 away from this morning, and I think a lot of the data
9 we saw shows that while there's been some improvement
10 in a number of metrics and indicators that we can look
11 at, these problems have not gone away. They have in
12 many cases simply leveled out. Perhaps we have
13 stopped the bleeding but not treated the underlying
14 wound.

15 So and more -- I think more can be done to
16 achieve certainty for innovators in the patent system.
17 And some of these issues, I think, actually carry over
18 to the copyright system as well, and the recent Music
19 Modernization Act is a recognition that uncertainty
20 can impede licensing, and Congress stepped forward to
21 try and address that area. I think some parallels
22 could be drawn here, but seeing as how I've exceeded
23 the time I've been given, I'll stop here and we can
24 cover it more in discussion. Thanks.

25 MS. MUNCK: Thank you very much.

1 Next I'd like to turn to Barbara Fiacco.

2 MS. FIACCO: Thank you. Thanks very much
3 for hosting this discussion today. I need to give the
4 obligatory disclaimer. I think I'm the only one on
5 the panel today that needs to do so. But AIPLA is not
6 my full-time employer. I am here speaking on behalf
7 of them today as the first vice president, but my
8 full-time employer is my firm, and I'm not speaking on
9 behalf of my firm nor my firm's clients.

10 So with that, let me introduce you a little
11 bit more to AIPLA. We're a national bar association.
12 We have approximately 13,500 members. We're primarily
13 lawyers engaged in private or corporate practice in
14 government service or in academia. We represent a
15 wide and diverse spectrum of individuals, companies,
16 and institutions who are both owners and users of
17 intellectual property, big and small, across all
18 sectors.

19 Our mission includes helping establish and
20 maintain fair, balanced, and effective laws and
21 policies that will stimulate and reward innovation
22 while balancing the public's interests in healthy
23 competition, reasonable costs, and basic fairness.

24 So at the outset, I do want to address the
25 data point that Matt brought up, which is the U.S.

1 Chamber's index, and I won't steal Patrick's thunder,
2 but suffice it to say that AIPLA is concerned with the
3 drop in the U.S.'s ranking in the IP index. It's a
4 disappointing turn of events for a country that's
5 traditionally led the world in this area and has
6 championed intellectual property rights.

7 So in my opening remarks, I want to touch on
8 two things. First on the importance of IP to U.S.
9 competitiveness and leadership, and then I'll
10 underscore some of the legislative and regulatory
11 changes to the IP landscape, as well as judicial that
12 we've talked about this morning and I'm sure this
13 panel will continue.

14 So with respect to intellectual property and
15 the U.S. market and technology leadership and
16 competitiveness, AIPLA firmly believes that in order
17 for the U.S. to maintain competitiveness and
18 leadership in the global marketplace, it's important
19 to support innovation by having a very strong patent
20 system that enables a sustainable return on investment
21 in R&D. Innovators in high-tech industries spend many
22 billions of dollars on high-risk R&D. These
23 innovators face substantial risks that their R&D won't
24 succeed and that their R&D expenses will not be
25 rewarded.

1 Ensuring that we have a strong patent system
2 allows innovators to be confident that they'll be able
3 to obtain a return on their investment, if and when
4 they successfully develop those new technologies. And
5 without this promise of a return, there's no incentive
6 to continue investing in R&D and create these
7 technologies.

8 So let me shift now to the current and
9 shifting landscape of U.S. IP law and practice. And I
10 want to touch on a couple of things. First, Section
11 101 case law. The landscape has clearly changed here,
12 or perhaps I should refer to it as a sea change. In
13 three Supreme Court decisions issued between 2010 and
14 2014, the Court distorted patent eligibility
15 determinations under Section 101.

16 Section 101 was really intended to be an
17 enabling provision, identifying particular categories
18 of subject matter that qualified for patent
19 protection. It wasn't intended as a standard to
20 decide whether a particular technological advance
21 should receive patent protection. That's what the
22 remainder of the Patent Act is for. Sections 102,
23 103, and 112, they were intended to provide the
24 yardstick that judges novelty, nonobviousness, and the
25 sufficiency of the disclosure in the spec and in the

1 claims.

2 The Supreme Court's decisions have blurred
3 these statutory functions and they've caused
4 significant uncertainty, as we have heard today, and
5 are potentially driving innovation investments abroad.
6 The present uncertainty has weakened our system and
7 it's discouraged investments in areas ranging from
8 software to life-saving diagnostic tools to
9 therapeutic medicines.

10 The Federal Circuit, the district courts,
11 the PTO, and our members are all struggling to find a
12 principled formula to guide their decision-making. So
13 AIPLA, along with other organizations and businesses,
14 have recognized the significant problem and we've
15 called for a solution. Over the past year, we were
16 able to reach an agreement with the Intellectual
17 Property Owners Association on a proposed legislative
18 solution to the 101 subject matter eligibility
19 problem.

20 Our proposal provides a clear and objective
21 test that will result in appropriately broad
22 eligibility, including expressly removing
23 considerations of inventiveness from the eligibility
24 determination. We hope that the FTC will take this
25 significant uncertainty into consideration when

1 evaluating the market power or effect associated with
2 patents going forward.

3 Second, I'd also like to address the IPR
4 proceedings by the PTAB, which has also been the
5 subject of discussion by many of today's panelists.
6 It also represents a very significant change in the
7 landscape. Since introduction about six years ago,
8 IPR proceedings have been very broadly used, perhaps
9 far more frequently than had been envisioned at the
10 time that the AIA was enacted in order to challenge
11 patent validity.

12 Some, including some here today, have
13 expressed concern about the balance and the fairness
14 of that procedure. The emergence of the proceedings
15 has dramatically changed U.S. patent enforcement by
16 adding in effect a second prong to litigation in many
17 cases. Rather than taking the place of district court
18 litigation as originally intended, it also now allows
19 for serial challenges to the same patents, both in the
20 PTAB and the courts.

21 So the IPR process has fundamentally changed
22 the calculus of considerations that a patent owner has
23 to consider before pursuing enforcement in the courts.
24 Moreover, as you've heard, in IPRs, the PTAB doesn't
25 assume that a patent is valid. So the presumption of

1 validity that characterized U.S. patent law for
2 decades is significantly limited and weaker today.

3 Other concerns have been expressed about
4 IPRs such as the difficulty of amending claims during
5 the proceedings and the possibility of serial
6 challenges with no standing requirement. These
7 factors have created a landscape which can place a
8 cloud over a patent for its entire life, leading to
9 the devaluation of patents generally.

10 Third, patent litigation has changed. Over
11 the years, few would dispute that the legal framework
12 for enforcing IP rights has changed dramatically.
13 It's led to some uncertainties and a lack of clarity,
14 as well as some positive outcomes. Examples of that
15 include in the context of injunctive relief. The 2006
16 eBay decision changed perceptions about the ability of
17 patents to exclude others, changing the calculus,
18 sharply limiting the ability of patent owners to
19 obtain injunctions, and that's impacted enforcement
20 strategy and also some licensing behavior.

21 In light of that case law, the portrayal in
22 the 2017 FTC/DOJ licensing guidelines of IP rights as
23 conferring an unbridled power to exclude may no longer
24 be completely accurate.

25 As was also noted this morning, other

1 developments in patent law have changed, negatively
2 impacting the ability of the patent owner to enforce
3 her rights and recuperate investment costs, including
4 the change in venue law, divided infringement law,
5 heightened pleading requirements, and patent
6 exhaustion to name a few.

7 So in conclusion, over the past seven years,
8 we've seen legislative, administrative, and judicial
9 trends that have produced some inconsistencies and
10 uncertainties about patent rights and their
11 enforceability. While there have been some positive
12 developments, AIPLA is concerned that the balance of
13 U.S. patent policy is tilting in the direction of
14 limiting enforcement rights, which may lead to a
15 negative impact on R&D investment and reduce the
16 innovation that produces such dynamic competition in
17 U.S. markets.

18 Governments through agencies like the FTC
19 have the power to promote or discourage innovation
20 through policy. AIPLA believes that IP protections
21 are important to accelerate technological progress and
22 economic growth, and we submit that careful
23 consideration of the impact of these changes is
24 warranted, and we thank the FTC for doing so through
25 these hearings today.

1 MS. MUNCK: Thank you, Barbara.

2 And, finally, we'll hear from Patrick
3 Kilbride in opening.

4 MR. KILBRIDE: Thank you, Suzanne, and thank
5 you, John, and to all the Commissioners for hosting
6 this opportunity. Again, I'm Patrick Kilbride. I'm
7 the Senior Vice President for the Global Innovation
8 Policy Center at the U.S. Chamber of Commerce. The
9 GIPC is the dedicated voice of the Chamber on issues
10 of intellectual property-driven innovation and
11 creativity.

12 And I want to share up front three
13 principles that really form the premise for my
14 comments today. You know, number one, that labor and
15 capital invested in the creation of intangible assets
16 deserve no less property right protection than
17 laboring capital invested in the creation of physical
18 assets. So in today's economy, we see that intangible
19 assets like R&D capabilities, workforce training,
20 business processes form much greater share of market
21 value than physical assets like plant and equipment
22 and real estate.

23 So it's appropriate that the U.S. is a
24 leader in protecting intellectual property rights,
25 which is a critical subset and a pivotal subset of

1 that broader class of intangible assets. Number two,
2 that exclusivity, exclusive rights to a discrete work
3 should in no way be conflated with a monopoly. And
4 number three, that the brilliance of the U.S. system
5 is that it has recognized that strong property rights
6 in both physical and intangible assets yields more
7 productivity in the intangible space and innovation
8 and creativity and more competition.

9 So this was explicitly recognized with a
10 great deal of foresight in the U.S. Constitution. And
11 as a result, the principle that authors and investors
12 should own property rights in their work, no less than
13 in physical assets, has underpinned the dynamism of
14 the U.S. economy from its outset. Intellectual
15 property was not an invention of the American
16 founders, but America did democratize it in a very
17 meaningful way, making it available and broadly
18 accessible to inventors of every class. And that
19 changed the system, making it the envy of all the
20 world.

21 Periodically, there are attempts to diminish
22 the founders' vision by conflating that exclusive
23 property right with a monopoly, but common sense tells
24 us that Walt Disney's exclusive right to the
25 reproduction and distribution of Pirates of the

1 Caribbean, for instance, is no more a monopoly in the
2 movies than your title to your car is a monopoly on
3 automobiles or transportation.

4 And, in fact, the FTC and the DOJ in
5 licensing guidelines have long held that they do not
6 presume a patent, copyright, or trade secret confers
7 market power upon its owner. And this basic premise,
8 though correct, I think actually improperly suggests a
9 correlation between the two. And we think the FTC
10 should consider going further to clarify that in
11 general intellectual property rights in and of
12 themselves do not confer market power.

13 I think there should be no doubt in the
14 minds of the Commissioners that intellectual property
15 rights are procompetitive, that they protect against
16 unfair competition and free riders, and that the
17 existence of exclusive rights has long been considered
18 and understood to be distinct from market power. And
19 that's because the power of that property right to
20 stimulate innovative and creative activity really
21 hinges on the ability to invest at very early stages
22 in those -- in that intellectual capital formation
23 that provides a pathway to development testing and
24 ultimately commercialization of a new and useful
25 product.

1 And in an environment where those property
2 rights are protected, we consistently see more
3 innovation, more creativity. Where they are less
4 protected, we don't see as much. That scenario,
5 unfortunately, is the reality in much of the world
6 today where intellectual property standards are very
7 low. And such a routine infringement is a form of
8 market failure for the innovative and creative sectors
9 and could even be considered an unfair method of
10 competition.

11 What does this mean for the United States?
12 You know, throughout a period of intense globalization
13 of international markets, the absolute and relative
14 strength of its intellectual property laws gave the
15 United States a competitive advantage and made it the
16 world's economic engine. Now, following decades of
17 globalization, the productivity edge in those sectors
18 has been dulled, especially because our trading
19 partners do not respect property rights at the same
20 standard that we do, creating an unfair playing field
21 for U.S. innovators and creators.

22 So we've sought at GIBC and the Chamber a
23 global commitment to enact and enforce intellectual
24 property rights at a higher standard, one that
25 empowers the creative capacity of all the world

1 citizens. That's why for the last six years the GIBC
2 has published its International IP Index, which is a
3 comparative law analysis, allowing like-for-like
4 comparisons among, at this point, 50 economies across
5 a range of categories of different intellectual
6 property rights.

7 And the data accumulated in the index
8 provides clear evidence of a strong correlation
9 between, number one, the standards of a country's
10 intellectual property system, the strength of their
11 standards, that is, and its innovative creative
12 output, its access to innovation and creativity, and a
13 whole host of other socioeconomic benefits, including
14 job creation in knowledge-intensive industries and
15 many others.

16 However, on the global stage, we continue to
17 see efforts to reduce intellectual property rights to
18 the lowest common denominator, and among them,
19 competition policy principles are being misrepresented
20 and abused in order to deny U.S. innovators and
21 creators the rights they deserve.

22 What happens at home matters abroad. The
23 U.S. is watched very closely by its counterparts
24 around the world, and we need to be careful about the
25 signals that we send. You know, we're here looking at

1 the period from now since 2011, and naturally, the
2 2011 report of the Commission forms a focal point for
3 that discussion. And whether or not you think that
4 the 2011 report got it just right, the fact is that it
5 was picked up and used by other actors in global
6 markets in ways that have disadvantaged U.S.
7 innovators and creators.

8 So where it's very possible in the U.S. with
9 our judicial tradition, our legal context, to take a
10 nuanced and complex approach to these issues, we have
11 to be very careful about the message that we're
12 sending to the rest of the world.

13 In similar fashion, seven years ago, the
14 U.S. Chamber supported enactment of the 2011 America
15 Invents Act, creating the Patent Trial and Appeals
16 Board. Concerns related to patent enforcement abuses
17 were at a peak, and it was important to a well-
18 functioning system that those be addressed. In its
19 implementation, however, we see some over-correction.
20 While the U.S. maintains the highest rated overall IP
21 system in the world, including on our index where the
22 U.S. scored 37.98 points out of a possible 40, there
23 have been concerns in some industry sectors regarding
24 restrictive patentability standards, the threat of
25 patent litigation abuse, and legal uncertainty

1 regarding the durability of patent rights.

2 We think that this does a disservice to our
3 innovative and creative economy because it dampens
4 enthusiasm for that initial investment. In a similar
5 fashion -- actually, you know, the good news is that
6 recent steps by the U.S. Patent and Trademark Office
7 have taken important steps to address some of these
8 concerns, and we look forward to continuing to work
9 with the FTC, with the USPTO, and other stakeholders
10 to make further progress.

11 Similar attention is due to the
12 modernization of Copyright Office operations, as well
13 as to addressing the global scourge of counterfeit and
14 online piracy that threatens both U.S. consumers and
15 its jobs. In all of these activities, the Commission
16 has a critical role to play in upholding the
17 constitutional promise of intellectual property-driven
18 innovation and creativity that has served the United
19 States so well. And we believe that a nuanced and
20 sophisticated approach to regulation is not exclusive
21 of a strong, clear, unequivocal political commitment
22 to property rights. A fair and competitive
23 marketplace demands no less. Thank you.

24 MR. DUBIANSKY: Thank you. We're just going
25 to move into questions now, and the first question

1 built upon the remarks of several of the panelists,
2 which is, what, in your experience, is the role of the
3 patent system in promoting innovation today?

4 Perhaps, Patrick, if you'd like to begin,
5 and then we can invite others to join as well.

6 MR. KILBRIDE: Thank you very much. So, you
7 know, the fact is that, you know, as I just sort of
8 reviewed, we believe the ability of the patent system
9 to stimulate innovative work is only as strong as the
10 system is -- produces rights that are reliable and
11 durable on the back end. So that means that we need
12 to do everything in our power not to address symptoms,
13 when we see those in the system, but root causes.

14 So, you know, when you hear about claims of
15 overpatenting, claims of poor-quality patents, the
16 answer is not to make it easier to invalidate all
17 patents; the answer is to spend the resources
18 necessary and the attention necessary to address those
19 problems on the front end.

20 So I know we heard this morning, for
21 instance, from Georgia Tech. There have been some
22 very interesting ideas about the application of
23 machine learning and AI to patent examination, but the
24 point is we cannot afford to just make it easier to
25 invalidate a property right. We have to get

1 examination right on the front end, as Barbara said,
2 to restore that presumption of validity so that
3 innovators can rely on the patent as a holder of value
4 as they make long-term, high-risk, capital-intensive
5 investment decisions.

6 MR. DUBIANSKY: Thank you.

7 Would anybody else like to join in? Tahir.

8 MR. AMIN: I mean, I would say that the
9 whole patent system and the idea of innovation has
10 become so muddled that we need to really understand
11 what do we mean, first, by innovation. I think when
12 we look at the patent system, it started off about
13 invention. And I think in the '60s, the language of
14 innovation came about. And you can probably check the
15 text for that if you look historically.

16 And innovation is a great driver of economic
17 growth, but that does not mean that it's deserved of a
18 patent. Innovation encompasses so many different
19 things -- marketing, design. It doesn't necessarily
20 mean inventiveness. Now, if you want to call the
21 label what it is, if you want to say the patent system
22 is not just about invention and it should be about all
23 these other things, then perhaps we need to really
24 start speaking what the value we put on these items
25 because the cost of society is far greater when we

1 give these -- if you want to call them exclusivities,
2 but when you see the strategies at play, they become
3 monopolies.

4 So I do believe that the patent system is in
5 need of correction, and the definitions that we use
6 are important in the narratives that we frame.

7 MR. SAUER: I have a more pedestrian
8 observation just real quick. From the perspective of
9 our kinds of companies, when you ask, like, how do we
10 use patents and why they are important, I would say
11 there are really three simple answers. First, to us,
12 they're important for licensing, partnering, and for
13 transferring business assets and intellectual assets,
14 right? So you use the patent instrument for orderly
15 dissemination of technology and getting partners.

16 Second, they're important, of course, for
17 investment and access to capital. And, third, this is
18 an observation I very often hear from our member
19 companies, that with all the other uncertainties that
20 are baked into the business model, you know, when you
21 develop products that more often fail than not and
22 where you have to sustain investments of hundreds of
23 millions of dollars or billions of dollars over a
24 decade or longer, there are so many other
25 uncertainties already built into that decision that

1 adding additional IP certainty by changing laws or by
2 court decisions actually become very highly leveraged
3 in business decisions.

4 You might say, really, our business is going
5 to change their behavior just because there's a 10 or
6 15 percent increased uncertainty on the patent assets?
7 Is that really going to, like, change the course of
8 the tanker? And it might, right, because you have to
9 think of it as being leveraged and layered on top of
10 all the other business uncertainties that exist until
11 a tipping point is reached and companies have -- I've
12 heard myself from colleagues in the industry who've
13 said, you know, we make our business decisions. When
14 IP changes, you know, we might as well go the other
15 way on a development program, and we might not go with
16 a high risk, maybe highly innovative program, but
17 we're going to invest and go and take forward another
18 development candidate that is perhaps less innovative
19 but promises less risk as well.

20 So that, I think, is often what I hear about
21 the role of the IP risk in the industry and how
22 leveraged it can become in corporate decision-making.

23 MR. DUBIANSKY: Matt?

24 MR. SCHRUEERS: I'll add something which
25 sadly, I think, echoes statements that were made in

1 the hearings in advance of the 2003 FTC report "To
2 Promote Innovation." So in that sense, you know, it
3 seems some things haven't changed, but in recent
4 years, surveys and empirical data on venture
5 capitalists have indicated that overpatenting or
6 uncertainty around patent rights has a substantial
7 negative impact on the willingness of VCs to put
8 investment in a particular sector. And that's
9 particularly the case in tech. And the availability
10 of patents by contrast to a particular startup has
11 relatively minimal positive improvement, and so it's
12 regrettable that we appear to be in the same place we
13 were back then.

14 So in that sense, I think it's similar to
15 what Hans was saying, is that the IP system does
16 impact investment decisions, and clearly it affects
17 different industries in different ways.

18 MS. FIACCO: I'll just add a little bit to
19 that. You know, we have members who are entrepreneurs
20 or who are representing entrepreneurs who need to
21 raise venture capital, and what we hear from them is
22 they need patents in order to get the venture
23 capitalists' attention. You can't take a trade secret
24 on a road show. You need to have at least your patent
25 applications on file, if not at least one issued

1 patent to obtain the investment, to take the
2 technology through to commercialization.

3 MS. MUNCK: Excellent. Well, in many ways,
4 I wish we could kind of meld this panel with the
5 venture panel that we had yesterday because I think
6 there's some interesting parallels and some
7 interesting sort of maybe change points. But one
8 other thing that we talked about so far on this panel
9 is the IP licensing guidelines and in a little bit the
10 2011 report.

11 And since our focus here is with innovation,
12 I'm going to paraphrase the beginning of the 2011
13 report, which says that innovation is key to meeting
14 society's unmet needs. It is risky and complex and
15 includes a number of steps from sort of idea to
16 development. And we talk about the role that
17 intellectual property plays in promoting innovation
18 because it protects investment and protects the ideas
19 from copying, but we also talk about the role that
20 competition plays in promoting innovation because it
21 drives others to enter into the market.

22 And so I say that because my next question
23 is really in looking at the years that have passed
24 since we issued the evolving IP marketplace report in
25 2011, how has substantive patent law changed in ways

1 that are relevant to your members and how is this
2 influencing incentives to innovate and invest in
3 commercializing technologies?

4 And, if possible, I'm interested sort of in
5 how you are striking the balance between patent
6 protection and competition and the roles that those
7 play in promoting innovation. So I think we'll start
8 with Barbara.

9 MS. FIACCO: Okay. Thank you. First, I
10 want to say that I think by the time the AIA was
11 enacted, you know, the dialogue definitely surrounding
12 the need for increased certainty in the patent system
13 had all come together and aligned. I mean, I think
14 one of the purposes of the AIA was to eliminate some
15 of the uncertainties that we were seeing in the patent
16 system and to improve it. And the switch to the
17 first-inventor-to file system really represents, I
18 think, the culmination of that consensus about the
19 need for additional certainty. So, you know, that's
20 definitely a positive.

21 Unfortunately, I think we've seen some other
22 developments that have led to more uncertainties in
23 the patent system. Certainly, some of those
24 uncertainties surround the PTAB, which I discussed in
25 my opening comments. It's caused, I think -- the

1 uncertainties around the PTAB have led to significant
2 costs and inefficiencies as patent owners and other
3 stakeholders figure out kind of the lay of the land
4 with the PTAB. I think it is stabilizing a bit. We
5 are seeing some improvements with the clean
6 construction rulemaking in particular, so that's going
7 to eliminate some of the uncertainty and some of the
8 inconsistency between district court litigation and
9 the PTAB, which is very good news.

10 The concern about serial challenges I think
11 is still very real and how to manage the situation
12 around, you know, a potential standing requirement,
13 particularly to the extent there's any uncertainty
14 surrounding, you know, what happens when a decision
15 from the PTAB is appealed and is there standing to
16 continue the appeal or are we in a place where there's
17 no appeal from particular PTAB decisions because of
18 the identities of the parties.

19 So there have also been a number of judicial
20 decisions that I alluded to in my opening statement.
21 TC Heartland on venue has upended some things in the
22 Lexmark decision on international patent exhaustion,
23 Akamai on undivided infringements. But by far the
24 most significant one for our members is the 101 issue.
25 There's no question that our members are

1 extraordinarily concerned about that. It's very
2 difficult to advise one's client about whether to file
3 a patent application, what the outcome of that patent
4 application would be.

5 And in some ways, the 101 situation is an
6 interesting kind of case study for some of the other
7 places where substantive law has changed, right. So
8 we're in a place where we have a patent system where
9 you file a patent application, you disclose publicly
10 what you believe your invention to be, and the quid
11 pro quo is that you, based on what you understand the
12 law to be, will obtain some patent protection that may
13 be the scope that you had originally hoped for but you
14 get some patent protection.

15 That's the quid pro quo that our system has
16 been based on for many years. And we've seen the
17 benefits of that. We've seen the disclosures that are
18 out there encourage other entities in the marketplace,
19 including sometimes one's primary competitor to design
20 around. And some of the big technological innovations
21 that we've seen over the years are, in fact, the
22 result of the design-around of the first patented
23 invention that's out there.

24 And so that's very concerning, and the
25 Section 101 law situation has certainly exacerbated

1 that problem and led our members to be concerned about
2 whether patent filings will continue or whether we'll
3 start to see companies maintaining more trade secrets.
4 And, of course, if something's maintained as a trade
5 secret, it's very difficult for innovation to build on
6 itself in that way. And so we have seen and heard
7 expressed from our members that this 101 situation is
8 really discouraging investment and innovation in
9 certain areas, especially those involving artificial
10 intelligence, healthcare diagnostics, and personalized
11 medicine.

12 And there's a real concern that this is
13 going to shift innovation and the innovation
14 activities outside of the United States to other
15 countries. And I'll leave others on the panel, I
16 think, to discuss maybe the details and the data
17 around the filings that we've seen around the world,
18 but there are some studies out there, including those
19 that we've cited in our 101 report, that suggest that
20 applicants aren't able to get past the patent subject
21 matter eligibility threshold in the United States but
22 are obtaining patents around the world on the very
23 same invention.

24 MS. MUNCK: Well, thank you. And I want to
25 open this up to the rest of the panel, and just sort

1 of noting the time, one thing I want to sort of flag
2 for people going forward is I hear a lot that, you
3 know, if we don't have patent protection we're going
4 to move to trade secrets on the one hand, but then I
5 talk to others who say, well, actually, they cover
6 very different rights and they're very complementary.
7 So I think I probably can't ask you that followup
8 question right now, but I'd like to sort of raise that
9 for people who are commenting on this because I think
10 it's a very big question, unless there's something you
11 want to say quickly because I don't want to prevent
12 you from talking about that.

13 MS. FIACCO: No, thanks.

14 MS. MUNCK: So I'll open it up to the rest
15 of the panel.

16 MR. SCHRUEERS: So let me jump in there. You
17 mentioned the intersection. I think it's very
18 appropriate for the FTC to be contemplating is the
19 impact of IP versus competition, as a vehicle, a
20 mechanism for promoting the public welfare. I think
21 they're both appropriately regarded as critical tools
22 in the innovation promotion toolbox. All those tools
23 should have clear substantive boundaries around them.
24 And you don't use a hammer to drive a screw.

25 And we see these kinds of fights happening

1 outside the IP space, right, and there's a lot of
2 discussion now about using competition law to solve
3 noncompetition issues because the noncompetition
4 issues are regarded as subjectively important, and
5 competition law looks like a pretty powerful hammer to
6 use. So we need to make sure that areas of the law
7 stay in their lane for design purposes. And in many
8 ways, I think our recent 101 jurisprudence is doing
9 precisely that.

10 I would note on the matter of serial
11 challenges which comes up rather frequently, the PTO
12 does have complete discretion over whether or not to
13 institute these, and so to suggest that this is a huge
14 problem implicitly suggests that the PTO doesn't have
15 the capacity to exercise that filtering function,
16 which I think is a hard argument to justify. And,
17 secondly, it's my understanding that only about 15
18 percent of patents are subjected to IPRs, and -- I'm
19 sorry, more than one IPR. I think that's right. And
20 the majority of those, it's only two. So I submit
21 that that may be overstating the problem.

22 Particularly one, as I mentioned in my
23 preliminary statement, our European counterparts
24 actually appear to invalidate or modify at a higher
25 rate in their opposition proceedings than we do.

1 Overall, I think the way the system has changed I
2 mentioned previously IPRs and the subject matter
3 reforms, the ways that the patent system has stayed
4 the same are equally important. And some of the data
5 that we saw earlier today has shown that many of the
6 problems that are regarded around patent assertion
7 entities have stabilized. They have not gone away,
8 they have stabilized. And insofar as we regarded that
9 as a problem ten years ago when we started talking
10 about the patent system and the data points are where
11 they were ten years ago, I submit we have more work to
12 do.

13 MR. KILBRIDE: Suzanne, maybe I could jump
14 in on the question you raised about patents and trade
15 secrets, just to, you know, share some observations
16 from someone who works with a really diverse set of
17 businesses and industries. I've seen a bit of a
18 breakdown on two levels.

19 You know, one, you talk about inventors, and
20 there's obviously a huge difference between an
21 inventor who's housed in a large multinational
22 corporation with, you know, incumbent market power and
23 a small inventor working out of their garage, you
24 know, investing their time and their money in a
25 startup. And to one, a patent might be a little more

1 than bragging rights, but to the other it's a business
2 model. So that's one thing.

3 And the other level that we have to consider
4 is the way companies use their intellectual property.
5 And I've seen a breakdown in the companies that we
6 work with between the industries where intellectual
7 property is part of the platform and really does stay
8 within the company and those where the intellectual
9 property is necessarily housed in their end product.
10 So that leads to some different commercial decisions.

11 What I think we want to avoid in terms of
12 promoting the national welfare is making decisions
13 based on commercial considerations versus those
14 fundamental economic principles, and so that's where
15 some of our arguments are based.

16 MR. SAUER: Just real quick because you
17 asked about changes in substantive patent law that
18 affect our members, of course, Section 101, that's the
19 one we hear about most and most consistently, but it's
20 not the only one. There are other areas. Written
21 description for antibodies under Section 112 is kind
22 of peculiar to our industry. Nonstatutory double
23 patenting.

24 So a list can be compiled of legal changes
25 that over time I think now implement different roles

1 from the ones that existed before. The reason why I
2 bring this up, and I don't want to let it go unsaid,
3 is that people consider these changes and these
4 Supreme Court decisions and court decisions mostly in
5 the context of what it means for procuring more
6 patents in the future, what does it mean for the
7 patentability of new innovations, and what sometimes
8 is forgotten is their impact on issued patents that
9 have been around for a long time and on which people
10 have relied to build their businesses.

11 The proposition is really if you, like, flip
12 the time line is you could tell an entrepreneur today
13 that, congratulations, you have just applied for a
14 patent and been granted one. You have complied with
15 all the rules, we all did a good job. And with the
16 expenditure of much effort, you can be pretty
17 confident that you have a good patent today. Go and
18 build your business.

19 In ten years, when it matters, and when that
20 patent might be reviewed in the context of litigation,
21 we may apply different standards to assess its
22 validity than the ones we just applied when it was
23 granted. You will not know what these standards are,
24 but go ahead and invest and build your business. You
25 know, we'll see, maybe you can hang onto your patent

1 in ten years, or maybe it will be declared bad because
2 the law changed along the way. Nothing could be worse
3 for investment and innovation in that.

4 And Section 101, as Barbara said, is only
5 one example. I think we've had a range of those, and
6 we really have to, like, consider the impact on
7 granted patents and the speed at which businesses
8 learn their lesson because when this happens two or
9 three times and when it happens to them, I think they
10 will go back to their patent counsel and other people
11 and ask, patent, fine, is there something else I can
12 rely on that will give me the certainty that I need
13 because this is a crapshoot, and if they are going to
14 keep changing rules on us, we need to find something
15 outside the patent system that will give us that
16 assurance or change our investments in a different
17 direction.

18 MS. MUNCK: We're just checking our time
19 here.

20 MR. DUBIANSKY: Well, earlier today and also
21 in our discussion right now, we've heard a lot of
22 mention of both the PTAB and the new IPR proceedings.
23 So my next question is in your experience, what has
24 been the impact of the AIA's creation of the new IPR
25 proceedings administered by the PTAB. I'll start with

1 you, Hans.

2 MR. SAUER: I want to make reference to
3 things I heard in the earlier panels this morning
4 which talked a lot about the PTAB. So one observation
5 that I get very much from our members is, yeah, the
6 PTAB was created, you know, its stated purpose was to
7 serve as a more cost-efficient and quicker
8 alternative, a substitute, if you will, for district
9 court litigation. And manifestly this is not the
10 experience we have in our membership. I talked about
11 Hatch-Waxman litigation earlier, that is the largest
12 proportion of IPR-related litigation that we have in
13 our industry.

14 And in those cases, in drug cases, we know
15 empirically that they are virtually never stayed when
16 there's an IPR. So district court litigation is
17 nothing, that we're aware of two, maybe three
18 pharmaceutical cases that actually received a stay
19 when an IPR was instituted. Overwhelmingly, what we
20 do see is that they operate as parallel adjudication.
21 A typical scenario is that a generic company -- drug
22 pharmaceutical company might -- so this is only small
23 markets -- the picture is different for biosimilars,
24 but for ANDA litigation, generic drug companies file
25 their Paragraph 4 certification with the FDA, which

1 means they have a time point at which they have a
2 pretty good idea of what's wrong with the patent or
3 what they think is wrong with the patent.

4 Then the patent is litigated for about a
5 year. Then the IPR challenge comes, and if it's timed
6 right, because the Hatch-Waxman litigation is not
7 stayed and is supposed to be under a 30-month time
8 frame, around the same time period, at the end of the
9 IPR, the district court litigation likewise will come
10 to a conclusion. And so the effect is that there's an
11 opportunity to hedge against the result of the
12 district court litigation. And if the district court
13 upholds the patent maybe the PTAB will strike it down,
14 even if they both agree that the patent is not
15 invalid, there is an opportunity for not one but two
16 appeals.

17 Right, so there's a lot of duplication built
18 into the system, baked into the system as it pertains
19 to pharmaceuticals that wasn't contemplated when the
20 AIA was negotiated. And without opining on other
21 experiences with the PTAB system and other industries,
22 I think in our industry, given the duplication of
23 adjudication that it produces, IPRs have served some
24 kind of function that wasn't contemplated when the AIA
25 was negotiated. It certainly doesn't unburden the

1 district courts.

2 MS. MUNCK: Hans, I just had a clarification
3 question. When you're seeing PTAB and district court
4 proceedings that are not stayed pending PTAB review,
5 is that localized within certain districts, or what's
6 the reasoning for that?

7 MR. SAUER: Oh, there's always, I think,
8 concentration in certain districts because if it's
9 Hatch-Waxman litigation, this is the one we understand
10 best that unfolds in maybe three districts in the
11 country. It's mostly Delaware, some New Jersey, and a
12 few other places. It's not the courts. I think it's
13 an expectation that these litigations by statute are
14 supposed to proceed under a 30-month time line. So I
15 do think that judges who handle these Hatch-Waxman
16 cases feel that they ought to proceed because
17 everybody is waiting for a result. The FDA might want
18 to approve the generic drug but can't do so until
19 after the expiration of 30 months or resolution of the
20 litigation.

21 So there is a sense that there's benefit to
22 resolving these disputes at least promptly without
23 sitting around for a year and a half and waiting for
24 the result of an IPR. And, now, keep in mind, right,
25 the kill rates in IPR aren't what they used to be at

1 the very beginning, so there's a pretty good prospect
2 that if a pharmaceutical patent or a biologics patent
3 undergoes an IPR, it might emerge with claims intact
4 at the very end, and then we're just back in district
5 court because invariably the defendants have other
6 defenses that they couldn't have brought in IPR and
7 that they reserve for a second round of litigation in
8 district court.

9 Right, so I do believe that judges often
10 feel there's a risk that the IPR is going to lead to
11 more delay than expedient resolution and it's going to
12 cause duplication of effort rather than unburdening
13 the district courts.

14 MS. MUNCK: Thank you.

15 MR. DUBIANSKY: Well, keeping an eye on the
16 time, I'd like to give some of our other panelists an
17 opportunity to respond prior to the conclusion of our
18 hour. So perhaps, Tahir, would you have anything to
19 say in response?

20 MR. AMIN: Yes. I just want to take a step
21 back a little bit just looking at the broader system.
22 It's kind of ironic that we hear the complaints of
23 serial challenges, yet we have serial continuation
24 applications to get a patent in the first place. So
25 if we talk about front-end problems, there you have a

1 front-end problem straightaway. We might not end up
2 in litigation or these investment issues if we solve
3 these matters earlier.

4 The other thing that I find interesting is
5 there was an FT article that talked about how the
6 branded pharmaceutical industry uses the PTAB quite a
7 lot. So on the one hand, the branded industry
8 pharmaceutical industry is complaining about the PTAB,
9 but then on the other hand, it uses it itself. It
10 seems to me to be kind of hypocritical to not want the
11 PTAB or try and diminish it but on the other hand to
12 try and use it as much as possible when they need it.
13 And I think this is where having the PTAB and having a
14 strong IPR system is important for a democratic patent
15 system.

16 And we've heard the issue of standing being
17 a problem. I think there's a lack of standing in
18 courts when you think of who can actually bring a
19 patent invalidation in court. Consumer people,
20 groups, public interest people are not allowed to have
21 standing in courts unless you're infringing the
22 patent. What kind of patent system is that? I don't
23 believe that exists anywhere in other Western
24 developed countries where you can't actually have the
25 right to stand and bring an action.

1 So when we talk about these issues, let's
2 look at it in the broader sense. We hear a lot of
3 these complaints about what the industry needs, but I
4 feel we're gearing towards where the term "innovation"
5 has become a monopoly power. It's anytime you use the
6 word "innovation" it should be overprotected. And
7 personally I think the IPR and the PTAB system is a
8 minuscule check on some of that, and it's actually
9 being whittled away, particularly because the industry
10 -- the pharmaceutical industry tried to extract
11 pharmaceutical patents in 2015 from the IPR system.

12 So it already showed that it didn't want it,
13 so hasn't really allowed it to work. And we've seen
14 it scaled back, and even Director Iancu in his speech
15 the other day, where he's calling it balanced, but
16 he's really saying anybody who's talking about patent
17 abuse is really anti-innovation So I think there's a
18 lot of work to be done.

19 MR. DUBIANSKY: Thank you.

20 Would anybody else like to speak to this?

21 MR. SCHRUERS: Let me say a word about IPR.
22 And while I can't comment on the Hatch-Waxman issues
23 that Hans was referring to, I know from our
24 perspective, IPR has provided a very cost-efficient
25 procedure for determining validity before an expert

1 tribunal as opposed to the alternative where
2 ultimately you're winding up -- you can wind up
3 determining validity before, at best, an inexpert
4 federal judge who is skilled but a generalist. And
5 having the opportunity to move these validity
6 questions to an expert agency of judges trained in the
7 law and the technology has provided extraordinary cost
8 savings over the alternative of doing that through
9 civil litigation, which isn't to say it's free.

10 The IPR processes are expensive, but our
11 back-of-the-envelope calculations is that billions of
12 dollars literally in litigation costs have been
13 avoided due to the PTAB's processes. And that's
14 critical and due exclusively to the availability of a
15 mechanism for assessing validity that's not in federal
16 district court.

17 MR. KILBRIDE: Maybe I could just add
18 that -- you know, again repeat that the U.S. Chamber
19 supported the act that created the PTAB, that we see
20 value in a mechanism that provides a time-effective,
21 cost-effective alternative to the courts. However,
22 it's important that in its operation it doesn't
23 undermine the reliability of patents as a store of
24 value such that businesses are able to make long-term
25 investment decisions. And in its operation over the

1 last six years I think a number of problems that have
2 been raised today are significant -- the serial nature
3 of challenges, which does exist; the differing
4 standards from the courts; and the reality that unless
5 a patentholder gets a final written decision affirming
6 their claims that they have no certainty throughout
7 the life of the patent.

8 And that's a problem for our system. USPTO
9 Director Iancu has taken some steps to make this work
10 better. We're interested to see how they work and
11 want to work with all industries to make it as useful
12 and effective as possible while retaining that strong
13 store of value in the U.S. patent.

14 MR. DUBIANSKY: Thank you.

15 Barbara.

16 MS. FIACCO: So I just want to add a couple
17 things, and this is really more my own perspective as
18 a patent litigator rather than speaking on behalf of
19 the association. But, you know, we can talk a lot
20 about the data and how many serial challenges there
21 have been or not. The threat of redundancy, however,
22 is one that I have to address with every client I
23 speak with who's considering enforcing their patent
24 rights.

25 And that's changing the calculus of the

1 decisions that patent owners are making about whether
2 and when potentially to bring a district court
3 litigation, knowing that even if they assert one
4 patent, they could face several petitions directed to
5 the same patent in addition to the district court
6 litigation. And if those petitions are filed just
7 before the one year bar, it's highly unlikely that the
8 district court's going to stay the litigation and the
9 defendants actually may choose not to because it's
10 part of their litigation strategy to run up costs, so
11 something to be aware of.

12 And I'll just throw out with my AIPLA hat
13 back on that according to our economic survey, the
14 average cost through trial for a single PTAB
15 proceeding is not cheap. It s \$324,000, which is
16 something else to think about.

17 MR. DUBIANSKY: Well, thank you. And given
18 the time, I think we'd like to shift into giving
19 everybody the opportunity to make probably two minutes
20 of closing remarks. But as we do so, we received a
21 number of questions from the audience, and there's one
22 in particular I think is rather good and perhaps you
23 can think about it as you make your closing statement.
24 And that is, what is on your patent policy wish list
25 as we gear up for the next congress. So I invite you

1 to respond to that or make any other statement you
2 like, perhaps going down the line and beginning with
3 you, Barbara.

4 MS. FIACCO: Well, I think I've already
5 shared a piece of that. I think the Section 101
6 legislative reform is something the AIPLA has been
7 speaking about with IPO, with other bar associations,
8 and others in the industry. I think that that's a
9 particularly important reform effort for us. That's
10 the one that's kind of at the top of our radar screen
11 at the moment.

12 And let me just close really by thanking you
13 all again for the opportunity to have this discussion.
14 I think that all of us here have benefitted from it.
15 And there are a lot of cooks in the kitchen, as
16 someone said this morning. There's a lot of pieces to
17 this puzzle about the changes in the patent landscape,
18 and we just encourage you to be comprehensive in your
19 studies, incorporate a range of perspectives from the
20 various stakeholders, and collect data on all the
21 trends across all the sectors in order to really
22 assess the legal landscape. And we thank you for your
23 efforts in that regard.

24 MR. DUBIANSKY: Great. Thank you.

25 Matthew.

1 MR. SCHRUERS: So let me try and answer the
2 question and sum up at the same time. I think for the
3 reasons I've mentioned before, the most, the highest
4 value that can come out of patent policy right now is
5 I think everyone would agree increasing the certainty
6 for all the stakeholders in the system. We view one
7 particular way of doing that is to improve the output
8 and quality of PTO's work. You know, obviously the
9 PTAB is one mechanism by which that is done. Having
10 greater certainty around subject matter is another
11 vehicle. And whether those are legislative wish items
12 or just generic wishes, I think, you know, I'll leave
13 open. But those are something that I think we can all
14 agree is a shared objective, and I hope we can find
15 ways to pursue that next year.

16 MR. DUBIANSKY: Thank you.

17 Hans.

18 MR. SAUER: So my wish for next year, I
19 think there's been too much patent reform too quickly.
20 And so I think what we should have over the next
21 couple years is that we take a breather to work
22 through the substantive implementation of the AIA. I
23 hope that the scope of patent-eligible subject matter
24 is going to settle, but I'm just going to second
25 Barbara there. I'm not optimistic that this is an

1 area of the law that the courts can develop and that's
2 amenable to, like, good judicial development.

3 On the PTAB side, a wish for harmonization
4 of legal standards with those that apply in district
5 court. I think adjudicators of issued patents should
6 use the same legal standards. A patent should mean
7 the same thing to different adjudicators, and it
8 should be upheld or struck down on the same quantum of
9 proof. I think that's only good policy. I would hope
10 that we can take steps towards that. But overall, I
11 think I'm hoping for a breather and for the system to
12 recalibrate and kind of calm down. We don't need more
13 patent reform too soon.

14 I think we need incremental change, and I
15 think we're taking good steps. I think this current
16 Administration and Patent Office leadership is working
17 in the right direction, and we were encouraged to see
18 the level of public support that Director Iancu and
19 Patent Office leadership seems to be gaining and
20 gathering for their current initiatives. We hope this
21 will continue.

22 MR. DUBIANSKY: Thank you.

23 Tahir?

24 MR. AMIN: Just to piggyback on what Matt
25 was saying, I think we need more equality coming from

1 the USPTO, and I think one of the ways to do that --
2 my wish at least -- is that we really start looking at
3 the obviousness standard. I think post-KSR, despite
4 that providing a little bit more clarity, the courts
5 have never really applied it in any real way, and I
6 think we barely have an obviousness standard. It's
7 just marginally -- slightly more than a novelty
8 standard, and I think more patents are being granted
9 just on the basis of utility and meeting an unmet need
10 than actually having real inventiveness.

11 So I would like to see a stronger
12 inventiveness standard that would actually eliminate
13 many of these arguments that are going on in terms of
14 litigation and fluctuation and investments and so on.
15 I think there isn't actually enough patent reform. I
16 think we need more. It hasn't gone fast enough, and
17 that's why we're in the predicament we're in where
18 we're having more monopolies today than we've ever had
19 since the Gilded Age. And that is a fundamental
20 problem for society, and it's also a problem for
21 innovation as well.

22 MR. DUBIANSKY: Thank you.

23 Patrick.

24 MR. KILBRIDE: Yeah, thanks. I guess
25 topping my wish list I would have to look externally

1 to the role that the U.S. plays in the global economy.
2 And I think it's incredibly important that the U.S.
3 really step out and lead the creation of a global
4 system that empowers innovators and creators
5 everywhere to develop their latent capacity.

6 You know, 25 years after the WTO TRIPS
7 agreement was created, we still see vastly different
8 standards of intellectual property treatment around
9 the world. Only a handful of countries protect
10 intellectual property at the standard that the U.S.,
11 the U.K., and a handful of other countries do. And
12 those countries are disadvantaging themselves both in
13 terms of their innovative output and their access to
14 the innovative product services and technology of the
15 U.S. and others. It's absolutely critical that the
16 U.S. speak with a clear voice, that it be a champion
17 for certainty, and that we not send mixed signals.

18 So I'd really like to see everyone rally
19 around the system that has gotten us to where we are
20 at today. We're better off than at any time in
21 history across all sorts of different metrics, and we
22 can't forget how we got here. Thank you.

23 MR. DUBIANSKY: Thank you.

24 Great. Well, thank you, and I'd like to
25 thank our panelists. We're now going to take a short

1 break and resume at 3:15.
2 (Applause.)
3 (End of Panel 3.)
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1 PANEL 4: ECONOMIC PERSPECTIVES ON
2 INNOVATION AND IP POLICY

3 MR. EZRIELEV: Good afternoon. Welcome to
4 the Economic Perspectives on Innovation and IP policy
5 Panel. This is the last panel of the day. I am Jay
6 Ezrielev from the FTC. I'm an economic advisor to
7 Chairman Simons.

8 MS. CARLSON: Hello, I'm Julie Carlson. I'm
9 an economist in our Bureau of Economics here at the
10 FTC.

11 MR. EZRIELEV: We'll be your moderators for
12 this panel. And before we begin, we want to give the
13 standard disclaimer. To the extent that we as
14 moderators express any views, those views are our own
15 and not that of the Commission.

16 We'd like to welcome people who are just
17 tuning in to this panel or just coming in to watch
18 this panel. And a special thank you to those of you
19 who have stuck around all day and watched a full day
20 of hearings. Your reward for sticking around is
21 hearing six economists have a very thoughtful
22 discussion on the economics of innovation.

23 We have a very distinguished panel of
24 economists today to discuss the economics of
25 innovation and IP. I'm going to give very brief

1 introductions. Rich Gilbert is Emeritus Professor of
2 Economics at the University of Berkeley and my former
3 colleague at Compass Lexecon.

4 Jim Bessen is Executive Director of the
5 Technology and Policy Research Initiative and a
6 lecturer at Boston University School of Law.

7 Michael Frakes is Professor of Law and
8 Economics at Duke University School of Law.

9 And Anne Layne-Farrar is Vice President at
10 Charles River Associates and also my former colleague
11 at Compass Lexecon.

12 So we're going to have a discussion on lots
13 of topics today, but we will kick off the discussion
14 where each panelist will give an opening five-minute
15 presentation, and after that we'll have a panel
16 discussion.

17 Our colleagues from the FTC will be coming
18 around and collecting audience questions, so please
19 write down your best questions, and we hope to have
20 time to cover these questions at the end of the panel.

21 So we're going to kick things off with Rich
22 Gilbert who will be speaking about antitrust and
23 innovation.

24 MR. GILBERT: Well, thanks, Jay. I'm happy
25 to be able to address these hearings, and also kudos

1 to the Commission for continuing to have hearings and
2 collect information and input that's relevant to your
3 enforcement mission.

4 So, now, our topic is innovation and
5 intellectual property today. It goes well with the
6 21st Century theme of the conference. And a common
7 perception is that antitrust enforcement is up to the
8 task of promoting competition in innovative
9 industries. That was the conclusion, for example,
10 of the Antitrust Modernization Commission. Most
11 people -- when I ask most people, you know, are the
12 antitrust laws adequate for addressing innovation
13 issues, does anything need to be changed, most people
14 say, no, they're fine, just leave them as is.

15 And it's true that the antitrust laws are
16 very flexible. The Sherman Act doesn't say much about
17 either Section 1 or Section 2 standards. The Clayton
18 Act doesn't say a whole lot more. But I think the
19 view that nothing really needs to change is actually
20 not correct. And there are many obstacles to
21 effective antitrust enforcement for innovation.

22 First of all is the obvious point that
23 antitrust policy has evolved over the past hundred
24 years with a focus on short-term consumer welfare. In
25 many respects, this is sort of a victory for

1 economists who have been saying, you know, it's all
2 about consumer welfare and allocative efficiency. But
3 at the same time, a focus on allocative efficiency,
4 which is really price-cost margins, is not necessarily
5 the right objective if the purpose is to provide
6 incentives for dynamic competition.

7 And it's also curious, anyone who has looked
8 at the history of the antitrust laws, there's nothing
9 about consumer welfare and allocative efficiency in
10 the history of the Sherman Act. If anything, the
11 Sherman Act was about promoting the ability of lots of
12 firms to compete in a context where there were large
13 trusts, not terribly unlike the situation we face
14 today.

15 Now, there are other challenges, somewhat
16 technical, that are nonetheless very important. One
17 is the strong emphasis in antitrust enforcement on
18 market definition. And, again, market definition was
19 not written into the Sherman Act, but it quickly got
20 included in there. Many economists -- I would say
21 almost all economists these days, if I can speak for
22 the profession -- and even many lawyers have been
23 pushing back against market definition as a necessary
24 predicate for antitrust enforcement.

25 Even the latest version of the Horizontal

1 Merger Guidelines kind of subtly takes this view by
2 inverting the positions of competitive analysis and
3 market definition. It used to be market definition
4 first, followed by competitive analysis, and now it's
5 switched. And that's a real problem for innovation.
6 Why, first of all, with a few narrow exceptions of
7 contract research and development, R&D is not traded
8 in a market.

9 So if you want to talk, even though the IP
10 guidelines talk about a research and development
11 market, we know it's not a market in the usual sense
12 of trade. And that's a problem if you follow the
13 precedent in the law.

14 The other problem is that innovation
15 effects, whether you're talking about actually
16 promoting R&D or whether you're talking about
17 promoting future competition in product markets, it's
18 just very hard to define these markets, particularly
19 in a world where there's a high standard for proof.
20 Increasingly in merger cases, we want to see things
21 like difference-in-difference analysis and really
22 getting down to very precise effects.

23 Well, those are hard to do when you're
24 talking about markets that may not even exist yet.
25 Or if they do exist, you don't know what the

1 competition is going to be a few years from now. And,
2 you know, that doesn't mean that these things aren't
3 important. You know, another problem is that you
4 might have a situation where the effects are to
5 advance or retard, delay competition. And that's a
6 big issue as well.

7 Well, I'm getting the hook here on having
8 to finish up. I think we'll be able to talk about a
9 lot of these other issues. But my own point, and I
10 really want to get to divestitures and innovation
11 remedies at some point, but my own point is that we've
12 been just a little bit too optimistic about antitrust
13 and innovation and our ability to use antitrust policy
14 to stop innovation concerns.

15 MR. EZRIELEV: Thank you, Rich.

16 Next we have Jim Bessen.

17 MR. BESSEN: Thanks for having me. As many
18 of you I assume know, industry concentration has been
19 rising in the U.S. This is a graph for the
20 manufacturing sector of the top -- the market share of
21 the top four firms since the 1980s. It's gone up
22 about 5 percent. And similar graphs could be seen in
23 every major sector of the economy -- services,
24 wholesale, retail.

25 Many people look at a graph like this and

1 assume it means that competition is declining and that
2 this is a real challenge for antitrust policy. I'm
3 going to suggest that it's actually something
4 different. It's not about competition declining, but
5 it poses a major challenge for IP policy. I have an
6 analysis, and I can go into it in detail later if
7 there's interest, but what's actually causing most of
8 the increase in U.S. industries outside of big tech
9 are major investments in proprietary information
10 technology.

11 Think about Walmart's investments in its
12 logistics and information systems that allow it to be
13 highly efficient and as a result have allowed it to
14 grow much faster than its rivals and come to dominate
15 the general merchandise market. We're seeing similar
16 investments in all areas of the economy by top firms
17 to the tune of \$250 billion a year. That's almost as
18 much as firms invest in tangible capital, net of
19 depreciation, so it's a very large investment being
20 made, and it's paying off in terms of increased
21 productivity.

22 Well, that sounds like good news. Why would
23 that be a problem? So the problem is that the
24 productivity is growing for the top firms in the
25 economy but not for everybody else. So this graph

1 shows -- the red line shows the productivity of the
2 top 50 public firms, and it's continued to go up at a
3 good rate after 2000, much faster than the
4 productivity of all of the rest of the firms.

5 And you have to ask, well, what's going on
6 there. In a sense, there is a diffusion gap that the
7 new technologies are being developed, but in contrast
8 to the way things worked in the past, they are
9 spreading to the rest of the economy more slowly. The
10 rest of the firms are being left behind. And this has
11 significant economic consequences in terms of things
12 like average productivity.

13 This is true not just in the U.S. but in the
14 OECD nations generally. The OECD has a report showing
15 a productivity graph growing across developed nations.
16 So it's not just an issue of U.S. antitrust policy
17 that's causing these changes.

18 So why is this significant? And the
19 significance has to do with the importance of
20 sequential innovation. We tend to focus when we think
21 about innovation about the big inventions, the first
22 inventions. So the power loom, for instance, was a
23 great invention which powered the industrial
24 revolution. From the hand loom to the first power
25 loom in the U.S., it increased the output per worker

1 over two times. That was tremendously important and,
2 like I said, it helped spur the industrial revolution.

3 But that was really only a small part of the
4 productivity growth that came related to the power
5 loom. So if you look over a hundred-year period that
6 initial doubling is really very small compared to what
7 happened in the century that followed. There was this
8 sequential innovation, and it consisted of two main
9 things. One was the development of a skilled labor
10 force who knew how to use these technologies such as
11 the power loom and in a more and more efficient way.
12 And many of those people also became tinkerers and
13 relating to the second cause, which was the series of
14 incremental improvements, incremental inventions,
15 which are sequential in innovations, which allowed
16 productivity to continue to improve.

17 So when we have a situation where
18 technologies are not diffusing or not spreading, we
19 are cutting short this pattern of important sequential
20 innovation. So what does this say about policy? In
21 general, IP policy needs to balance the incentives
22 that we provide for providing the initial innovations
23 with the incentives we provide for diffusing those
24 inventions and sharing them and the associated
25 knowledge.

1 And what that growing productivity gaps
2 suggest is that we have a less optimal balance today
3 than we had in the year 2000 because things seemed not
4 to be spreading as rapidly. Policy is not the only
5 factor. I should emphasize, a lot of this may be
6 simply the technology. We're dealing with new sorts
7 of information technologies. These are complex
8 systems. They may be more difficult to spread in a
9 way. But there are -- there is a body of evidence
10 suggesting there are policy areas that do affect the
11 rate of diffusion. In patents, we're talking largely
12 here in information technology, so software patents.
13 We have some evidence that software patents reduce the
14 rate of sequential innovation from Galasso and
15 Schankerman.

16 We have several studies now that have looked
17 at the impact of patent assertion entities, or
18 popularly patent trolls, and their litigation and that
19 these reduce R&D, particularly for smaller firms.

20 Another policy is employee noncompete
21 agreements. We've seen a tremendous spread of these.
22 We have good evidence now that they reduce labor
23 mobility, they reduce entrepreneurship. Another area
24 closely related is the inevitable disclosure doctrine
25 and trade secret law. And, again, we have some good

1 economic studies which are now showing that these
2 reduce labor mobility and reduce innovation.

3 So these are some policy areas where policy
4 in some cases seems to be going against diffusion,
5 making it more difficult or slowing the spread of new
6 ideas. These are some things we need to think about
7 in the bigger picture of innovation. Thank you.

8 MR. EZRIELEV: Thank you, Jim.

9 Next up we have Michael Frakes.

10 MR. FRAKES: Thank you for having me here
11 today. I'm going to speak in somewhat broad terms
12 regarding what we've learned from the economics
13 literature on the fundamental question of whether
14 patent systems incentivize innovation. To begin, as
15 many of us are aware, you know, we may be concerned
16 that new ideas may be under-incentivized, given that
17 ideas take on characteristics of public goods.

18 One of the chief promises of patent system
19 is that by allowing innovators to earn rents through
20 exclusion rights, people and firms may be willing to
21 innovate and overcome free-riding concerns, but have
22 we actually seen this promise met in practice? At the
23 outset, I should say any attempt to empirically
24 approach this question with confidence encounters
25 notable obstacles, arguably the most challenging of

1 which is the construction of the necessary
2 counterfactual that is to be able to effectively
3 compare the extent and type of innovation we would see
4 in a system without patent rights if we could also
5 observe that same system with such rights.

6 One line of research produced by the
7 Economics Academy that I perhaps turn to most when
8 thinking about this question is that from Professor
9 Petra Moser. For these purposes, Petra looked at sort
10 of mid/late 19th Century Northern Europe, a time where
11 this region was characterized by notable heterogeneity
12 across countries and the strength and existence of
13 their patent systems, but where this heterogeneity is
14 what economists would call plausibly exogenous, as it
15 was perhaps driven by various political traditions
16 rather than by characteristics of the innovation
17 environment. This provided Professor Moser with the
18 means to sort of make comparisons across different IP
19 regimes. And in a very clever fashion, she acquired
20 data on innovative activity by turning to records of
21 innovation exhibits at two of the major world's fairs
22 at the time.

23 So the following is just a brief summary of
24 her findings from this really interesting work.
25 First, countries without patent protection at that

1 time still had very high rates of innovative activity.
2 Second, across all innovations at the fairs, only a
3 small portion were reported to be patented. That
4 being said, there was a relationship between whether
5 an innovation was patented and whether the innovation
6 won a prize based on its level of usefulness and
7 quality. So while patent systems may not have been
8 major drivers of innovation levels, patents may have
9 led to higher quality inventions.

10 But it is her next set of findings that I
11 actually find most interesting from her work. In
12 countries without patents, we see a greater focus on
13 innovation and industries where secrecy operates as an
14 effective alternative to patents, mainly in industries
15 with innovations that are harder to reverse engineer,
16 or as in countries with patent protection, we saw a
17 greater amount of innovative activity in industries
18 where secrecy was arguably less effective. So I'd say
19 that the bottom line from this analysis is that
20 patents do seem to play a role at least in shaping the
21 direction of technological growth.

22 Now, I perhaps have two concerns with this
23 discussion thus far. You know, first we're talking
24 about innovative activity from a very long time ago.
25 And as Jim mentioned, you know, we're also speaking --

1 to get to the idea of sequential innovation -- so far
2 I've just been speaking about innovation in rather
3 broad terms, perhaps, you know, combining both notions
4 of isolated, stand-alone innovation and follow-on
5 cumulative innovation, when the reality is when we
6 sort of look at innovative activity today perhaps much
7 of it is truly cumulative in nature in the sense that
8 existing technologies may be inputs into newer
9 technologies, which raises a more specific question
10 for our literature, you know, what effect do patents
11 have on follow-on innovation.

12 And this question has been the subject of
13 much theoretical literature, which I won't discuss in
14 the interest of time, but from what I gather from this
15 theoretical work, there really is a lot of ambiguity
16 surrounding this question, so I think at the end of
17 the day, it really is, you know, quite an empirical
18 question.

19 And so what have we learned from the
20 empirical literature? Well, let me just turn briefly
21 to two very nicely done recent studies, one of which
22 Jim had just alluded to. But first is a forthcoming
23 study by Heidi Williams and Bhaven Sampat that look at
24 the effect of whether a patent is granted on human
25 genes on follow-on scientific research and follow-on

1 commercial research investments.

2 Williams and Sampat are also very mindful of
3 the need I raised above to sort of develop a
4 convincing counterfactual environment. And the quasi-
5 experimental framework that they take is really quite
6 clever. They rely on what is effectively random
7 assignment of patent application to examiners,
8 combined with heterogeneity and the leniency of
9 examiners to really produce what is in effect, you
10 know, randomization and whether applications are
11 granted or not.

12 So taking this approach, Professors Williams
13 and Sampat essentially find really no meaningful
14 effect of patents on follow-on innovation, at least in
15 this gene context. And that raises the question about
16 what about other contexts. And, here, I think it's
17 perhaps helpful to turn to recent research by
18 Professors Alberto Galasso and Mark Schankerman, which
19 Jim had just mentioned.

20 And, in fact, they're actually taking a very
21 similar methodological approach to that taken by
22 Williams and Sampat, but instead they're looking at
23 what happens when courts invalidate patents, creating
24 the necessary counterfactual by drawing on random
25 assignment of judges and judge heterogeneity and

1 patent invalidation rates.

2 Their findings are interesting but need
3 a little bit more explanation. They find that
4 patents impede follow-on innovation but only in very
5 specific scenarios. For instance, they find that
6 patent invalidations have a significant impact on
7 cumulative innovation in the fields of computers and
8 communications, electronics, and medical instruments,
9 but they find no effect for drugs, chemical, or
10 mechanical technologies.

11 Additionally, they show that their
12 entire findings are actually driven by one specific
13 scenario, the amount of innovative activity by small
14 innovators increases when patents by larger firms are
15 invalidated. So the bottom line is, is there perhaps
16 some evidence that patents may, in fact, impede
17 follow-on innovation but only in select circumstances.
18 I'm going to stop there for now.

19 MR. EZRIELEV: Thank you, Michael.

20 Next up we have Anne Layne-Farrar.

21 MS. LAYNE-FARRAR: Thank you. I'm going to
22 switch gears a little bit and talk about a very
23 particular kind of player in the marketplace, and that
24 is a form of PAE, patent assertion entity. There's
25 one aspect of a PAE that's referred to as a privateer

1 or, less pejoratively, a hybrid PAE. And these are
2 patent assertion entities that maintain a financial
3 back end with the patent assigner. These were not
4 covered in the FTC's case study that was released in
5 2016. It's a narrower subset of the PAEs.

6 And the claim in the theoretical literature
7 is that these entities impose an innovation tax on
8 whatever industry they're operating in. The arguments
9 are similar to those made for PAEs in general but with
10 some specifics added. For example, that in addition
11 to acquiring and asserting low-quality patents for
12 nuisance value settlements, they also target the
13 practicing entity from whom they received the patent
14 as a means of raising rivals' cost, which is an
15 antitrust issue.

16 Until now, however, there hasn't been any
17 empirical work. It's all been legal and theoretical.
18 My coauthors and I have the first round of our
19 research on quantitatively testing some of these
20 implications coming out in the next few months in The
21 Journal of Empirical Legal Studies.

22 So very briefly, just a thumbnail sketch of
23 what we found in this first round of research, and
24 that is at least from the quality -- patent quality
25 perspective of the theory, we are not finding support

1 for the claim that these entities are acquiring low-
2 quality patents to assert for nuisance value.
3 Instead, an objective patent measures, patent quality
4 measures that are accepted in the economics
5 literature, we find that the privateers are acquiring
6 patents that look like other litigated patents, in
7 some technology areas, even higher quality than other
8 litigated patents or other PAE-held patents.

9 Certainly, the odds of a patent being held
10 by a privateer increase with both the scope of the
11 patent and certain quality measures. And not
12 surprisingly, not differentiating this theory or any
13 other theory, the odds of a patent being litigated are
14 higher when they're in the hands of a privateer.
15 That's consistent both with this antitrust tax on
16 innovation theory, as well as other theories such as
17 these are just profit-maximizing entities who create
18 an intermediary or liquidity within the marketplace so
19 it's not a differentiating factor.

20 And, lastly, we've just begun to look at
21 litigation timing, and we found thus far that
22 privateers -- patents held by a privateer experience
23 their first litigation event later than patents held
24 by others. Now, that could either be because the
25 privateer is holding on to a patent longer as a means

1 of raising the damages over time, which would be
2 consistent with an innovation tax theory, or it could
3 be simply that the reassignment process takes a while
4 to work out, and that once in the hands of the hybrid
5 PAE, assertion is relatively quick after that. That's
6 something we're investigating now.

7 But thus far, at least one aspect of the
8 innovation tax theory is not confirmed with an
9 empirical look, and that is the quality piece. Thank
10 you.

11 MR. EZRIELEV: Thank you, Anne.

12 So next we'll kick off the panel discussion,
13 and the first question is for Rich. Rich, you spoke
14 about the need to look at incentives to innovate in
15 antitrust analysis. But here the big challenge is how
16 do you identify the incentives to innovate in the
17 context of antitrust in reviewing mergers. Is there a
18 reliable set of tools that policymakers could use to
19 identify mergers that may impede innovation or
20 alternatively incentivize innovation? And, if not,
21 what are we to do?

22 MR. GILBERT: Well, in terms of, you know,
23 what signals do we look for, you can look for
24 basically three classes of evidence. There's the
25 corporate documents. You can look at theoretical

1 analysis. You can look at empirical analysis. An
2 interesting issue is that there's been a great deal of
3 work that's been done on the economics of competition
4 and innovation, both on the empirical side and on the
5 theoretical side.

6 Some people say it's the second most tested
7 relationship after the price-structure relationship in
8 economics. But there's not been a whole lot of work
9 that's been done that is relevant to the types of
10 enforcement levers that the antitrust agencies have.
11 So in other words, competition and innovation is
12 different from mergers and innovation, certainly
13 different from what you might encounter in a Section 2
14 case. And so you need to tailor the evidence to what
15 solutions that you have or the enforcement instruments
16 that you have.

17 Now, there is another way of thinking about
18 a whole class of innovation cases, which is potential
19 competition theory. There are many cases and many
20 traditional innovation cases, none of which, by the
21 way, have ever been tested in court, which is an
22 important caveat. There are many potential
23 competition cases. The problem is that the agency's
24 record on potential competition cases has not been
25 very good, but I would argue that innovation cases are

1 different, and if they did go to court, assuming that
2 the courts are not stuck in their old ways, which is a
3 big assumption, these cases should succeed.

4 I'll give you an example. The FTC's
5 challenge of the Thoratech-HeartWare merger where I
6 was involved as a consultant to the FTC was, in my
7 opinion, a very successful challenge. Now, I think
8 you gave me the opening to also talk about solutions.
9 Many innovation cases are settled with remedies, and
10 particularly merger cases. And even though the FTC
11 and other enforcement agencies have conducted a lot of
12 retrospective analyses of merger remedies, they've
13 been almost entirely focused on price effects.
14 There's been very little sort of historical studies of
15 innovation, the success of innovation remedies.

16 I've done some work on this question. And
17 the preliminary results are not at all encouraging.
18 There have been a lot of remedies in merger cases that
19 were supposed to address innovation concerns that
20 turned out to be really unsuccessful. The assets went
21 to someone who then either did not pursue a desire to
22 R&D at all or the company went bankrupt and was bought
23 by another company that also did not pursue the
24 desired R&D direction.

25 This is a big problem, and what does it mean

1 for merger policy? Well, it doesn't mean -- one
2 lesson might be to be more aggressive and not accept
3 these consent decrees. That actually doesn't work
4 because if you adopt a more aggressive stance in
5 merger enforcement, what people are going to do if
6 they have overlapping activities that they can divorce
7 from the deal and are not critical, essential for the
8 deal, they'll fix the transaction first. And they'll
9 do it with effectively a spinoff that has no reason
10 why it would be more effective as an enforcement
11 remedy than what the agency would have done. So it's
12 really quite a dilemma.

13 I do think that one area that is promising
14 and is actually related to the comments of other
15 people on the panel is a number of compulsory
16 licensing obligations have been pursued, and those in
17 my analysis seem to have generally positive effects as
18 a remedy.

19 MR. EZRIELEV: Thank you.

20 Anybody have a response, panel?

21 Okay. So next question for Anne. So Rich
22 spoke about the focus or the obsession with market
23 definition in IP. The question, of course, is with
24 market definition and in IP cases, merger cases that
25 focus on innovation, is there even an implication of

1 Section 7 of the Clayton Act? If firms don't compete,
2 can antitrust enforcement agencies do anything about
3 incentives to innovate?

4 And in terms of competition, competition may
5 happen 10 years from now, 20 years from now. You're
6 investing in something that where alternative
7 technologies may or may not compete. So how do you
8 apply this analysis in merger cases if you don't know
9 if Section 7 is even applicable?

10 MS. LAYNE-FARRAR: Well, I think that's one
11 of the risks that you run in trying to regulate or
12 oversee innovation, that whenever you try to do so, it
13 involves some manner of industrial policy. So you
14 said what laws apply if the firms don't compete.
15 Well, I think you have to think about your definition
16 of competing. What exactly do you mean? Do you mean
17 do they not compete in downstream product markets? Do
18 you mean that they don't have competing strands of
19 R&D, that they aren't at least attempting to reach the
20 same customers, even if they're with very different
21 approaches or different products and services?

22 And I would say the answer to those
23 questions inform, then, what policy can and cannot do,
24 but nobody's going to have a crystal ball on how
25 things are going to play out over time. And when it

1 comes to potential competition, I think it's a very
2 risky proposition for any agency to try and step in to
3 prevent activities that aren't even clear that they're
4 going to come to pass.

5 MR. EZRIELEV: Okay, Rich.

6 MR. GILBERT: You know, William Baxter once
7 wrote that competition and mergers in particular can
8 affect competition in today's markets, tomorrow's
9 markets or in research and development to get from
10 today to tomorrow. You know, all of these three,
11 they're all three possible effects. Antitrust
12 policy has been overwhelmingly focused on today's
13 markets, but the fact is there can be significant
14 consequences in the other two, at least as important
15 as the consequences in today's markets. But we need
16 to be able to take some more risks in antitrust
17 enforcement.

18 Right now, I would characterize antitrust
19 enforcement today as saying you have to be absolutely
20 right because we are -- we don't want to have any --
21 make mistakes about overenforcement of the antitrust
22 laws. Well, what about underenforcement about the
23 antitrust laws? That's a risk, too.

24 Now, I'm not saying that we should abandon
25 standards of proof and just assume that every

1 transaction raises a concern. That, of course, would
2 be absurd. And particularly when you go farther and
3 farther out into transactions that are many years off,
4 which has happened with, for example, and the European
5 Commission has been doing some of these interventions,
6 it gets very uncertain, and then you really are in the
7 crystal ball world.

8 But we do need to take a few more risks,
9 and I'll give you an example. There was a not too
10 distant case, the Nielsen-Arbitron transaction, which
11 was challenged on effects in a new market and, you
12 know, whether or not that was a good transaction or
13 not, a good enforcement action, it was a bit
14 complicated.

15 I don't want to get into the details. But
16 what I do want to say is Commissioner Wright wrote an
17 interesting dissent in that transaction about the
18 difficulties of challenging conduct or a merger that
19 was going to have future effects. And I would agree
20 with everything that Commissioner Wright wrote in that
21 dissent. But if you take it literally, you can't
22 block any merger that would have a future effect
23 because there's always going to be uncertainties. And
24 that would not be good policy in my opinion.

25 MS. CARLSON: Great, thank you.

1 Anyone else on that topic before we shift
2 gears a little bit?

3 No, okay. I'm going to pick on Anne a
4 little bit more since she raised the issue of PAEs.
5 In our 2016 report, one of our findings was that
6 litigation PAEs engage in conduct that's consistent
7 with nuisance litigation. And so I wonder if you
8 could speak to what evidence we might have that
9 nuisance litigation by PAEs -- what effect that might
10 have on innovation and follow-on innovation in
11 particular.

12 MS. LAYNE-FARRAR: So I don't think there's
13 been any empirical work on this yet, aside from the
14 case study, the FTC case study you're mentioning. And
15 we were discussing this over lunch actually. I am
16 frankly a little skeptical. I understand that the
17 nuisance value, the costs and the time and the
18 distraction involved in litigation are a price that
19 you have to pay for any IPR, any patent. Because it's
20 valueless unless you can enforce it or have a threat
21 of enforcement.

22 So there's going to be some -- in any but-
23 for world -- some baseline level of transaction costs
24 related to getting sued, defending yourself, having to
25 sue, having to pay for your arguments in court. The

1 question I have in terms of the nuisance litigation
2 and the nuisance PAEs is how prevalent they are within
3 the economy. I know we can all probably come up with
4 anecdotal evidence of an example here, an example
5 there, but I think that's true for almost any kind of
6 antitrust or policy issue that you can think of that
7 you're going to find one or two.

8 And the question is, are those one or two
9 representative of a large group or are they just
10 exceptions? And if we're going to pursue policy that
11 targets particular business models or makes it harder
12 to litigate, those have -- those kinds of policies
13 have far-reaching repercussions across the ecosystem
14 and affect people's incentives even in different
15 business models.

16 So I would want to see some solid empirical
17 evidence that this is a widespread or at least a
18 common problem that the nuisance lawsuits are dragging
19 down small firms, preventing R&D investments or
20 preventing the ability to obtain financing, for
21 example, in a fairly regular basis before I saw any
22 policy simply because I think the unforeseeing
23 circumstances could be quite detrimental, especially
24 in areas of innovation where we know that innovation
25 is -- incentives are created from all different kinds

1 of areas of the economy. And you just don't know how
2 you're going to muck things up by clamping down here
3 when maybe you kill innovation over here.

4 MS. CARLSON: Any others? Go ahead, Jim.

5 MR. BESSEN: So there is empirical evidence
6 about the effect of PAE litigation, and it's the
7 specific question of whether there's a detrimental
8 effect from nuisance PAE litigation. It's hard
9 because it's hard to define which any particular
10 lawsuit is a nuisance case. So we should put it, I
11 think, in the context of the broader literature.
12 There are several papers now that have used quasi-
13 experimental methods. Mezzanotti has a paper based on
14 the eBay decision, where he finds a reduction in R&D.
15 Mezzanotti and Simcoe have another paper on the eBay
16 decision and find no negative effects from the eBay
17 decision.

18 Conan, et al., have a paper where they look
19 -- they compare companies that lost to a PAE or
20 settled with a PA, compared to companies that won
21 after they've been -- had a PAE demand, finding a loss
22 in R&D. So there do seem to be some evidence, and I
23 don't think it's conclusive or overwhelming, but
24 there's some very significant evidence that PAE
25 litigation has negative effects on innovation, at

1 least R&D spending and patenting, particularly by
2 small firms.

3 MS. LAYNE-FARRAR: If I could follow up a
4 little bit on that. Those papers are -- they are very
5 good papers, they're solid empirical papers, but they
6 are also very clear about what their limitations are
7 and what assumptions they're making. And, so, for
8 example, the Mezzanotti paper looks specifically at
9 the eBay ruling and the removal of an automatic
10 injunction. So that's a shift from a very extreme,
11 strong IPR system to a more moderate one, and so I
12 think you have to interpret those results in the
13 context of the research that he was doing.

14 It is what is the impact of removing
15 automatic injunctions. It's not necessarily that all
16 PAE litigation is bad. And likewise with the other
17 PAE studies. I think, you know, they're very careful
18 in circumscribing what exactly the question they're
19 asking is. And so you need to look at the
20 assumptions, you need to look at the model they're
21 running, rather than just lumping them all together
22 and saying, yeah, there's this body of evidence.

23 MR. BESSEN: Mezzanotti went beyond that.
24 He compared specifically companies that were prone to
25 PAE litigation and not. And he found that PAE

1 litigation was significantly affected by the eBay
2 decision. So he has an instrument.

3 MS. LAYNE-FARRAR: Yeah, and I agree with
4 it, but it's all about the injunction question.

5 MR. GILBERT: So this is not really on the
6 nuisance issue, but I can't resist saying in the
7 context of the earlier session which made some rather
8 strong claims about how the world would fall apart if
9 we don't have strong intellectual property rights.
10 The Mezzanotti and Simcoe paper did look at, as Anne
11 said, about injunctions and removing automatic
12 injunctions.

13 And that's a pretty strong change in
14 intellectual property rights, a weakening of
15 intellectual property rights. And, well, it's hard to
16 get conclusive empirical results because you don't
17 really have any natural experiments. A lot of things
18 are going on. But they couldn't find any evidence of
19 any reduction in innovation, productivity, R&D effort
20 following the eBay decision.

21 MS. LAYNE-FARRAR: If I could just add one
22 more quick thing. I think there's not been enough,
23 probably because it's too difficult, empirical work
24 examining what happens when you start from a Western,
25 well-developed country with a strong system of IPR and

1 you reduce those rights. The Mezzanotti paper looks
2 at that -- at one aspect of that because eBay gave us
3 this natural experiment: What happens when you go
4 from automatic injunction to having to fulfill the
5 four eBay factors?

6 But the trickier question is what if
7 you take a system like the U.S. and you start
8 systematically weakening patent rights. And we don't
9 know the answer to that question just because it's not
10 been done and we don't have the empirical data for it.
11 And empirical studies in other parts of the world look
12 at the other side of the question: What happens when
13 you start really low and you add?

14 And so taken as a whole over a span of
15 multiple decades, the empirical literature, I think,
16 suggests that there's sort of this inverted U
17 relationship between property rights and innovation,
18 that if you have too little, improving them
19 strengthening them, increases your innovation. Once
20 you get past that sweet spot, you're on the downward
21 slope, automatic injunctions were probably on the
22 right side of that curve, and so moving back took us
23 back up towards the peak. But there's not very much
24 empirical work on that other side of the question as
25 opposed to the one on the left.

1 MR. BESSEN: And the work that is done, I
2 mean, you have to be really careful about the fact
3 that everything is simultaneously determined. I
4 always cringe when someone says, you know, we have
5 strong intellectual property rights and we have an
6 innovative economy and, you know, you look at these
7 poor developing countries, they have weak intellectual
8 property rights, and they have -- you know, they don't
9 have innovation like we do.

10 Well, now, if you're a country that's mostly
11 using innovations and not really entrepreneurial to
12 begin with, you probably don't want a strong
13 intellectual property right system. It makes more
14 sense to be biased towards users rather than towards
15 the IP creators. And that doesn't mean that if you
16 strengthen intellectual property rights all of a
17 sudden these countries would just have millions of
18 flowers blooming. There are a lot of determinants.

19 MS. CARLSON: Great. Thank you.

20 MR. EZRIELEV: On that note, very
21 interesting exchange, we should move on to the next
22 topic.

23 MS. CARLSON: Yeah. I was going to do the
24 patent quality.

25 MR. EZRIELEV: Okay.

1 MS. CARLSON: So we had a pretty extensive
2 discussion this morning about patent quality from a
3 legal perspective, or I should say from the
4 perspective of an economist who was very much in the
5 legal weeds about patent quality, but one of the
6 themes that I heard this morning was about devoting
7 more resources to patent examiners to improve
8 examination.

9 And what struck me about that conversation
10 is, you know, there's two ways that you can deal with
11 patent quality, right? You could deal with it ex ante
12 by devoting more resources to examiners, or you can
13 deal with it ex post by weeding out the poor-quality
14 patents.

15 So, I don't know, Jim, if you can maybe talk
16 about that balance and is sort of a zero error rate ex
17 ante really the most efficient way to think about this
18 or, you know, whatever thoughts you might have on
19 that.

20 MR. BESSEN: Okay, hmm. So it's more
21 complicated than that I think. It's not -- we can
22 talk about patent quality about certain things, like
23 novelty, 102. And the question is did the examiner do
24 a good enough search? Was there something out there
25 that would invalidate that patent? And in that area,

1 more resources or perhaps more technically astute
2 resources or crowdsourcing, I mean, there's this new
3 movement where the MIT media lab and some other
4 sources have gotten together and are creating a prior
5 art database for software patents.

6 You know, those are encouraging things. But
7 a lot of the problems with patent quality aren't so
8 simple. They have to do with 103, they have to --
9 which is -- or with issues I think of vagueness of
10 what the definitions are, of what the patent actually
11 is, which, by the way, relates to even simple novelty
12 searches so that if we're not clear what the
13 boundaries are, we can't be very clear on what the
14 relevant prior art is.

15 So I always find -- this is sort of the
16 Lemley discussion of rational ignorance. Do we want
17 to put the resources up front or later? And I find it
18 difficult because to a great degree, we need to change
19 how we're doing things in a more fundamental way, I
20 think, to really solve some of the patent quality
21 problems.

22 Now, that said, we are -- when we get into
23 the world where we see a whole business model based on
24 -- well, arguably based on poor-quality or at least
25 poorly defined patents, I think that may be a better

1 description, patents which have vague boundaries or
2 unclear boundaries, that's probably a sign that we
3 need to put more resources into finding things early.
4 But, as I said, it's not just a matter of resources.
5 I think it may be much more about what we're doing
6 rather than how much we're doing it.

7 MS. CARLSON: Any others?

8 MR. FRAKES: Yeah, I'll jump in on this
9 because I've been thinking about it quite a bit
10 lately, and it raises a classic question that we
11 confront, and I'll put my lawyer hat on, and from the
12 law professor perspective we think about this all the
13 time. If we're going to, you know, regulate, regulate
14 in a loose sense, so do we want to do it ex ante, do
15 we want to do it ex post, sort of you know, more
16 agency approach, do we want to do -- sort of rely more
17 on, you know, the courts after the fact?

18 That's not a unique question to the patent
19 system. We confront it in the patent system. And I
20 think the starting point is, you know, if we think
21 that sort of -- you know, the patent system is
22 relevant for innovation incentives, then, you know, we
23 have these patentability standards that are meant to
24 sort of reflect the balances that we sort of want to
25 get right.

1 And so -- and hopefully, the patentability
2 standards are set in a way to sort of properly reflect
3 these balances, and then the question is, well, who's
4 going to apply the patentability standards? So this
5 rational ignorance idea is essentially, you know,
6 maybe it's just more cost-effective for society to
7 sort of reserve more of those efforts for the courts
8 and less up front.

9 I think it's ultimately a cost-benefit
10 exercise. And Professor Lemley nicely got this
11 conversation started in a Law Review article that he
12 wrote in 2001, and I think it was a great discussion.
13 And I think it's certainly time to revisit the
14 discussion because there was really a lot that he was
15 kind of assuming the answer on many things and
16 actually said, you know, now, we have sort of better
17 data and better methods, we could actually try to
18 estimate some of the parameters that he was simply
19 assuming.

20 And so Professor Wasserman, who was here
21 this morning in the first panel, and I, we have a new
22 paper where essentially we're revisiting this cost-
23 benefit exercise. And so the analysis, you know, it's
24 rich. We have to sort of think, well, if it's sort of
25 a question of do we -- it almost sort of starts with

1 the question, do we invest more in resources at the
2 Patent Office right now to allow them to sort of do a
3 better job in applying the patentability standards.
4 And those resources are going to cost money so, like,
5 what are the costs of it?

6 I mean, that's -- you know, our simulation
7 analysis, we're really focusing on giving examiners
8 more time because without getting into the details, we
9 have an empirical sort of framework to be able to sort
10 of estimate what's the effect of time that examiners
11 are allocated on some of the outcomes that are
12 relevant for this cost-benefit analysis.

13 What was nice about the conversation this
14 morning is not just thinking about resources in terms
15 of time, but also on resources in terms of
16 technologies available to do prior art searching and
17 AI and related as well, so that could be part of it as
18 well, but whether we invest in more time, and that
19 would be more personnel expenses, these are the types
20 of costs that we're really going to have in the
21 equation. You know, what are the savings that could
22 come from sort of giving examiners more time?

23 So and the idea is that if you've got this
24 sort of tradeoff between -- you know, if we do more of
25 a good job weeding up front at the Patent Office,

1 well, one of the savings could be, well, we have less
2 need for litigation later on to the extent that
3 litigation would otherwise be filling this residual
4 role of weeding out legally invalid patents.

5 And so then it raises the question, well,
6 what are the litigation savings, and without getting
7 into the weeds, we have our empirical framework to be
8 able to put some estimates now into that. And then
9 there's other savings as well. To the extent that if
10 we think we take the work by Galasso and Schankerman,
11 we think that there might be some consequences of if
12 there are legally invalid patents that are issued and
13 might have effects on follow-on innovation, then the
14 period of time between otherwise when the Patent
15 Office would have knocked out this invalid patent
16 before the courts getting around to it, there could be
17 some social welfare costs there imposed in the
18 meantime. Those are much harder to quantify, so we
19 left them kind of unquantifiable in our analysis.

20 But even with what ultimately we could
21 quantify on the cost side and what we could quantify
22 on the savings side, we actually sort of -- we think,
23 could come out suggesting that it would be beneficial
24 to invest more on the margin in the Patent Office as
25 opposed to sort of relying ex post on litigation, so

1 we kind of come out counter to what Professor Lemley
2 did. And much of what we can't quantify we think only
3 sort of reinforces that. I'll stop there.

4 MR. BESSEN: Yeah, I should add, I mean,
5 since 2001, litigation costs have soared. So many of
6 the things that he was considering then are different
7 now.

8 MS. LAYNE-FARRAR: Well, that's why the
9 cost-benefit framework is such a nice one, right,
10 because the costs are going to change over time, the
11 benefits are going to change over time, and you can
12 decide, I'm going to reassess this every few years.

13 But just one other point on this particular
14 question, I think there's a third avenue that since
15 we've mentioned them three times today let's make it
16 four, Galasso and Schankerman, they conclude on the
17 basis of their empirical work that because of these
18 areas of blockage that the freeing up of R&E only
19 after a patent is invalidated only emerges in very
20 specific circumstances, they conclude that it's not a
21 problem with the patent, per se, but that it is
22 contracting, that there are blockages between the
23 ability of small firms to negotiate properly with the
24 large firms who are holding these rights to come to
25 societally beneficial outcomes.

1 So, you know, let's not forget that that's a
2 really valid avenue that should be explored, and is
3 there any role for policy in making those kinds of
4 transactions easier? Clearly, they're happening in
5 lots of parts of the economy, and it's only in these
6 narrow areas that Galasso and Schankerman find the
7 problems.

8 MR. FRAKES: Right, and I definitely agree
9 with that, and so you would take, like, what we did
10 with our analysis, take as given sort of what's there
11 right now, but not to say that's not in the tool set
12 of maybe also sort of trying to solve some of the
13 contracting problems. I definitely completely agree.

14 MR. EZRIELEV: Okay.

15 MR. BESSEN: Also, I mean, people have said
16 narrow region a couple of times here, and we're
17 talking about computers, telecommunications, software,
18 which is --

19 MS. LAYNE-FRAKES: But from large firm to
20 small firms, it's not all of ICT.

21 MR. BESSEN: Right, right.

22 MR. FRAKES: It's narrow, but they actually
23 still had an average effect, as well. So there's
24 still the average effect, but it's narrower when they
25 broke it down, so -- but it's a fair point.

1 MR. EZRIELEV: Okay, we're going to shift
2 gears once again. The next question is for Jim. You
3 spoke about the importance of technology diffusion and
4 presented some very compelling evidence. So the
5 question is, is there a tradeoff between technology
6 diffusion and retaining sufficient incentives for
7 original innovation?

8 MR. BESSEN: That's one of the basic -- did
9 you have more?

10 MR. EZRIELEV: Yeah.

11 (Laughter.)

12 MR. EZRIELEV: So and truly every invention
13 is a follow-on innovation. So are we on the right
14 side of the balance in the straight-off? And another
15 question is whether we should have different policies
16 for sequential innovation. That's a lot of question,
17 but...

18 MR. BESSEN: I was better off interrupting
19 you.

20 (Laughter.)

21 MR. BESSEN: So, yeah, so one of the key
22 theoretical things is yes, there's very much a
23 tradeoff that you can -- in many cases, you know, you
24 can give a greater right to an initial inventor who
25 can then license it to somebody downstream, who -- and

1 can -- the initial inventor can extract some rents
2 from the downstream inventor and you want to play with
3 that so both have optimal incentives.

4 And you're also right, this is complex
5 because basically every invention, even the power loom
6 was an improvement of earlier things, people had been
7 playing with it for over a century. And knowledge
8 tends to be cumulative inherently in so many technical
9 fields that there is this balance we have to achieve.
10 And I think this has been a very difficult area to get
11 at. I think one of the insights I have here, which is
12 I think I can say with some credibility that since the
13 year 2000, when we see these gaps, what appear to be
14 gaps in diffusion of technology, we're seeing a change
15 for the worse, because what we're seeing, on the one
16 hand, the top firms are innovating as fast or actually
17 faster than they were prior to 2000, so there's no
18 shortage of innovation incentives for them. They have
19 the incentives and they are innovating and their
20 productivity is going up.

21 What we're seeing that's worse is everybody
22 else is so much behind. Now, how we solve that and
23 what exactly is causing it, and what the choke points
24 are and what any policy would look like, those are
25 complicated questions I can't answer, but I think I

1 can say enough to say that things have gotten worse in
2 the last 15 years or so.

3 MR. EZRIELEV: Rich?

4 MR. GILBERT: So in terms of what can be
5 done in this area, what should be done, I want to look
6 to history a little bit. There's a very nice paper by
7 Will Tom who spent many years at the Federal Trade
8 Commission, also at the Antitrust Division, and the
9 paper is on the 1975 Xerox consent degree negotiated
10 by the Federal Trade Commission.

11 And his premise was a very interesting one,
12 which was that this was a consent decree that had very
13 little legal basis, that is, you could criticize it
14 and say what was the basis for this intervention. On
15 the other hand, it seemed spectacularly successful.
16 It opened up the market for xerography, led to all
17 kinds of new competitors, small firms becoming larger
18 firms, increased productivity by every dimension.

19 We also have other examples. The 1959 IBM
20 consent decree, the 1959 -- or it might have been '56
21 AT&T consent decree. You know, most people who have
22 looked at this consent decrees say that they have
23 really done pretty positive things for the industry.
24 And it suggests to me that we really do have this
25 problem of sequential innovation that protecting the

1 original innovator to the maximum extent, that's fine
2 for the original innovator, but what about all the
3 follow-on innovations that often account for at least
4 as much or, as Jim said, many times as much in terms
5 of economic output as the original innovator did? And
6 there are things we can do. It's just we haven't done
7 anything like this really since 1975.

8 MR. EZRIELEV: Anybody else?

9 MS. LAYNE-FARRAR: Well, if you did things
10 like that on a regular basis and it was semi-
11 predictable, then we'd have to do another round of
12 empirical research because if you're anticipating
13 that, would you have had the Xerox and the AT&T? It's
14 an interesting question. And I agree with you about
15 you can't have maximum power, that then you're on the
16 wrong side of the curve.

17 MR. GILBERT: Exactly. You're on the wrong
18 side of the curve. But in terms of the predictability
19 issue, yeah, sure. You know, if everybody has
20 succeeded, then how to license all the intellectual
21 property? But I just don't think many people would
22 really be deterred from innovating if they said when
23 you become the next AT&T, you might have an antitrust
24 problem --

25 MS. LAYNE-FARRAR: If I get a decade of

1 those returns first, I would probably still do it.

2 MR. GILBERT: Yeah, exactly.

3 MR. BESSEN: So, I mean, these are
4 interesting historical examples. In the AT&T case,
5 there's an AT&T executive at the time who wrote about
6 how, you know, this was like -- I think the phrase was
7 spreading bread on the water, that it produced all
8 sorts of innovations that AT&T would have never
9 thought of and they thought -- he actually thought it
10 was a good thing.

11 And, similarly, some people have argued that
12 the IBM unbundling that came about in part because of
13 the consent decree was something that IBM probably
14 would have done anyway given enough time but that the
15 consent decree hastened. So we're not necessarily
16 talking about giving away the crown jewels in a sense
17 that it's often portrayed.

18 MR. GILBERT: Yeah, and I think it was Noyce
19 at Intel said the AT&T consent decree was the best
20 thing that ever happened to the industry. And then
21 the CEO of Xerox said that the Xerox consent decree
22 ultimately was a good thing for the industry.

23 MR. EZRIELEV: So a speaker on the last
24 panel suggested that innovation in the computer
25 industry actually increased after the Alice decision.

1 Is there any economic support for this claim? And, if
2 so, what does that tell you about the role of patents
3 in promoting innovation, technology diffusion, and do
4 patents actually play a positive or a negative role in
5 technology diffusion? Question for Jim and others.

6 MR. BESSEN: So I didn't hear the first
7 part. The Alice decision had an effect on what?

8 MR. EZRIELEV: So the speaker at the
9 previous panel suggested that the Alice decision had a
10 positive effect on innovation in the computer
11 industry.

12 MR. BESSEN: So, I mean, I think it's
13 conceivable to the extent that it -- from my point
14 of view -- sorry about that. From my point of view,
15 the Alice decision was not related to any real
16 innovations. Most of the things that were wiped out
17 by Alice could have also been wiped out by a strict
18 103 nonobviousness determination. These were -- do it
19 on a computer basically, something we already know how
20 to do, let's do it on a computer.

21 So it's hard to see how it would have
22 affected innovation adversely. To the extent that
23 Alice patents were being used by PAEs and these were
24 burdening small innovative firms, I could see that
25 would have a positive -- possibly have a positive

1 effect.

2 MS. LAYNE-FARRAR: I haven't seen any
3 empirical work on that question, but anecdotally, I
4 have heard that Alice actually increased uncertainty
5 because there was a lot of confusion over how it was
6 going to be applied and where it was going to be
7 applied. And I heard some examples of if you looked
8 at Patent X, which has been hugely successful
9 commercially and spurred all kinds of follow-on
10 innovation, if you evaluated it under the new Alice
11 rule, you wouldn't know if you would be able to get
12 that patent and whether it would be valid today.

13 So I think from what I've heard -- again,
14 anecdotally, not statistically valid -- but that it
15 increased uncertainty, and that could have a
16 detrimental impact on innovation.

17 MR. EZRIELEV: So and on the question of
18 whether patents actually have a positive or negative
19 effect on technology diffusion, anybody have any
20 thoughts?

21 MS. LAYNE FARRAR: Go ahead.

22 MR. GILBERT: Again, it relates to this
23 issue of sequential innovation. If you're a strong
24 believer in sequential innovation, then the
25 desirability of creating an ecosystem for innovation

1 and lowering barriers to entry into that ecosystem is
2 desirable. So I mentioned, you know, in the context
3 of the AT&T consent decree, it was actually Gordon
4 Moore who said it was the best thing that happened to
5 semiconductors, but, you know, clearly no one wants to
6 do away with intellectual property -- well, some
7 people do, but I don't think it's really a credible
8 proposal to say that we're going to do away with
9 intellectual property completely.

10 But at the same time, we have these -- it's
11 almost these two religious extremes. One is we don't
12 need any intellectual property rights. That's wrong
13 clearly. But then this other extreme, which is
14 innovation is maximized as long as an increasing
15 function of the strength of intellectual property
16 rights, that's wrong, as well. The optimal balance is
17 somewhere in the middle.

18 MR. BESSEN: A lot of it has to do with
19 quality issues or really scope or vagueness issues.
20 So the ability of the original inventor to extract too
21 much from the follow-on inventors is increased when
22 patents are interpreted very broadly, which will
23 happen when they're very vague. So when we have a
24 regime where we're issuing far too many vague patents
25 in certain areas like software, we may very well be

1 giving too much power to the upstream inventor and too
2 little leeway to the downstream inventor.

3 MS. LAYNE-FARRAR: There is some empirical
4 evidence on historical data from Petra Moser who looks
5 at the change in the 1870s in the ability to reverse-
6 engineer chemical inventions so there were certain
7 technological advances like the periodic table and
8 some other things I can't remember that made it far
9 easier to reverse-engineer chemical innovations and
10 inventions. And what she found was then a shift
11 towards patenting, away from trade secrets in that
12 industry, and she confirmed that there was a
13 broadening of diffusion of technology as measured by
14 the geographic localization of innovative activity
15 around the focal point of the patent.

16 So that's at least a historical example of
17 patents increasing diffusion over the alternative of
18 trade secrets. Of course, it always depends on what
19 else you were going to use, whether it's trade secrets
20 or something else.

21 MR. GILBERT: But that's also an example of
22 being at one end of the spectrum.

23 MS. LAYNE-FARRAR: Right.

24 MR. GILBERT: No patent protection.

25 MS. LAYNE-FARRAR: Right, trade secrecy with

1 no disclosure whatsoever moving to patents with
2 disclosure.

3 MR. BESSEN: And I think also critically the
4 periodic table and the other developments Petra talks
5 about helped produce very sharply defined patents that
6 were not excessively broad or excessively vague.

7 MS. CARLSON: So I want to pick up a little
8 bit on the work that Petra Moser did, and also we've
9 mentioned quite a bit already the work by Galasso and
10 Schankerman on sequential innovation. So I think the
11 two combined tell a pretty interesting story. So we
12 have the work of Galasso and Schankerman saying that
13 patents have some potentially negative effect on
14 follow-on innovation but that this varies by industry.
15 And then we have Petra Moser's work saying, well,
16 patent protection is important, but it varies by
17 industry, right?

18 And even if you sort of tie that back to
19 Galasso and Schankerman, right, that the patents
20 affecting follow-on innovation weren't really an issue
21 for something like chemicals where we can really
22 easily define the patent or the boundaries of the
23 patent and that there aren't really a lot of
24 alternatives for protecting that innovation relative
25 to software where maybe the boundaries are a little

1 bit more vague and there may be alternatives to
2 protecting that innovation, like copyrights, for
3 example.

4 And so, I don't know, maybe, Michael, you
5 want to take this. Does this sort of literature then
6 suggest that maybe really in the -- in the patent
7 system we ought to be thinking of designing IP rights
8 in such a way that they vary by industry? That maybe,
9 you know, this sort of one-size-fits-all IPR policy is
10 not really the most efficient?

11 MR. FRAKES: Right, and, I mean, there's, I
12 guess, a ton with that question. I mean.

13 MS. CARLSON: Sorry, that was a big lead-in.

14 MR. FRAKES: Yeah, I mean, to some extent,
15 too, to the extent that also you don't have to be all
16 or nothing with what type of IPR system, you have to
17 the extent that you've got, you know, a patent system
18 alongside the ability to have trade secrecy as well
19 that you might just get kind of sorting by industry
20 into maybe sort of the desired protection regime.

21 And then -- and we ask this question
22 sometimes in the patent context a lot, should the
23 patent policy be industry-specific, focusing
24 specifically on the patent side. And I'll just say
25 that I've just been kind of a casual consumer of these

1 topics and I'm not remotely an expert in this and I
2 also defer to my more "patent law" colleagues on this,
3 but sometimes my patent law colleagues would even tell
4 me, yeah, we have sort of like a unitary patent
5 system. And when you look in the doctrines they may
6 not speak so specifically to industries, but I think
7 that the realities in practice, they have still, like,
8 taken on industry-specific treatments.

9 And I would sort of defer the Commission to
10 sort of look to work by Mark Lemley and Dan Burk, who
11 I think have sort of written a lot on this point and
12 just, you know, there are certain doctrines that have
13 just -- they play out in practice differently in some
14 -- you know, a written description may play out
15 differently in some industries relative to others, and
16 I think they may also sort of tell us that even the
17 notion of a PHOSITA, you know, a person having
18 ordinary skill in the art, already inherently sort of
19 builds in flexibility that is in part sort of
20 industry-specific as it relates to sort of how we
21 apply nonobviousness.

22 And so I think, you know, one answer might
23 be in part it's already even -- by its face, it might
24 seem so unitary, but when you uncover a little bit,
25 there's some more industry-specific patterns that are

1 actually playing out. That might still not be
2 sufficient to those who think it ought to be more
3 industry-specific. Some people often point to the
4 fact that patent terms are -- we're kind of unitary in
5 patent terms, and that might seem nonsensical for a
6 number of reasons.

7 Professor Sukhatme, he was over there and
8 he's gone now, but he was a panelist earlier in the
9 day. He's done some interesting work showing
10 differential sensitivities across industries to patent
11 terms. Ben Rowe at MIT has written quite a bit about
12 this, and then did some follow-on empirical work with
13 Heidi Williams and I think Ben Rudush (phonetic),
14 looking even within pharma, even looking within one
15 industry, you can get some distortions in behavior to
16 the extent we have sort of a unitary patent term.

17 So I think that there could be -- I mean, we
18 have these discussions about there could still be sort
19 of a lot of potential social welfare improvements from
20 kind of, you know, more sufficiently tailoring our
21 patent system, but my one comment is, you know,
22 there's probably more of it going on than might sort
23 of, you know, initially be perceived. And then we as
24 economists, we could talk about we can do a lot more.

25 I wish there was -- you know, the lawyers

1 could sort of also correct -- and we also run into
2 some various constraints on sort of how much we can do
3 in this. I think trips might be sort of a constraint
4 in sort of how much you can do on varying across
5 industries. And I'm not remotely an expert on that
6 particular question. I'll stop there and kick it off
7 to anybody else.

8 MS. LAYNE-FARRAR: I just want to add a
9 caveat. Do not underestimate the creativity of patent
10 drafters. So you may try to make things industry-
11 specific. They will be creative. They will figure
12 out ways to make this thing in this industry sound
13 like that thing in that industry if the protection is
14 better over there. So it's just a risky proposition.

15 MR. FRAKES: Right, and I'll even add to
16 that. It's really probably the PTO experts in the
17 room could speak better to this. I think that there
18 had been some PTO practices that try to target
19 specific art units, like I think a second-pair-of-eye
20 review might be sort of one particular example in what
21 you say, or sometimes I think applicants -- and it
22 might be -- and I think that John Allison and Mark
23 Lemley had a paper on this, and that might be totally
24 wrong in my recollection of that, but seeing
25 applicants like try to actually sort of -- would

1 otherwise sort of like, you know, kind of respond in a
2 way to sort of -- you know, to move where they think
3 ultimately -- or, you know, an art unit to the extent
4 that it might be difficult for them to sort of control
5 that.

6 But there might have been a behavioral
7 response, you know, in an attempt to try to affect
8 essentially sort of, you know, what art unit is really
9 going to be reviewing their application. And so I
10 definitely agree with don't rule out sort of the craft
11 of the applicants.

12 MS. LAYNE-FARRAR: It is a game. You have
13 to use game theory, and I think you can look at
14 history for examples, right? Back when software
15 patents had to have some physical embodiment, then you
16 see software patents that were disguised as pizza
17 ovens. So people are creative.

18 MS. CARLSON: Anyone else?

19 So a number of commentators have suggested
20 that using alternative mechanisms, such as prizes or
21 contests or crowdsourcing, to incentivize innovation,
22 so is there any support in the economics literature to
23 suggest that these alternative mechanisms might
24 actually be effective in inducing innovation, perhaps
25 relative to patents or other ways of protecting

1 innovation? I don't know who wants to start with
2 that. Jim, do you want to take the one?

3 MR. GILBERT: Well, here have been some nice
4 things, done both historical and some more recent
5 ones, finding yes, these can be effective innovation
6 mechanisms. It's not clear that they're necessarily
7 alternatives to the patent system. They may be
8 complements to it. And that's part of I think the
9 design, but it's very clear there's some areas where
10 the current regime does not address innovation well,
11 and prizes and some of these other mechanisms may be
12 very important.

13 Trade secrecy, of course, is huge, and we
14 always kind of forget about that. But probably the
15 majority of innovations are protected by trade secrecy
16 rather than anything else.

17 MS. LAYNE-FARRAR: Zorina Kahn has some
18 really nice papers on historical data on prizes and
19 medals and contests, and she points out the rent-
20 seeking behavior that those kinds of incentive
21 mechanisms can create -- both the rent-seeking to get
22 on the committee to name who wins these things and the
23 rent-seeking to obtain the awards.

24 And in some instances what she found was
25 that the really highly valuable most pioneering

1 inventions were getting patents and it was the "me,
2 too's" or the less incentive ones that got the awards
3 because they didn't have the incentives to get the
4 patents, whereas the ones who wanted the market value
5 did because there's very little correlation between
6 what the prize value is versus what the societal value
7 of the innovation may be. Or that the prizes were
8 given to people who were gaming the system and getting
9 patents, too, and maybe getting prizes in multiple
10 countries and from multiple entities in addition to
11 their patents. So it's not clear that those kinds of
12 mechanisms are a silver bullet.

13 I would agree with Jim that you might want
14 to think about them, if at all, as complementary to
15 the IPR protection system that you already have, but
16 be very careful in how you define those prizes and
17 medals and think about how you're creating incentives.

18 MR. FRAKES: And I'll just add, I think on
19 some of this empirical literature I think they've
20 supported this complementary idea to the extent that
21 they've found -- I just remember -- actually, I kind
22 of forget the authors, but some studies looking at the
23 Royal Agricultural Society of England and some prizes
24 that they were giving out from sort of mid 19th
25 Century to the early 20th Century. It was, like, a

1 long period of many decades of prizes they were giving
2 out, and some of the punch lines of their analysis was
3 there does seem to be sort of, you know, entry into
4 innovation resulting from the prizes, but then
5 ultimately sort of kind of fed over into sort of the
6 patent system subsequently. And so I do think there's
7 some empirical support to the idea that they can sort
8 of work as complements to each other.

9 MR. BESSEN: Also, in the sense of
10 sequential innovation, we need to distinguish between
11 the big inventions and the incremental inventions.
12 And so often -- you know, Zorina focused on the major
13 inventions, but that doesn't mean the minor inventions
14 were to be ignored. And, in fact, if you look at the
15 power loom, the big invention was really a very small
16 part of the total productivity gain. It was mostly
17 from those minor improvements, many of which were
18 probably unpatentable, many of which -- some of which
19 were patented, some of which were not patented, and
20 some of which were, you know -- may well have been
21 enhanced by a prize.

22 MR. EZRIELEV: Okay. So we had a number of
23 questions from the audience. We only have time for
24 one. Time is running short. This question is for
25 Rich, and others can weigh in. Seventeen years ago,

1 Rich, you and Will Tom asked if innovation is king at
2 antitrust agencies. And do you think we've made
3 progress since then?

4 MR. GILBERT: Interesting question. It's
5 progress in the sense that innovation concerns are
6 very commonly raised in antitrust cases in high-
7 technology industries. And, in fact, since about I
8 don't know, since the turn of the century, it's really
9 been almost 100 percent in terms of complaints. If
10 there's a complaint in a merger case alleging harm to
11 innovation in a high-tech industry, it's also going to
12 include an allegation of harm to innovation.

13 So it certainly has -- the innovation's
14 concerns are more prominent, but they have not been
15 really pivotal yet with a couple of very -- only a few
16 exceptions at most. And the question is, you know,
17 when are we going to really step up and say this is a
18 concern in this case. It's not just a price concern.
19 It really is an innovation concern and be prepared to
20 litigate.

21 I think we're getting there. I think we're
22 getting there. And we are making progress, but we
23 haven't yet seen an agency actually take it to court
24 on a fundamentally innovation-based theory.

25 MR. EZRIELEV: Anybody else?

1 Okay, so let's take a little bit of time
2 where each person, each panelist will give a short
3 statement of policy recommendations, your overall
4 conclusions, takeaways. We'll start with Rich.

5 MR. GILBERT: Okay. If I may I would
6 like -- we've had sort of two main themes. One is the
7 innovation theme, but the other is intellectual
8 property and protection and sequential innovation. On
9 the latter, I just want to briefly repeat my concern
10 that you can't equate intellectual property strength
11 to innovation. It's much more complicated than that.
12 You know, we don't know if people innovate because
13 there are strong intellectual property rights or if
14 there are strong intellectual property rights because
15 people innovate. You know, both are factors. And
16 some of the work that's been discussed here I think
17 provides nuances on that that are important to
18 appreciate.

19 On the innovation area, you know, we just
20 talked about whether the agencies will step up on
21 innovation, and I want to point -- and in terms of
22 what can the agencies do, the Federal Trade
23 Commission, in particular, has had in my opinion an
24 admirable record of being on the edge of, in my
25 opinion, positive antitrust enforcement actions. For

1 example, reverse payments. You know, there was a time
2 when it was the scope of the patent and if you were in
3 the scope of the patent, you could do anything you
4 wanted with the patent.

5 And the Federal Trade Commission really led
6 the charge to say that, you know, many of these
7 reverse payment cases are like disguised mergers and
8 raise significant competition concerns. And the
9 agency faced enormous headway in bringing those cases
10 but the agency persevered. And now, you know, they
11 don't win all of these reverse payment cases, but I
12 think they've gotten the courts to understand that
13 reverse payments are a very significant competitive
14 issue.

15 Similarly with standard essential patents
16 and injunctions, and I think the agencies can do the
17 same on innovation, and in particular the Federal
18 Trade Commission can, by bringing strong cases like
19 Thortech HeartWare, where it was a very clear
20 innovation case, the parties abandoned the
21 transaction, but I think if you took that one to
22 court, you could well have won it. And hopefully you
23 will continue to bring the right cases and bring them
24 because they're right, even if they don't fit the law
25 in exactly the precise way the law has been

1 constructed.

2 MR. EZRIELEV: Thank you.

3 Jim.

4 MR. BESSEN: So I guess my main point is
5 that we need to think about innovation policy, not
6 just about the initial innovations, but about the
7 whole sequence of innovations and cumulative knowledge
8 development, and this requires sort of a broader
9 perspective on policy, and maybe some policy areas
10 that we don't traditionally think about when we're
11 thinking about innovation.

12 In patents, it may mean some ways of
13 improving patent quality so we're narrowing scope or
14 vagueness. And Rich raised some interesting ideas
15 about compulsory licensing that might be relevant.

16 In trade secrecy law, I think there's
17 growing evidence of things like the inevitable
18 disclosure doctrine may be problematic from the point
19 of view of employee mobility and this tremendous rise
20 in noncompete agreements in employment law is a factor
21 affecting employment mobility; and employment
22 mobility, I think we have good evidence, is often key
23 to sequential innovation, cumulative innovation. It
24 allows people to start new companies. It allows
25 people to transfer knowledge from one place to

1 another. So I would say we need a broader perspective
2 often when we think about innovation.

3 MR. EZRIELEV: Thank you. Michael.

4 MR. FRAKES: And I really quite like that
5 idea, thinking more broadly and thinking about other
6 things, sort of other policy approaches, and maybe
7 some that sort of relate to sort of employment
8 mobility, and I echo some of the views about
9 compulsory licensing.

10 I'll probably say specifically sort of just
11 discuss, you know, probably what I'm more comfortable
12 discussing, which is actually the issue of patent
13 quality just because I spent more time thinking about
14 and doing research in this particular area. And,
15 again, I just emphasize not to the exclusion of other
16 great ideas when stepping back and thinking more
17 broadly, but at least as it comes to, like, at least
18 like some of the questions that were to some extent
19 posed to me today, well, should we think about sort of
20 more technology-specific tailoring of the patent
21 system, or should we think about sort of making
22 improvements in patent quality at the Patent Office.

23 I tend to think sort of let's kind of focus
24 more on the latter, maybe in part because we might
25 have a stronger evidence base there right now, and it

1 might be sort of more tractable, intractable and also,
2 maybe more legally feasible. But -- so much of what
3 I'll say here it's really much of what was discussed,
4 I would say, sort of in the first panel today.

5 And first something that often starts with
6 sort of a good, you know, adoption of a definition of
7 what patent quality is, and I'd probably just really
8 defer to the nice statement by Professor Marco earlier
9 today and then first I think we should think about it
10 in terms of patent quality, not in terms of -- you
11 know, value in some sort of economic sense so much as
12 sort of, you know, the legal validity of the patent,
13 to the extent that those patentability standards are
14 at least hopefully set properly with the types of big-
15 picture balances that we do have in mind. But quality
16 in terms of validity of the patents that are issued by
17 the Patent Office and also sort of less vagueness,
18 more certainty with these patents and to try to push
19 for not just passable patents, as Professor Marco
20 said, but let's try to push towards A-plus patents.

21 And are we there yet? So do we know exactly
22 what to do? I think in part, you know, we start to
23 have some ideas. And, again, Professor Wasserman and
24 I have been trying to advocate certain ideas. One
25 just sort of relates to the question of, you know, ex

1 ante versus ex post, investing more resources in the
2 Patent Office. Or is it should we just not care about
3 quality that comes out of the Patent Office because
4 the courts will just sort of deal with it later on?

5 And, again, I sort of at least feel
6 relatively strongly at this point that we actually do.
7 I think we ought to sort of think much more closely
8 about the quality at the Patent Office. And I will
9 say we've made nice strides in recent years, in part
10 by the great data dissemination efforts that have come
11 out of the Office of the Chief Economist at the Patent
12 Office, and Professor Marco deserves a lot of credit
13 for that, and so kudos to that. And hopefully we keep
14 seeing more of that moving forward.

15 And then also, we talked about this -- they
16 talked about this in the first panel, it would be nice
17 to see some more experimentation so that some of the
18 tools that we have with fee-setting authority and with
19 other sort of parameters of the system, that we might
20 have a better sense about how to tweak them moving
21 forward that might be informed by not just the
22 observational data that we've been producing, but
23 maybe some information coming out of targeted
24 experiments at the Office. But so my suggestions are
25 to sort of -- which are consistent with already sort

1 of very strong desires to sort of improve quality at
2 the Patent Office to sort of -- I just -- I say I
3 endorse many of those efforts.

4 MR. EZRIELEV: Thank you.

5 Anne?

6 MS. LAYNE-FARRAR: I think given the
7 complexity of the issues that we're talking about, how
8 IPRs of all types -- patent quality, patent scope,
9 copyright, trademark, trade secret, et cetera -- and
10 the ability of all the parties within a given industry
11 or a given market area to react to one another and re-
12 react, that theory only gets us so far.

13 So my main policy recommendation would be
14 encouraging additional empirical research. The panel
15 right before us talked about all the different
16 reforms, both legislative, different rulings at the
17 courts, experiments at the USPTO, et cetera, we should
18 be using those as a springboard to test empirically
19 what happens when these things did? What happens to
20 this constituency versus that constituency? What were
21 the unintended consequences? I think we just can't
22 barrel ahead on the basis of theory, that we really do
23 need more empirical research on these fields.

24 MR. EZRIELEV: Thank you. I think that
25 concludes today's panel, but don't go away yet. We

1 have a speaker to close the hearings. We're honored
2 to have closing remarks by Commissioner Rebecca Kelly
3 Slaughter.

4 Commissioner Slaughter was sworn in as a
5 Federal Trade Commissioner on May 2nd, 2018. Prior to
6 joining the Commission, she served as Chief Counsel to
7 Senator Charles Schumer of New York, the Democratic
8 Senate Leader. A native New Yorker, she advised
9 Leader Schumer on legal competition, telecom, privacy,
10 consumer protection, and intellectual property
11 matters, among other issues.

12 Prior to joining Senator Schumer's office,
13 Ms. Slaughter was an associate in the D.C. office of
14 Sidley Austin. Please join me in welcoming
15 Commissioner Slaughter.

16 (Applause.)

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1 CLOSING REMARKS

2 COMMISSIONER SLAUGHTER: Thank you so much.
3 It is a pleasure to be here to close two productive
4 days of hearings about innovation and intellectual
5 property. Before I begin, I want to note the usual
6 disclaimer that I will be expressing my own views only
7 and not those of the Commission or any other
8 Commissioner. I will also apologize because I ran
9 over here from headquarters and got a little winded,
10 so I'm sorry if I'm speaking a little quickly.

11 So I want to commend all of the FTC staff
12 who worked very hard to put together these thoughtful
13 panels, and thank you to the many panelists and
14 presenters for contributing to the Commission's
15 reexamination of the state of antitrust and consumer
16 protection law. I am particularly pleased that Drew
17 Hirshfeld, the Commissioner of Patents, and the
18 Honorable Scott Boalick, the Acting Chief PTAB Judge,
19 joined us earlier today. The FTC and PTO have had a
20 longstanding and invaluable working relationship. We
21 have much to learn from each other so that we can both
22 improve how we use our tools to foster innovation.

23 The conversations at these hearings over the
24 past two days were extremely animated. As I learned
25 working on IP issues on the Hill for many years,

1 intellectual property can get pretty spicy. I used to
2 find the depth of emotion and passion around IP
3 perplexing. At first glance, these issues seemed like
4 they should be much less emotionally and politically
5 fraught than the policy areas that more directly
6 implicate life or liberty, and yet I found them to be
7 equally, if not more, charged. But intellectual
8 property is fundamentally about the right and
9 incentive to create and the potential to foreclose
10 others from the fruits of that creative process.

11 It is hard to imagine anything more personal
12 than the ability to have an ownership right in the
13 work of one's own mind. Whether you believe IP needs
14 to be strengthened to promote creativity or that IP
15 rights are abused to stifle it, you are likely to care
16 very much about the policy being applied properly to
17 allow human intellectual potential to thrive.

18 All of that is to say I get the passion and
19 I appreciate the energy we have seen displayed here
20 today and yesterday. One of the many reasons I am so
21 excited to be here, both at the Commission generally
22 and here today at the hearings specifically, is
23 because the FTC has long been at the forefront of
24 tackling difficult questions of how intellectual
25 property rights intersect with competition and

1 consumer protection.

2 At the heart of these questions is something
3 of a paradox. IP law and antitrust law share a common
4 goal, the promotion of innovation, but at the same
5 time, IP can seem in conflict with competition policy
6 because intellectual property is fundamentally about
7 the opportunity to exclude competitors, a concept that
8 generally invites scrutiny under antitrust law.

9 Let me start by saying a word about the
10 common goal of IP and antitrust, innovation. Each
11 type of IP protection grants an exclusive ownership
12 interest to the rightsholder with a level of
13 exclusivity tailored to the specific nature of each
14 type of IP in order to encourage innovation without
15 stifling competition. The balance is not the same for
16 research-intensive patent inventions as it is for the
17 creative works in copyright, for example.

18 Whatever the nature of the specific right,
19 each type of intellectual property promotes innovation
20 and benefits consumers, and competition law is
21 designed to do exactly the same. Our competition laws
22 promote innovation by ensuring that firms do not
23 exercise their market power, whether it is supported
24 by intellectual property or otherwise, to thwart
25 competition through anticompetitive conduct or

1 consolidation.

2 Often this work does not involve IP
3 specifically, such as in many merger reviews. The FTC
4 and DOJ first recognized that a merger could harm
5 innovation when they included a section on innovation
6 effects in the 2010 Horizontal Merger Guidelines.
7 Since then, the FTC has brought several cases that
8 include allegations of harm to innovation. And I want
9 to talk about one good example of these efforts, which
10 was the Commission's challenge to the merger of CDK
11 Global and Auto/Mate, two firms that provide business
12 software for car dealerships.

13 CDK Global was attempting to acquire
14 Auto/Mate, a competitor, that while smaller in terms
15 of market share, was a similarly innovative and
16 disruptive challenger to the two market leaders. In
17 this case, harm in the form of reduced innovation was
18 a prominent feature of the FTC's inquiry, alongside
19 allegations that the merger would result in increased
20 prices and diminished quality of services. In the
21 face of the court challenge from the FTC, the parties
22 abandoned the deal.

23 The FTC should continue its careful scrutiny
24 of deals with the potential to reduce innovation and
25 be ready and willing to challenge a merger even when

1 the facts show that the prevailing, and perhaps only
2 harm, is to innovation. In many cases competition law
3 and IP law run peacefully in tandem and are even
4 complementary in promoting innovation and competition.
5 However, we wouldn't be here today discussing
6 innovation and IP if that was the end of the story.

7 The most interesting and difficult
8 questions, to me, arise when there is an overlap or a
9 conflict between the application of intellectual
10 property rights and the healthy operation of a
11 competitive marketplace. In examining restraints and
12 competition, the FTC considers not only the IP matter
13 at hand, whether that be patent, copyright, trademark,
14 or trade secret-related, but it focuses on the impact
15 the exercise of that property right will have on
16 competition and consumers.

17 As the Supreme Court held in *Actavis*, a
18 patent does not provide a free pass from antitrust
19 scrutiny. And patents aren't the only area of
20 challenge.

21 Yesterday, we had a terrific panel about
22 copyright, the Commission's first of this kind, with
23 discussions about how copyright law intersects with
24 competition and consumer issues in various forms of
25 media and online platforms. As content is

1 increasingly and often exclusively digital, there are
2 many new challenges that I'm glad to see these
3 hearings addressing head on. How properly to identify
4 the line between where the right to exclude promotes
5 innovation and where it inhibits competition and,
6 therefore, innovation is extremely challenging and
7 extremely important. These questions have only become
8 more difficult with 21st Century innovations in data
9 sharing, online platforms and the ubiquity of
10 software.

11 I'm not the only one who thinks it's hard.
12 We've seen case after case out of the Supreme Court on
13 IP that each raise more questions than they seem to
14 answer. That is why I'm glad these hearings have
15 devoted two days to difficult IP questions and so
16 grateful our panelists have donated their time and
17 intellect to helping us think through these issues.
18 While the Commission has been very engaged in some
19 specific areas of IP study, advocacy, and enforcement,
20 this week's sessions have been an opportunity to take
21 a step back and reconsider the fundamental questions
22 of competition, innovation, and intellectual property.

23 Participants throughout both days have
24 shared their views on major trends in the IP
25 landscape, including how businesses make IP decisions,

1 copyright challenges, patent quality, and patent
2 litigation. Some of the debate sounded very familiar
3 to me from my days working on these issues in the
4 Senate, but there are, of course, new developments,
5 new law, and new empirical studies that are continuing
6 to inform the conversation.

7 This week's hearings reaffirm the critical
8 role the FTC plays in bringing its competition and
9 consumer protection expertise to help tackle key
10 innovation and intellectual property questions. As I
11 said, when I opened the second day of hearings, it is
12 simply not plausible that we conclude this effort with
13 a pat on the back telling ourselves that we've gotten
14 everything right so far. Surely we will be able to
15 distill key lessons that will inform our enforcement
16 and policy priorities, and certainly there will be
17 more to consider as IP markets and competition evolve.

18 Thank you again for having me and, again,
19 thank you to all of you who provided us with two days
20 of thought-provoking and spirited discussions. Thank
21 you very much.

22 (Applause.)

23 MR. EZRIELEV: I think that concludes
24 today's hearings. Thank you.

25 (Hearing concluded at 4:52 p.m.)

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